MCWD SEWER CODE

Chapter 11

DIVISION I ADMINISTRATION

Section 1.01 Title

This chapter shall be known as the “Sanitary Sewer Code” and may be cited as such.

Section 1.02 Scope

The provisions of this chapter shall apply to the discharge or disposal of all wastes including any material which may cause pollution of underground or surface waters in, upon, or affecting the territory of the Mammoth Community Water District, and the design, construction, alteration, use, and maintenance of public sewers, house laterals, industrial connections, liquid waste pretreatment plants, sewage pumping plants, sand and grease interceptors; the issuance of permits and the collection of fees therefore and fees to pay for the cost of checking plans, inspecting construction, and making record plans of the facilities permitted hereunder; and providing penalties for violation of any of the provisions thereof.

DIVISION II DEFINITIONS

Section 2.01 Scope

The words and phrases appearing in this Chapter are defined and shall be construed as hereinafter set forth, unless it shall be apparent from the context that they have a different meaning.

Section 2.02 District

"District" means the Mammoth Community Water District.

Section 2.03 Board

"Board" means the Board of Directors of the Mammoth Community Water District.

Section 2.04 District Manager

"District Manager" shall mean the Manager of the District or other person designated by the Board to perform the services or make the determinations permitted or required under this chapter by the District Manager.

Section 2.05 Person

"Person" shall mean any person, firm, company, corporation, partnership, association, any public corporation, political subdivision, city, county, district, the State of California, or the United States of America, or any department or agency thereof.

Section 2.06 Owner

"Owner" shall mean any person who by contract of sale, grant deed, or other evidence of estate, color of right or color of title has fee title to any lot, premises, or parcel of land.

Section 2.07 Premises

"Premises" shall mean any lot, or any piece or parcel of land comprising two or more lots of record in one ownership, or any building or other structure or any part of any building or structure used or useful for human habitation or gathering or for carrying on a business or occupation or any commercial or industrial activity.

Section 2.08 County Health Officer

"County Health Officer" means the County Health Officer of the County of Mono, or their authorized deputy, agent, representative, or inspector.

Section 2.09 Ordinance

"Ordinance" means an ordinance of the Mammoth Community Water District.

Section 2.10 Section

"Section" means a section of this chapter unless some other chapter, ordinance, or statute is mentioned.

Section 2.11 Inspector

"Inspector" means the authorized inspector, deputy, agent, or representative of the District.

Section 2.12 Licensed Contractor

"Licensed Contractor" means a contractor having a valid license issued pursuant to Chapter 9, Division 3, of the Business and Professions Code, State of California, which license includes the activities listed on permit applied for.

Section 2.13 Permittee

"Permittee" means the person to whom a permit has been issued pursuant to the provisions of this chapter.

Section 2.14 Pollution of Underground or Surface Waters

"Pollution of Underground or Surface Waters" means affecting such waters in a manner which, if allowed to continue, would render them unfit for human or animal use or toxic to vegetation to an extent adversely affecting pant growth.

Section 2.15 Lot

"Lot" means any piece or parcel of land bounded, defined, or shown upon a map or deed recorded or filed in the office of the County Recorder of Mono County, provided, however, that in the event any building or structure covers more area than a lot as defined above, the term "lot" shall include all such pieces or parcels of land upon which said building or structure is wholly or partly located, together with yards, courts and other unoccupied spaces legally required for the building or structure.

Section 2.16 Street Property Line

As used in this chapter, "Street Property Line" means a building line, where one has been established by ordinance, otherwise the street property line itself.

Section 2.17 Frontage

“Frontage” means the length or width in feet applied to a lot based on the benefit received from the abutting sewer, as determined by the District.

Section 2.19 Sewage

“Sewage” means any water borne or liquid wastes including domestic sewage and industrial waste, but does not include or mean storm water, ground water, roof, or yard drainage.

Section 2.20 Domestic Sewage

“Domestic Sewage” means the water borne wastes derived from the ordinary living processes and of such character as to permit satisfactory disposal, without special treatment, into the public sewer or by means of a private sewage disposal system.

Section 2.21 Effluent

“Effluent” means the liquid flowing out of any treatment plant or facility construed and operated for the partial or complete treatment of sewage or industrial waste.

Section 2.22 Industrial Waste

“Industrial Waste” means any and all waste substances, liquid or solid, except domestic sewage and includes among other things radioactive wastes and explosives, noxious or toxic gas when present in the sewage system.

Section 2.23 Public Sewer

“Public Sewer” means a main line sanitary sewer, dedicated to public use.

Section 2.24 Main Line Sewer or Force Main Sewer

“Main Line Sewer” or “Force Main Sewer” means any public sewer in a dedicated right of way in which changes in alignment and grade occur only at manholes, or where angle points or curves between manholes have been approved by the District. Such sewer lines are generally eight inches or more in diameter.

Section 2.25 House Lateral

“House Lateral” means that part of the sewer piping within the street or right of way that extends from the property or sewer right of way line to a connection with the main line sewer.

Section 2.26 Tapping

“Tapping” means the forming of a Tee or Wye branch connection to a main line sewer by installing a Tee or Wye Saddle after the sewer is in place.

Section 2.27 Tee or T

“Tee” or “T” means a fitting for a branch on which the spur joins the barrel of the pipe at an angle of approximately 90 degrees.

Section 2.28 Saddle

A “Wye Saddle” is a short pipe fitting with a shoulder at one end to allow the application of the fitting to a hole tapped in the main line sewer such that the short pipe shall form a 45-degree angle from the main line sewer pipe.

A “Tee Saddle” is a short pipe fitting with a shoulder at one end to allow the application of the fitting to a hole taped in the main line sewer such that the short pipe shall form a 90-degree angle from the main line sewer pipe.

Section 2.29 Wye or Y

“Wye” or “Y” means a fitting for a branch on which the spur joins the barrel of the pipe at an angle of approximately 45 degrees.

Section 2.30 Chimney

“Chimney” means a vertical section of a sewer pipe extending either from a vertical tee set 90 degrees to the main line or from a long radius ¼ bend set vertically at the curb or property line, and in either case suitably reinforced with concrete.

Section 2.31 Seepage Pit

A “Seepage Pit” is a lined excavation in the ground that receives the discharge of a septic tank, so designed as to permit the effluent from the septic tank to seep through its bottom and sides.

Section 2.32 Septic Tank

A “Septic Tank” is a water-tight receptacle which receives the discharge from a sewage system, designed and constructed to retain solids, digest organic matter through a period of detention and allow the liquids to discharge into the soil outside of the tank through a drain field system or one or more seepage pits.

Section 2.33 Interceptor

An “Interceptor” is a device designed and installed to separate and retain deleterious, hazardous, or undesirable matter from wastes.

Section 2.34 Sewage Pumping Plant

“Sewage Pumping Plant” means any works or device used to raise sewage from a lower to a higher level or to overcome friction in a pipeline.

Section 2.35 Customer

“Customer” shall mean any person described herein who receives sewage service from or discharges sewage to the District system and, except as specifically provided in this Chapter, shall be the owner.

Section 2.36 Private Sewer Line

The portion of the sewer collection system that is located on the owner’s side of the property or sewer right-of-way line.

Section 2.37 Collection System

The system by which sewage is collected throughout the service area within the District, including, but not limited to, private sewer lines, house laterals, mainline sewers, pumping plants and all other appurtenances.

Section 2.38 Master Fee Schedule.

“Master Fee Schedule” means the Mammoth Community Water District Master Fee Schedule adopted on March 17, 2022 and effective April 1, 2022, or any subsequently amended schedule then in effect, which sets forth in U.S. dollar amounts each of the rates, fees and charges for sewer service and related miscellaneous District services required or authorized by this chapter, and which Master Fee Schedule is attached to and incorporated by reference in full as Appendix A to this Code and which schedule may be separately amended by the District Board of Directors by motion or resolution and reattached to this Code from time to time without the necessity of amending the Code’s enacting ordinance.

DIVISION III GENERAL PROVISIONS AND REGULATIONS

Section 3.01 Amendments

Whenever a power is granted to any portion of this chapter, such references apply to all amendments and additions thereto.

Section 3.02 Delegation of Powers

Whenever a power is granted to or a duty imposed upon the District by provision of this chapter, the power may be exercised, or the duty performed by an authorized person or agent of the District.

Section 3.03 Validity

If any provision of this chapter or the application thereof to any person or circumstance is held invalid, the remainder of the chapter, and the application of such provisions to other persons or circumstances shall not be affected thereby.

Section 3.04 Enforcement

The District Manager shall enforce the provisions of this chapter and for such purpose shall have the powers of a peace officer. Such power shall not limit or otherwise affect the powers and duties of the County Health Officer.

Section 3.05 Minimum Standards

Facilities shall be designed to produce an effect that will not pollute underground or surface waters, create a nuisance, or menace the public peace, health, or safety. The District Manager shall consult with the Health Officers and officials of public agencies, and from time to time, promulgate standards that may vary according to location, topography, physical conditions, and other pertinent factors.

Section 3.06 Penalty for Violation

Every person violating any provision of this chapter or any conditions or limitations of permit issued pursuant thereto is guilty of a misdemeanor and upon conviction is punishable by a fine as stated in the Master Fee Schedule.

Section 3.07 Continued Violation

Each day during which any violation described in this chapter is willful continues shall constitute a separate offense punishable as provided by this chapter.

Section 3.08 Notice

Unless otherwise provided herein, any notice required to be given by the District Manager under this chapter shall be in writing and served in the manner provided in the Code of Civil Procedure for the service of process, or by registered or certified mail. If served by mail, the notice shall be sent to the last address known to the District Manager. Where the address is unknown, service may be made as above provided upon the owner of record of the property.

Section 3.09 Time Limits

Any time limit provided for in this chapter may be extended by mutual written consent of both the District and the permittee or applicant, or other persons affected.

Section 3.10 Identification

Inspectors and sewer maintenance men shall identify themselves upon request when entering upon the work of any contractor or property owner for any inspection of work required by this chapter.

Section 3.11 Maintenance Inspections

The District Manager may inspect, as often as he deems necessary, every main line sewer, sewage pumping plant, waste pre-treatment plant, sewer connections, interceptor, or other similar appurtenances to ascertain whether such facilities are maintained and operated in accordance with the provisions of this chapter. All persons shall permit and provide the District Manager with access to all such facilities at all reasonable times.

Section 3.12 Access Requirements

No object, whether a permanent structure, or temporary structure, or any object which is difficult to remove, shall be located on a sewer easement or placed in such a position as to interfere with the ready and easy access to any facility described in Section 3.11. Any such obstruction, upon request of the District Manager, shall be immediately removed by the violator at no expense to the District and shall not be replaced.

Section 3.13 Interference with Interceptors

No person shall, during reasonable hours, refuse, resist, or attempt to resist the entrance of the District Manager into any building, plant, yard, field, or other place or portions thereof in the performance of his duty within the power conferred upon him by law or by this chapter.

Section 3.14 Maintenance of Plants, Interceptors, and Other Facilities

The requirements contained in this chapter, covering the maintenance of sewage pumping plants, waste pre-treatment plants, interceptors, or other appurtenances, shall apply to all such facilities now existing or hereafter constructed. All such facilities shall be maintained by owners thereof in a safe and sanitary condition, and all devices or safeguards that are required by this chapter for the operation of such facilities shall be maintained in good working order.

This section shall not be construed as permitting the removal or non-maintenance of any devices or safeguards on existing facilities unless authorized in writing by the District Manager.

Section 3.15 Operation and Maintenance of House Laterals and Private Sewer Lines

a) The owner of the property served by the District's collection system shall be responsible for the operation and maintenance of the private sewer line, and all devices or safeguards required by this chapter, which are located upon the owner's property, and which are outside the District's right-of-way line
b) The District shall be responsible for the operation and maintenance of that portion of the collection system that is in the District's right-of-way, which has been dedicated to the District or which is not located upon the owner's property served by the District's collection system.
c) The owner served by the District's collection system shall be responsible and liable for all costs involved in the repair of all damage caused by the owner or agents thereof to the collection system, including but not limited to sewer obstructions, wherever located.

Section 3.16 Rain and Surface Water Drainage

No pool, receptacle, area, or roof that receives or disposes of rainwater or surface water shall be connected to any private or public sewage disposal system.

Section 3.17 Notice to Stop Work

Whenever any construction is being done contrary to the provisions of any law, standard, or ordinance, the District Manager shall issue a written notice to the responsible party to stop work on that portion of the work on which the violation has occurred. No work shall be done on that portion until corrective measures have been taken and approved by the District Manager.

Section 3.18 Mandatory Sewer Connections

All occupancies requiring sanitation facilities as defined in the Uniform Building Code shall be connected to the public sewer. Withstanding any provision to the contrary, structures shall be connected to the public sewer by July 1, 1973, if the public sewer is available. Availability shall mean a public sewer that has been constructed and is in use within 100 feet of the premises.

No person shall cause or permit the disposal of sewage or other liquid waste into any drainage system that is not connected to the public sewer when such connection is required by this section.

Section 3.19 Liability of Contractor for Damaged Lines

a) For the purposes of this section only, the term "contractor" shall indicate a person with whom the District has contracted for the construction of any sewer lines or facilities.
b) As between the contractor and the District, the District shall be liable for any damage to an existing sewer line or facility on a construction site when such damage does not result from the contractor's failure to exercise reasonable care, and which does result from the District's failure to identify the damaged line or facility upon the plans or specifications provided to the contractor.
c) This section shall not be deemed to require the District to indicate the presence of other visible facilities on or adjacent to the construction site. This section shall not be deemed to relieve the District from identifying main lines or other facilities on its plans and specifications.

Section 3.20 Warning Notices

a) For the purposes of this section, a requesting party is defined to include any person who desires to examine the District's plans and specifications regarding the location of any lines or facilities and who is not a District employee, or contractor as defined in Section 3.19 (a).
b) A requesting party shall be provided the following warning notice in writing and shall execute a copy thereof: WARNING NOTICE. The locations of Mammoth Community Water District underground facilities shown in and on the District's records, maps, as-builts, etc. are believed to be accurate. The District does not warrant that all facilities are located as shown. A party engaging in any excavation in the District shall take all steps necessary to avoid contact with underground facilities that may result in injury to persons, property, or damage to the District's facilities. The final determination of the exact location and the cost of repair to damaged facilities shall be the responsibility of the excavating party.

Section 3.21 Location of Lateral Inconsistent with District As-Builts

Whenever a house lateral is not located as shown on District as-built maps, District personnel shall assist to the extent possible to determine the location of the house lateral by use of surface and underground line detector. However, the District shall bear no expense for equipment, excavation and/or labor expenses incurred by any person in determining the location of District lines, house laterals and other facilities.

This section shall not apply to construction undertaken by District contractors, as defined in Section 3.19 (a).

Section 3.22 Non-Existent Laterals Shown On As-Builts

a) Before a house lateral, that is shown to exist on District maps, is determined to be non-existent, the person attempting to locate the house lateral shall contact the Operations and Maintenance Manager for determination relative to the amount of digging and/or research to be required of the person in locating the house lateral. The District shall not be liable for any expenses for equipment, excavation, and/or labor incurred by any person in determining the existence of any laterals, lines or other facilities.
b) When the District has previously been provided with as-built maps and the Manager has determined that no house lateral exists as shown on the District as-builts, the Manager or the Operations and Maintenance Manager shall:
    i. Waive any applicable main line tap fees and
    ii. Install the house lateral at the District's expense if there is an existing main servicing the property.
c) This section shall not apply to construction undertaken by District contractors, as defined in Section 3.19 (a).

DIVISION IV GENERAL POWERS AND DUTIES

Section 4.01 Record of Fees

The District Manager shall keep in proper books a permanent and accurate account of all rates, fees, and charges required to be paid under this chapter and as stated in the Master Fee Schedule, giving names and addresses of the persons on whose accounts the same were paid, the date and the amount thereof, and the number of permits granted if any, which books shall be open to public inspection.

Section 4.02 Estimated Valuations

Whenever the fees or charges required to be paid by this chapter are based on valuations, as further provided in the Master Fee Schedule, the District Manager shall determine the estimated valuation in all cases, and for such purposes shall be guided by approved estimating practices.

Section 4.04 Joint Action with Other Public Agencies

The District Manager may contact, confer, and negotiate with officials of any public agency and may recommend to the Board a contract by which the District and one or more public agencies may jointly exercise any powers pertinent to the enforcement of this chapter and any similar statute, ordinance, rule, or regulation of such public agencies, common to all.

Section 4.06 District Manager to Issue Permit

If it appears from the application for any permit required by this chapter that the work to be performed there under shall be done according to the provisions of this chapter, the District Manager upon receipt of the fees hereinafter required shall issue such permit.

Section 4.07 Certificate of Final Inspection

When it appears to the satisfaction of the District Manager that all work done under the permit has been constructed according to, and meets the requirements of all the applicable provisions of this chapter, and that all fees have been paid, the District Manager, if requested, shall cause to be issued to the permittee constructing such work a certificate of final inspection. The said certificate shall recite that such work as is covered by the said work is in an approved condition.

Section 4.08 Relief on Application

When any person, by reason of special circumstances, is of the opinion that any provision of this chapter is unjust or inequitable as applied to his/her use or premises, he/she may make written application to the Board, stating the special circumstances, citing the provision complained of, and requesting suspension or modification of that provision as applied to his/her use or premises.

If such application be approved, the Board may, by appropriate action, suspend or modify the provision complained of, as applied to such use or premises, to be effective as of the date of the application and continuing during the period of the special circumstances.

Section 4.09 Relief on Own Motion

The Board may, on its own motion, find that by reason of special circumstances a provision of this chapter is unjust or inequitable as applied to a particular premises or use, and may, be appropriate action, suspend or modify the provision as applied to such premises or use during the period of such special circumstances, or any part thereof.

Unless otherwise stated, these Rules and Regulations shall apply to any and all users to whom the Mammoth Community Water District (District) distributes tertiary recycled water pursuant to the Master Permit.

DIVISION V PERMITS

Section 5.01 Permit Request

No person other than the persons specifically excluded in this chapter, shall commence, do or cause to be done, construct or cause to be constructed, use or cause to be used, alter or cause to be altered, or connect to any public sewer, mainline sewer, house lateral, sewage pumping plant, or other similar appurtenance in the Mammoth Community Water District without first obtaining a Sewer Permit from the District Manager and paying the appropriate fees as stated in the Master Fee Schedule.

Section 5.02 When Permit Not Required

The provisions of this chapter requiring permits shall not apply to contractors constructing public sewers and appurtenances under contracts awarded by the Board and entered into under proceedings pursuant to any of the special procedure statutes of this State providing for the construction of sewers and the assessing of the expense thereof against the lands benefited thereby, or under contracts between the contractor and the District.

Section 5.03 Validity of Permits

A. 1. (b) The usage of a permit for a lot or premises other than the lot or premises for which the permit was issued shall be considered an unauthorized usage and is prohibited.

A. 1. (c) The usage of a permit for a lot or premises, which has an increased number of units, hook-ups or taps, than that for which the permit was issued shall be considered an authorized usage and is prohibited.

A. 1. (d) The usage of a permit for a lot or premises which has more fixture units or facilities than that for which the permit was issued shall be considered an unauthorized usage and is prohibited until and unless fees are paid for the additional fixture units/facilities in the amounts stated in the Master Fee Schedule and for any additional plan checking fees in the amounts stated in the Master Fee Schedule.

A. 1. (e) (1) The usage of a permit for any lot or premises which has a different design as to its distribution system, fixture units, or facilities from that shown on the plans for which the permit was issued, shall be unauthorized unless the permittee first provides the District with a revised set of plans showing the different design and the permittee pays all administrative fees the District incurs in reviewing and inspecting the revised plans, including, but not limited to, pre-plan check fees and inspection fees as stated in the Master Fee Schedule. This requirement is in addition to other requirements or limitations imposed upon the usage of permits as set forth in this Code.

A. 2. (a) The unauthorized usage of a permit in a manner prohibited by Section 5.03.A.1 imposes a different or greater demand upon the District's sewer system. Therefore, the owner shall apply to the District for a new permit to authorize the increase in the number of hook-up units, fixture units or taps

from that specified in the existing permit. The owner applying for a new permit shall comply with the District's then existing ordinances, rules, and regulations concerning permits, including, but not limited to, the payment of the appropriate fees and charges as stated in the Master Fee Schedule, and compliance with the District's water saving and water conservation device requirements set forth in Section 2.38 and 3.22 of Chapter 12 of the District Code. Such compliance shall fully occur within sixty (60) days of written notice from the District of the unauthorized usage. In the event that the owner fails to timely comply, the District may revoke the permit and the permittee shall be subject to the provisions of Section 5.03.A.3 below.

A. 3. When the District determines that an unauthorized usage of a permit has occurred, the District shall, in addition to all other enforcement devices set forth in this code, have the option of declaring part, or all, of the unauthorized usage to be void and demand that the unauthorized acts cease until such time as appropriate permits have been applied for the obtained, if available, and/or all appropriate fees and charges have been paid.

A. 4. The terms "unit", "hook-ups", "taps", "Fixture Units" and "Facilities", as used in this Section, shall refer to those terms as specified in Section 6.03.

C. Any assurance of sewer service issued by the District, in any form, in addition to the conditions as ordained heretofore, shall also be issued on the provision that the assurance is given on the state of facts existing on the date of that issuance, and that such facts may change subsequent to the date of issuance.

D. 6. (a) Notwithstanding any other section of the District Code, no permit shall be issued for any development for which the Town of Mammoth Lakes requires approval of a final tract map except upon the following conditions:

D. 6. (a) The application for issuance of a permit shall be accompanied by a certified copy of documentation from the Town of Mammoth Lakes indicating the Town's approval of a tentative map for the proposed development; and

D. 6. (b) Any permits so issued shall automatically become void upon the expiration or invalidation of the tentative map unless a valid final map has been approved and issued in place thereof. This provision shall be in addition to any other section of the District Code pertaining to the issuance, vesting or invalidation of permits, including, but not limited to the provisions of Section 5.03. H.

G. A letter of sewer availability for a single family residential unimproved lot subdivision or other development shall, in addition to all other terms and conditions required by District rules, regulations and ordinances, provide that said letter does not unconditionally guarantee any priority or reservation of capacity but that the developer or subsequent purchaser must acquire a sewer permit prior to construction of any improvements. Said letter shall further provide that such permits will be issued by the District solely on a first-come, first served basis and only to the extent there is then remaining available capacity in the physical facilities for conveyance and treatment. The letter shall also indicate

that such permits will be issued only upon payment of all then applicable fees and charges and in accordance with and subject to all then applicable District rules, regulations, and ordinances.

H. 1. There shall be a permit for each hook-up unit or portion thereof, as defined in Section 6.03 of Division VI of this Chapter 11.

H. 2. Any permit or assurance of sewer service shall be issued on a first-come, first-served basis. To maintain the validity of a permit and to keep a permit in full force and effect, the following conditions must be met within 3 years from the date of the issuance of the permit, except that the General Manager may extend an un-expired permit for a period not to exceed one year upon written request by the permittee made prior to the expiration of the permit:

H.2.a. Those portions of the project's collection system which are to be constructed by the permittee, shall be inspected and approved by the District and dedicated to the District.

H.2.b. The permittee has timely complied with the requirements of Section 5.03.I. of Division V of Chapter 12 of the District Code, regarding water service to the same premises described in the permit for sewer service; and

H.2.c. The permittee has paid all applicable fees and charges required by this Chapter 11, and has otherwise complied with all applicable provisions of this Chapter 11 in connection with the issuance of permits and the initiation of sewer service.

H.3. A permit shall become null and void if the permittee fails to comply with the provisions of this Section 5.03.H., or if a building permit from the Town of Mammoth Lakes is not obtained within one year from the date of issuance of the District's permit. If sewer service has commenced pursuant to the provisions of Section 6.04 of Chapter 11 of the District Code, such service shall terminate as of the date that the permit becomes null and void. If any permit becomes null and void and the connection charges paid for such permit are not refunded, then the amount of such charges shall be credited against any connection charges due on a subsequent application for sewer service for the same premises described in the void permit.

Section 5.04 Application for Sewer Permit

Any person requiring a Sewer Permit shall make written application to the District Manager.

The District Manager shall provide printed application forms of the permits provided for by this chapter, indicating thereon the information to be furnished by the applicant. The District Manager may require in addition to the information furnished by the printed form, any additional information from the applicant that will enable the District Manager to determine that the proposed work or use complies with the provisions of this chapter.

Section 5.06 Refunds

The permittee shall be entitled to a refund of all moneys paid pursuant to Sections 6.02, 6.03, and 6.14, less any costs incurred by the District in connection with the permit and a refund processing fee as stated in the Master Fee Schedule. In order to be entitled to such a refund, the permittee must request the refund in writing and not have commenced water service. The written request must be delivered to the District or postmarked by the United States Postal Service within one year of the date of issuance of the permit. No refunds will be made if such request is not made in a timely manner.

Section 5.07 Sewers in Public Ways

Before granting any permit for the construction, installation, repair or removal of any sewer, or appurtenances thereto, which will necessitate any excavation of fill, in, upon, or under any public street, highway or right-of-way under the jurisdiction of another public agency, the District Manager shall require the applicant to fill out the necessary forms of the agency having jurisdiction and pay the required fee. The District will obtain the encroachment permit required.

Section 5.08 Plan Approval Required

No sewer Construction Permit shall be issued until the District Manager has checked and approved the plans in accordance with the other applicable provisions of this chapter.

Section 5.09 Pumping Plants

Before granting a permit for the construction of any sewage pumping plant the District Manager shall check and approve the plans or required modification thereof as to their compliance with county, state, and other governmental laws or ordinances and shall require that the facilities be adequate in every respect for the use intended.

Section 5.10 Excessive Discharge of Sewage

Any person proposing to have sewage discharged from any property to a public sewer in quantities or at a rate greater than the capacity for which the sewer was designed, when such additional quantities will immediately overload the sewer, shall be denied a permit to connect any facilities to the sewer which will discharge more than the proportionate share allotted to the property. However, if such additional discharge will not immediately but may in the future overload the sewer, a conditional permit to connect to the sewer may be issued after the owner of the property agrees by a covenant satisfactory to the District Manager recorded against the land to construct or to share in the cost of construction of additional sewer capacity at such future time as the District Manager determines that an overload situation exists or is imminent. The owner of the property shall supply a faithful performance bond guaranteeing compliance with the terms of the covenant, in a penal sum that in the opinion of the District Manager, equals the future cost of construction of sewer facilities to carry such additional discharge.

The faithful performance bond shall be kept in full force and effect until such additional discharge is discontinued or until such additional sewer facilities are completed, and this obligation shall pass to succeeding owners of the property.

If any owner fails to supply and keep in effect the required faithful performance bond or fails to comply with the terms of the covenant, the conditional permit allowing such additional discharge may be revoked, and the continuing of such additional discharge thereafter will constitute a violation of this chapter.

The provisions of this section shall also apply to any property previously connected to a public sewer, the discharge from which is later proposed to be increased or is found to have been increased substantially beyond the proportionate share of public sewer capacity allotted to the property.

Section 5.11 Pre-Plan Check Policy

Prior to the issuance of a permit, the permittee shall submit two (2) sets of plans to the District for pre-plan check. The plans shall be checked for compliance with all District specifications, rules, and regulations. Prior to the District performing the pre-plan check, the applicant shall pay a fee to the District as stated in the Master Fee Schedule. Such a pre-plan check is not an assurance of sewer service, nor a sewer permit for the particular project. The submittal of plans and/or documents for pre-plan check shall not constitute nor be considered an application for a sewer permit.

Section 5.13 Underutilization of Hook-Up Units

A. Except as otherwise provided in the District Code, when land uses at a premises no longer exist for which hook-up unit fees were paid, and the owner of the subject premises desires that the permit for the unused hook-up units remain in effect, the District shall impose only its base charge for such non-used hook-up units and, where applicable, discontinue service. Unless the owner provides the written notice specified in Subsection B. below, the District will impose its base charges for non-uses hook-up units.

B. When land uses at a premises no longer exist for which hook-up unit fees were paid, the owner of such premises may relinquish such unused hook-up units, and, where applicable, have service discontinued. The owner of the premises must give the District written notice thereof. Upon receipt of such written notice, the District shall discontinue any sewer service charges, including base charges, imposed respecting such relinquished units, and, where applicable, discontinue service. Such discontinuation shall occur in the month during which such written notice is received, and any charges for the month shall be imposed according to the number of days in the month for which the hook-up units remain in effect. There shall be no refund of hook-up unit fees paid on the relinquished units. If after relinquishment of the unused units, the owner of the subject premises later desires to renew service or increase the number of authorized hook-up units at such premises, the owner shall apply for such renewed service or additional units in accordance with the ordinances, rules and regulations of the

District regarding applications for sewer service, except that the amount of any capacity fees (hook-up unit fees) previously paid for the relinquished units shall be deducted from the amount of capacity fees due pursuant to the application.

DIVISION VI FEES AND CHARGES

Section 6.01 Plan Checking Fees

Any person required by this chapter to have plans checked must pay to the Mammoth Community Water District the fee or fees stated in the Master Fee Schedule.

If any portion of the plans, after having been checked, are required to be redrawn or rechecked, as a result of additional footage of main line sewer or for any other reason, the applicant shall pay a rechecking fee as stated in the Master Fee Schedule. No plan rechecking fee will be performed until the required rechecking fee is paid.

Applications are available in the District office and are to be filled out by the Engineer submitting the plan.

Section 6.02 Sewer Construction Permit Fee

A. Before granting any permit for the construction of a main line sewer, house lateral sewer, sewage pumping plant, and whenever a permit for any waste treatment or disposal facility is required by the District, the District Manager shall collect fees stated in the Master Fee Schedule from the applicant to cover the costs of field and structure inspection of the proposed construction procuring or preparing record plans, automobile mileage and all overhead and indirect costs.

Section 6.03 Sewer Connection Charges

A. All sewer connection charges shall be paid to the District upon approval of an application and prior to issuance of a permit.

B. Sewer connection charges shall be imposed based on the water meter size serving the premises in accordance with the schedule stated in the Master Fee Schedule. An automatic annual escalator shall be added to the sewer connection charges at the beginning of each District fiscal year beginning April 1, 2020. The escalator will be based on the “ENR 20-city construction cost index” as shown in the Engineering News Record (ENR). The sewer connection charges shall be increased by the percent change of the cost index for the previous year ending December 31.

C. If there is an adequate, existing house lateral to which a premises shall be connected, no -tap is required. If there is an existing house lateral which is not adequate for the premises to be served or if there is not an existing house lateral to which the premises to be served may be connected, then the customer will be billed for the District’s costs for any work completed by the District in relation to tapping the mainline.

D. Connections of house laterals or of a force main into the District’s existing force main shall be charged the applicable sewer connection charge for each related water meter installed, except for meters

installed for irrigated landscaped areas. The District shall bill the property owner for its costs to perform any tap required under these circumstances.

Section 6.04 Billing for Sewer Services

The District shall begin billing for sewer service when the private sewer line is connected to the house lateral, and such connection has been inspected and approved by the District. The commencement of sewer service shall not relieve a permittee from timely compliance with the requirements of Subsection 5.03 H of Division V of this Chapter 11; and the permit is subject to revocation and service is subject to termination if such timely compliance does not occur.

Section 6.05 Fees for Processing Sewer Easements

For each private contract requiring the processing of sewer easements, the District Manager shall collect from the applicant the fees stated in the Master Fee Schedule for each parcel description through which a sewer easement is required. In addition, a policy of title insurance insuring the easement in favor of the District shall be furnished at the sole cost of the applicant.

In the event it is necessary to rewrite the description because of the realignment or revision, the District Manager shall collect an additional fee as stated in the Master Fee Schedule for each new parcel description necessary.

Section 6.07 Fees for Preparing or Checking Special Studies

Before proceeding with the preparation of any special study, the District Manager shall collect a fee from the person making the request for the study. The amount of this fee is stated in the Master Fee Schedule. If, after the fee is paid, a change in the study is requested which will increase the cost of preparing the study, supplemental fees shall be collected in the amount of the estimated additional cost.

Studies prepared by others and submitted for checking by the District shall be subject to the fee requirements stated above.

Section 6.08 Cesspool Truck Disposal

Operators of septic pump trucks required to discharge the contents of their tanks into the District's wastewater treatment facility may do so upon payment of a disposal fee as stated in the Master Fee Schedule. Approval from the District shall be required prior to discharge.

Section 6.09 Collection of Fees Charged

All fees and charges required to be paid under Sections 6.01, 6.02, 6.03, 6.14, 6.15, and 6.17 shall be paid prior to issuance of any permit.

Section 6.10 Stand-by or Sewer Availability Charge

A yearly stand-by or sewer availability charge shall be levied on undeveloped land within the District to which sewer is made available whether the sewer is used or not. The charge shall be as stated in the Master Fee Schedule and the charge shall be added to and become a part of the annual tax levied upon the land.

In the event that the sewer stand-by charge remains unpaid on the first day of the month before the month in which the Board of Supervisors of Mono County is required to levy the taxes for county purposes, a six (6) percent penalty shall accrue thereon. The amount of the unpaid stand-by charge plus the amount of the penalty shall be added to and become a part of the annual tax levied upon the land and shall constitute a lien on that land.

Section 6.11 Rates and Charges for Sewer Service

A. For the purpose of this section only, the specified terms shall have the following definitions

1. "Domestic users" shall mean all residential users, including single family residences, condominium units, apartment units, mobile homes and motels.

2. "Commercial users" shall mean all business or other similar users, including RV spaces, commercial units, motels, ski dormitories, laundries, laundromats, service stations, car washes, restaurants, bars, theaters, hospitals, schools, - and public spa/hot tubs (semi-public).

3. "Industrial user" shall mean:

(a) Any non-governmental, nonresidential user of a publicly owned treatment works:

(i) Identified in the Standard Industrial Classification Manual, 1972, Office of Management and Budget, as amended; and

(ii) Which discharges more than 25,000 gallons per day (gpd) of sanitary waste, or which discharges, after exclusion of domestic waste or discharges from sanitary conveniences, the weight of biochemical oxygen demand (BOD) or suspended solids (SS) equivalent to the weight found in 25,000 gpd of sanitary waste; or

(b) Any non-governmental user of a publicly owned treatment works which discharges wastewater to the treatment works which contains toxic pollutants or poisonous solids, liquids, or gases in sufficient quantity, either singly or by interaction with other wastes, to contaminate the sludge of any municipal systems, or to injure or interfere with any sewage treatment process, or which constitutes a hazard to

humans or animals, creates a public nuisance, or creates any hazard in or has an adverse effect on the waters receiving any discharge from the treatment works.

4. “Commercial unit” shall mean each office, store, or other separately owned or operated commercial space or structure, including any commercial user which is not otherwise specifically identified.

5. “Mobile home” shall mean a trailer or other similar vehicle, which is located more or less permanently on a lot and is used as a residence.

6. “RV space” shall mean any short-term parking and/or service space for transitory trailers, campers or other recreational vehicles.

7. “Laundry” shall mean a commercial laundering facility.

8. “Laundromat” shall mean a self-service laundry utilized by the public.

9. “Public building” shall mean any public service building, including a police station or fire station or any other publicly owned building not otherwise specifically identified.

B. Each lot or premises which is connected to, and each owner receiving sewer service from, the District’s collection system shall pay a monthly sewer charge, as stated in the Master Fee Schedule.

1. In addition to the monthly sewer charge, an industrial user shall pay a monthly waste quality surcharge which shall be computed by the District in accordance with the formula in the Master Fee Schedule.

   In the event that the average waste discharge characteristic and surcharge factor is disputed, the discharger shall submit a request for an analysis and flow measurement to the District and bear all expenses associated with the measurement and sampling.

2. For each industrial user, the District may require the installation, at the expense of the industrial user, of District-approved recording and sampling devices or sewage meters on the user’s premises for use by the District. Such devices or meters shall be available for inspection by District personnel at any reasonable time. The industrial user shall be responsible for the maintenance, repair and replacement of all sampling or recording devices, sewage meters, and related equipment. The industrial user shall be responsible for any damage or expense involved in the repair or replacement for which the industrial user, its agents, officers or employees is or are responsible.

3. At its sole option and as an alternative to the industrial user charge, the District may require an industrial user to pre-treat the user’s sewage flow so that the flow, after exclusion of

domestic wastes or discharges from sanitary conveniences, is less than the equivalent weight in BOD and SS found in 25,000 gpd of sanitary waste.

C. Each common space or area for condominium, apartment, or similar structure shall constitute one unit for purposes of determining sewer charges.

D. No sewer service shall be furnished to any premises or persons except through a service connection in compliance with the District's rules and regulations.

E. The District shall not charge its monthly sewer charge as stated in the Master Fee Schedule with respect to any lot or premises which is connected to the District's collection system during the period that, as determined by the General Manager, such lot or premises has been rendered unusable due to circumstances beyond the control of the permittee, his/her officers, directors, employees, agents tenants, or independent contractors; provided that such period of relief from the monthly sewer charge shall not extend beyond three years, except that the General Manager may for good cause shown extend the period for one additional year. Circumstances beyond the permittee's control may include, but are not limited to, fire, earthquake, explosion, or other natural disaster. In the case of a lot or premises occupied by multiple commercial and/or domestic users where one or more, but not all, of the premises of such commercial and/or domestic users on such lot or premises has or have been rendered unusable as described above, the reduction in the monthly sewer charges shall be equal to the total of such charges for those domestic and commercial users whose premises have been rendered unusable.

F. No sewer service shall be furnished to any premise or persons free of charge.

Section 6.12 Collection of Sewer Use and Service Charges and Rates

All sewer use and service rates and charges may be billed on the same bill as and collected together with rates and charges for any other District services. If all or any part of such a bill is not paid for any service, the District may discontinue any or all of the service for which the bill is rendered.

A. All services shall be billed on a monthly basis. The monthly billing statement will be for service rendered during the preceding month. A statement shall become delinquent on the twenty first (21st) day of the month following the month in which the statement is mailed.

B. A one-time basic penalty stated in the Master Fee Schedule shall be added to each delinquent bill for the first month the billed charges are delinquent. Pursuant to Subsection D, below, the Board may request the County Auditor to include the amount of delinquencies on the bills for property taxes against the respective lot or parcel. Prior to the collection of delinquent amounts pursuant to Subsection D, monies paid where any portion of an account is delinquent shall first be credited to the delinquent portion and then to the current billing. Once the delinquent amounts have been sent to the County Auditor's office for collection, no payment shall be received by the District on said delinquent amounts except as collected by the County Auditor's office.

C. The District shall include a statement on its bill to each customer, or shall provide such statement to each customer by any other means, that any charges remaining delinquent for a period of sixty (60) days shall constitute a lien against the lot or parcel of land against which the charges were imposed.

D. All rates, charges, penalties, and interest which remain delinquent as of June 30th each year shall be collected in the same manner as the general taxes for the District for the forthcoming fiscal year, provided that the District shall give notice as provided by law.

E. In the event that any customer fails to make such payment as provided above, the customer shall be deemed to be in default and, the District brings action to collect any sum in default under District ordinance terms, the customer shall pay, as an additional penalty, any and all attorney's fees and/or court and legal costs incurred by the District to bring such action. The District shall not be limited to any one remedy in the event of default, but may avail itself of any remedy or legal procedure available to it in such event.

Section 6.13 Billing Procedures

A. Except as otherwise specified herein, the District shall directly bill each customer receiving sewer service, and each lot or premises connected to the District's collection system. The monthly sewer charge shall be payable by each customer. Each customer shall be liable to the District for payment of the monthly sewer charge regardless of whether service is provided through an individual lateral or multi-customer lateral.

B. Where owners of premises in a multi-unit structure are billed individually and belong to a homeowners or similar association, the association shall provide to the District current and up-dated lists of the owners of each premises. The association shall inform the District in a timely fashion of any change in ownerships in its members.

C. Notwithstanding Section 6.13A, the District may elect to send a composite bill to groups of customers when each of the following conditions are met:

1. The owners to be billed as a group own lots or premises in a multi-unit living structure;

2. The owners have formally organized in writing into a homeowners or similar association;

3. The homeowners or similar association, through properly executed covenants, conditions, articles of incorporation or by-laws, has the power to act as the sole agent for the owners concerning water and sewer charges in a manner which binds individual owners; and

4. The association enters into a written agreement with the District which provides, among other matters, that;

a) The association shall be responsible for and guarantee payment of all such charges within the time required by the District's rules and regulations, regardless of whether any single owner has paid the owner's share of such charges to the association:

b) The District shall bill to and the association shall pay all delinquent penalty and interest charges on the composite bills'

c) The District's bill or other notices to the association shall constitute a bill or other notice to each individual owner who shall agree that no other notice or bill to individual owners shall be necessary for, or a prerequisite to, the District's exercise of its powers to terminate service, or place liens on each owner's property or exercise other legal remedies necessary to preserve the collection of and collect delinquent bills and charges.

d) The bill shall consist of the sum of the total monthly sewer charges for each owner represented by the association. Service to a common area shall be treated as service to a single unit.

D. All applications for service shall constitute a written agreement to pay for all services rendered pursuant to the application and to be bound by all applicable District rules and regulations. An application shall be signed by the owner who shall be responsible for the bills for sewer service provided.

Section 6.14 Fee for District Installation of House Laterals

The permittee shall pay all fees and charges associated with the installation of the house lateral. The permittee shall pay the appropriate fee for installation of the lateral to the District prior to the time of issuance of a permit by the District. The amount of the fee shall be stated in the Master Fee Schedule.

Section 6.15 Application Fee

A. When a person applies for a permit, the applicant shall pay to the District an application fee as stated in the Master Fee Schedule for each application submitted. The District shall not accept an application until it receives the application fee.

B. If a permit is issued, the application fee paid pursuant to this section and the pre-plan check fees paid pursuant to Section 6.17 and the Master Fee Schedule shall be applied to the overall fees required under this Division for the issuance of a permit.

C. Any person who has paid an application fee pursuant to this section and/or pre-plan check fees pursuant to Section 6.17 and the Master Fee Schedule and whose application is canceled or withdrawn shall not be entitled to a refund or credit respecting such paid fees.

D. An application shall be deemed canceled if the applicant does not pay the applicable sewer connection charges within one year from the date of the application.

Section 6.16 Deposit

a) Prior to receiving sewer service, an applicant for sewer service shall deposit with the District a sum equal to three (3) months of the meter inoperative rate for sewer service.

b) A deposit shall be required for each lot or premises when any of the following conditions occur:

1. Whenever an owner of property receiving sewer service from the District transfers the property to a new owner, the new property owner shall pay a deposit to the District as identified in Section 6.16 (a).

2. Whenever there is a change in the customer receiving sewer service, the new customer shall pay a deposit to the District as specified in Section 6.16 (a).

3. Any District customer whose sewer service is disconnected due to non-payment of District charges shall pay a deposit, as specified in Section 6.16 (a), as a prerequisite for resumption of sewer service.

c) Notwithstanding Section 6.16 (a), (b) (1), or (b) (2), an existing customer within the District who has not incurred any penalties or late charges on any sewer account with the District for nine (9) months of the immediately preceding twelve (12) months, shall not be required to deposit with the District an amount as identified in Section 6.16 (a).

d) Notwithstanding Section 6.16 (a) and (b), the District shall not retain as a deposit a sum greater than three (3) months of the meter inoperative rate for sewer service for any single lot or premises.

e) The District may use the deposit to pay any sewer bill, and penalties thereon, which are otherwise unpaid by the customer. The District may also use the deposit for its costs of collecting the unpaid sewer bill and penalties. If the District uses part or all of a customer's deposit, that customer shall pay the District a sum adequate to maintain a deposit equal to three (3) months of the meter inoperative rate as a condition of continued sewer service.

f) The amount of deposit not used by the District shall be refunded to the customer when the customer voluntarily terminates sewer service with the District.

g) The amount of the deposit not used by the District may be credited to the account of the customer at such time as the District determines a deposit is no longer required, provided the District has held the deposit for a minimum of twelve (12) months.

Section 6.17 Pre-Plan Check Fee

At the time an application is made to the District for a sewer permit, the applicant shall pay to the District a pre-plan check fee as stated in the Master Fee Schedule.

Section 6.19 New Connection Charges Resulting From Remodel or Redevelopment

If a larger water meter size is required in accordance with Section 6.25 of Division VI of Chapter 12 (Water Code), then the permittee also shall pay additional sewer connection charges reflecting the difference in the prevailing connection charge for the required larger meter and the prevailing connection charge for the existing meter to be replaced. There shall be no cash credits or refunds for meter down-sizing.

Section 6.22 Charges for Customer Requested Service Call

For any customer requested service call, the District will charge a service call charge as stated in the Master Fee Schedule.

DIVISION VII DESIGN STANDARDS

Section 7.01 New Main Line Sewers

New main line sewers shall conform to the requirements of this division, unless otherwise specifically excepted.

Section 7.02 New Sewage Pumping Plants

New sewage pumping plants shall conform to the requirements of this division unless otherwise specifically excepted.

Section 7.03 New House Laterals

New house laterals shall conform to the requirements of this division.

Section 7.04 Sewer Service for Large Lots

Where a lot is of sufficient size that the Zoning Ordinance does not prohibit its division into smaller parcels, each of such possible parcels upon which one or more buildings containing plumbing facilities are or may be located, shall be considered as a separate lot. Separate house laterals shall be constructed to the main line sewer for each of such possible parcels except where the owner has filed an affidavit stating that the land will be held as a unit and that before any division of land is made, separate sewer facilities will be provided for each parcel. If the main line sewer does not extend to a point from which such possible parcels can be served in accordance with the requirements of Section 7.14, the main line sewer must be extended in compliance with Section 7.14.

Section 7.05 Plans by Registered Civil Engineer

Any plans submitted for approval under the provisions of this chapter shall be prepared by or under the direction of and shall be signed by a Registered Civil Engineer of the State of California.

Section 7.06 Sewer Plans

a) Before a Sewer Permit may be issued, plans for the proposed construction shall be submitted to and approved by the District. The plans submitted shall become the exclusive property of the District.

b) After the fees required by this chapter have been paid, the District shall check the submitted plans for compliance with the requirements of this chapter and other applicable laws and ordinances of the city, county, state and other governmental entities.

c) The plans submitted shall be identical to plans for the same project submitted to the city, county, or other governmental entity. The District shall be notified of any changes in the plans. Any changes in the

plans must be checked and approved by the District prior to the issuance or modification of the sewer permit and shall be subject to Section 6.01, concerning plan checking fees.

d) All structures, facilities, and other appurtenances shown on the plans shall comply with all applicable District standards including, but not limited to design.

e) The plans submitted shall be adequate for the District to determine the proposed demand to be placed on the District's sewer system. The plans submitted shall be adequate for the District to calculate the applicable fees and charges.

Section 7.07 Sewer Easement Requirements

A person who wishes to have constructed a sewer in an easement under the provisions of this chapter shall present to the District a request for processing, sufficient information to enable the preparation of written description, the appropriate fees, and plans showing the locations of all structures in the proximity of the sewer.

The location and dimensions of a sanitary sewer easement shall be sufficient to provide present and future sewer service to abutting areas and adequate access for maintenance, as determined by the District. No easement shall be less than ten feet in width.

Section 7.08 Size of Main Line Sewer

The size of main line sewer pipe shall be determined by standards of design listed below, but in no case shall it be less than eight (8) inches inside diameter unless approved by the District.

For Zoning in the Following Categories	Coefficient Cubic Feet Per Second Acre
For Residential Areas:	
R-1	0.004
R-2	0.008
R-3	0.0012
	0.0016*
For Commercial Areas: C-1 through C-4	0.015*

*Individual building or commercial capacities shall be the determining factor when they exceed the coefficients shown.

The coefficient to be used for any zoned areas not listed will be determined by the District based upon the intended development and use.

Sizes and Grades: Pipes 15” and under in diameter shall be designed to flow at ½ depth at maximum flows with n = 0.013. Pipe 18” in diameter and over shall be designed to flow at ¾ depth at maximum flows with n = 0.013.

Minimum grades for various sizes of pipe are listed below:

6” pipe at s = .010 feet per foot
8” pipe at s = .004 feet per foot
10” pipe at s = .0032 feet per foot
12” pipe at s = .0024 feet per foot
15” pipe at s = .0015 feet per foot
18” pipe at s = .0014 feet per foot
21” pipe at s = .0012 feet per foot

Gradients shall be set to two figures divisible evenly by 4, such as s = 0.0036, whenever possible. Standard plan and profile drawings are available at the District.

For determining the maximum flow in the main line sewer appropriate acreage and per capita sewage flow data shall be used.

For convenience in computations, for house connections per acre may be used for tracts with average size lots of 7,500 square feet in area, making Q max. per connection in medium density residential areas = 0.0010 cfs. Acreage shall be taken to center of bounding streets and/or back lot line.

Section 7.09 Velocity

A main line sewer shall be designed to provide a minimum velocity of two (2) feet per second for pipes flowing one-half full, except that the District Manager may approve a gradient that will develop a lower velocity if he finds that a gradient that will develop a velocity of (2) feet per second is unobtainable.

Section 7.10 Grades

The slope of the sewers shall be shown on the plans in feet of fall per 100 feet of horizontal distance expressed as a percentage. Slopes used expressed in percentages shall be divisible, without remainder by four (4) in the hundredth column. For example, .036% complies with this section.

Section 7.11 Depth of Sewer

The minimum depth for main line sewers shall be seven and one-half (7.5) feet.

Where ground water is present, the depth for residential main line sewers must be sufficient to provide for a house lateral with a minimum depth of at least five (5) feet below the curb grade or center line of street or alley grade at the property line.

Exceptions to the above minimum may be made only as a special condition only after review and approval by the District.

Section 7.12 Structures

Manhole structures shall be placed in the main line sewer at all changes of alignment and gradient. The maximum distance between structures shall be not more than four hundred (400) feet. All structures shall be designed according to the standard drawings for structures on file with the office of the District. If a cleanout is used at the upstream end of the line, a maximum distance of two hundred (200) feet shall be used.

Section 7.13 Alignment and Location of Sewer in Street

Where design considerations permit, main line sewers shall have a straight alignment and shall be located five (5) feet from and on the northerly and easterly sides of the center lines off streets or alleys, except on major or secondary highways where separate sewers shall be located in the roadway six (6) feet from each curb line.

Section 7.14 Location of End Structures

End structures shall be placed at whichever of the following locations is farthest upgrade:

A. Not less than ten (10) feet upgrade from the downgrade lot line of the last lot being served.

B. Not more than forty (40) feet downgrade from the upgrade lot line of the last lot being served, if there may be a future extension of the main line sewer.

C. At a location where the house lateral and building sewer can be constructed in a straight alignment at right angles to the main line sewer.

Section 7.15 Asbestos Cement Pipe

Asbestos cement pipe shall conform to Federal Specifications Ss-P351a and shall be of pipe class required to meet the particular installation conditions. Pipe lengths shall be standard thirteen (13) foot lengths except that a maximum of ten percent (10%) of the total footage of any one size and class may be furnished in shorter length.

Section 7.16 Vitrified Clay Pipe

Vitrified clay pipe main line and house lateral sewers shall be constructed of the class designated as extra strength pipe.

Sewer pipe installed under a conduit or other structure, or at depth greater than twenty (20) feet or in other locations where the District determines that additional protection is required, shall be reinforced with a concrete cradle, or encased in concrete, or reinforced by other approved means, which will protect the pipe.

Sewer pipe installed in streets or public easements with the top of the pipe less than four (4) feet below the surface, as determined during construction or indicated on the plans, shall be encased in concrete, or other approved means to protect the pipe.

Section 7.17 Substructures

All substructures which will be encountered in the construction, or which will be installed as part of the improvement shall be shown and designated on the plan. Large substructures, which require special treatment in the design of the sewer, shall also be shown in the profile.

Section 7.18 Soil Conditions

Soil conditions, particularly in areas known to have high groundwater rock, or filled ground, shall be prospected and the results shown on the profile.

Section 7.19 Benchmarks

A System of benchmarks on the U.S.C. & G.S. Sea Level Datum of 1929 and adequate to construct the work shall be shown on the profile. The elevation of the sewer at the point where the system is to be discharged shall be shown as determined by the field from the above shown datum.

Section 7.20 Material of Pipe

All pipe other than asbestos cement, vitrified clay, or cast iron shall first be approved for use by the District and shall be equivalent to vitrified clay or cast-iron pipe in strength, effectiveness, durability, and safety in accordance with the use intended.

Section 7.21 House Laterals

a) For each lot, a six (6) inch internal diameter house lateral sewer shall be provided in the street a straight in alignment and grade between the mainline sewer and the property line, with minimum depths as required by Section 7.11 and at right angles to the mainline sewer whenever possible. Existing 4-inch house laterals and 4-inch wyes and easements may be used for connection to the sewer.

As shown in Exhibit A of this chapter, house laterals shall be marked at the property line with a # 4 reinforcing bar extending from a point twelve (12) inches above the house lateral to a point four (4) above the ground. The buried end of the #4 reinforcing bar shall be bent to provide an eight (8) inch right angle. Plastic “Idento-tape” labeled “sewer” shall extend from the end of the house lateral to

ground surface and shall be laid the end of the house lateral to ground surface and shall be laid twelve (12) inches above the entire length of the house lateral.

b) A District inspector shall be present during the installation of all house laterals to ensure that the locations of all hose laterals are properly marked on as-build maps and to ensure that the hose laterals are marked with a steel stake or some other means to guarantee easy location of the house lateral at any future date.

Section 7.22 Depth of Lateral in Street

The depth of house laterals at the property line shall be sufficient to provide service to the lowest or farthest point to be served on the lot at a minimum grade of 2% with the top of the pipe not less than one foot below the ground surface at any point. The minimum depth for house laterals at the property line shall be five and one-half (5 ½) feet below the curb grade or the center line of street or alley grade.

Section 7.25 Water and Sewer Separation

Water and sewer connections to District mains shall be separated so that no potential cross-connection exists. Water connections shall be a minimum of twelve (12) inches above the top of the house lateral with a horizontal separation of two (2) feet minimum from the structure to the mains. If the vertical and horizontal separations cannot be met as stipulated, a horizontal separation of ten (10) feet shall be required. Water and sewer line crossings on the applicant's property shall have a vertical separation of three (3) feet minimum between the bottom of the water line and the top of the house connection (water line on top). If the clearance is less than three feet, the sewer shall be encased in a concrete envelope for a distance of five (5) feet on each side of the water line, measured at right angles, from the outside of the water line. The concrete encasement shall provide a minimum of six (6) inches of cover around the periphery of the sewer line.

Section 7.26 As-Built Plans

Two sets of blue-line prints and one set of reproducible drawings delineating As-Built sewers and appurtenances shall be filed with the District prior to and as a condition of approval and acceptance of construction. No certificate of final inspection will be issued until "As Builts" have been filed with the District.

Section 7.27 Pipe Bedding

Materials used for pipe bedding within the pipe zone shall be granular select sand approved by the District. Material witting the pipe zone shall extend from six (6) inches below the pipe to twelve (12) inches over the top of pipe. Select sands shall be free from stone clods or other deleterious material shall be placed in the trench on each side of the pipe for the full length of the trench in six (6) inch layers. Each layer shall be thoroughly compacted by tamping or, where the material is sufficiently granular in nature as determined by the District, by water settling. In all cases, backfilling of the pipe

zone must be done by hand. Particular attention is to be given to the underside of the pipe fittings to provide a firm support along the full length of the pipe. Backfill shall be compacted to ninety (90) percent in accordance with ASTM D1557.

Section 7.28 Backfill

All backfill material, placement thereof, and compaction shall be in accordance with the requirements of the agency having jurisdiction thereof. In road right-of-way, backfill shall be in accordance with the encroachment period. In no case, however, will a lesser degree of compaction than herein before specified be permitted in the pipe zones. Excavated materials that do not comply with the requirements of the governing agency shall be replaced at the contractor's expense. Unsuitable material excavated shall become the property of the contractor and shall be removed from the work site.

Section 7.29 Inclusion of Other Utilities within Pipe Trench

No other utility shall be allowed in the pipe trench excavated for sewers or sewer appurtenances within the county rights-of-way. Utilities crossing over or under sewers shall be adequately marked and protected against future excavations for necessary repair of sewer lines.

DIVISION VIII INSPECTION

Section 8.01 Inspection by District Manager Required

All work done under the provision for this chapter shall be subject to inspection by and shall meet the approval of the District Manager, provided, however, that approval by the District Manager shall not relieve the permittee or any other applicable ordinance.

After the fee required has been paid and the permit issued, the District Manager shall inspect the construction for compliance with the requirements of this chapter.

Section 8.02 Notification When Ready for Inspection

The permittee shall notify the District Manager at least twenty-four hours prior to the time any inspection is to be made.

Section 8.03 Work Shall be Uncovered and Convenient

At the time of the inspection the permittee shall have all work uncovered and convenient and shall give the District Manager every facility to make a thorough inspection.

Section 8.04 Correction of Defective Work

If the construction does not conform to the provisions of this chapter, or if the permittee fails to prosecute the work with such diligence as to ensure its completion within the time specified, the District Manager shall notify the permittee in writing to comply. If the permittee fails to comply within five (5) days after the written notice, the permit shall be suspended or revoked in accordance with the procedures set forth hereinafter.

Section 8.05 Materials and Construction to meet Standard Specifications

All material used in any work done under provisions of this chapter shall be new, first-class material and shall conform to, and the manner of construction shall meet all the requirements prescribed by this chapter, by the “Standard Specifications for Public Works Construction”, and by “Standard Requirements for Design and Construction of Water Distribution Systems within the Mammoth Community Water District”, on file in the office of the District Manager before a certificate of final inspection will be issued.

Section 8.06 Facilities Not to be Used Prior to Final Inspection

No sewer or other facility constructed under the provisions for this chapter shall be placed in use until the work has been approved by the District Manager and a certificate of final inspection has been issued. Exceptions to this requirement may be made only when the work is substantially complete and

has been inspected, and if the District Manager determines that the best interest of the public will be served by permitting such use prior to completion of work.

DIVISION IX MAINTENANCE

Section 9.01 Removal of or Injury to Sewer

An unauthorized person shall not remove or cause to be removed, or injure or cause to be injured, any portion of any public sewer, sewage pumping plant, water pollution plant, or any appurtenances thereto.

Section 9.02 Opening Manhole

An unauthorized person shall not open or enter, or cause to be opened or entered, for any purpose whatsoever, any manhole in any public sewer.

Section 9.03 Dumping Effluent

The District Manager may permit operators of "Cesspool" pump trucks to dispose of septic tank, seepage pit or cesspool effluent, which does not contain harmful concentrations of industrial liquid waste, oils, greases, or other deleterious substances into certain designated manholes, upon payment of the fee stated in the Master Fee Schedule. No person shall dump such effluent in any manhole, other than those designated to accept such effluent, if it fails to meet the aforementioned requirements.

Section 9.04 Cleaning Manholes

When septic tank, seepage pit or cesspool effluent is dumped into a specified manhole under permission from the District Manager, it shall be discharged through a pipe or hose in a manner such that none of the effluent shall be left adhering to the sides or shelf of the manhole, and if any such effluent is inadvertently allowed to adhere to the sides of shelf of the manhole, the manhole shall be thoroughly cleaned with clear water.

DIVISION X DISCHARGE OF WASTE TO THE PUBLIC SEWER

Section 10.01 Waste Disposal Permit Required

A person discharging waste into a public sewer shall obtain a waste disposal permit from the District prior to discharge.

The District shall not grant such a permit unless it finds that sufficient capacity exists in the public sewer to allow for such waste or in the case of the FOG Control Program set forth in Division XVI of this chapter, that the FSE or Property Owner is complying with the provisions of that division.

Section 10.02 Revocation of Permit

The General Manager may recommend that revocation of, and the Board may revoke, any permit, if after a public hearing, if a public hearing is requested, or otherwise, after due investigation, the Board finds that the Permittee has failed to correct conditions as required by the District, or that fraud or deceit was employed in obtaining the permit, or that any other violation of this chapter exists.

Section 10.03 Application Form

The District shall provide application forms for the permit required by this Chapter indicating thereon the information to be furnished by the applicant. The District may require an addition to the information furnished by the application, any additional information from the applicant which will enable the District to determine that the proposed disposal complies with the provisions of this chapter.

Section 10.04 Permit

If it appears from the application for any permit required by this article that the proposed disposal complies with the provisions of this chapter, the District, upon receipt of the fees hereinafter required, shall issue such permit, with applicable general conditions and with or without any special conditions.

Section 10.05 Liquid Waste Disposal

Before granting a Waste Disposal Permit to any applicant, the District shall determine either that the waste is one which will not damage or destroy the public sewer or cause an unwarranted increase in the cost of maintenance of the public sewer or retard or inhibit the treatment of the sewage or is one that can be made acceptable by pre-treatment.

Section 10.06 Pretreatment Plans Required

In the event pretreatment or special facilities are required to make the waste acceptable as provided under the provisions of this chapter the applicant shall install any required facilities, prepare any

required pretreatment plan, and have the same reviewed and approved by the District before the District will issue a permit.

Section 10.07 Limitations on Use of Sewer

A person shall not place, throw, or deposit, or cause or permit to be placed, thrown, or deposited in any public sewer or main line sewer any dead animal, offal, or garbage, fish, fruit, or vegetable waste, or other solid matters, or materials or obstructions of any kind whatever of such nature as shall clog, obstruct, or fill such sewer, or which shall interfere with or prevent the effective use or operation thereof. A person shall not cause or permit to be deposited or discharged into any such sewer any water or sewage or liquid waste of any kind containing chemicals, greases, oils, tars, or other matters in solution or suspension, which may clog, obstruct or fill the same, or which may necessitate or require frequent repair, cleaning out or flushing of such sewer to render the same operative or which may obstruct or cause an unwarranted increase in the cost of treatment of the sewage. Storm runoff water shall not be discharged into a sanitary sewer.

Section 10.08 Water

No uncontaminated water shall be discharged into a public sanitary sewer except by written permission from the District.

Section 10.09 Garbage

Except as prohibited in Division XVI of this Chapter 11, garbage resulting from the preparation of food may be discharged in the public sewer if ground to a fineness sufficient to pass through a 3/8-inch screen. Excessive or unnecessarily large quantities of water shall not be used to flush ground garbage into the sewer. The use of garbage disposals is highly discouraged. Domestic food waste is best disposed of in the trash.

Section 10.10 Temperature of Effluent

A person shall not discharge into the public sewer effluent to a temperature exceeding one hundred forty (140) degrees Fahrenheit.

Section 10.11 Control of pH

Before any person shall discharge acids or alkalis into the public sewer, he shall control the pH to the extent the District finds adequate.

Section 10.12 Toxic Substances

All toxic chemical substances shall be retained or rendered acceptable before discharge into the public sewer.

Section 10.13 Rights of Permittee

Within the time specified in the notice of violation of suspension, the permittee shall correct and remedy the conditions so specified, to the satisfaction of the District Manager, or file with the Board a denial that all the conditions so specified exist and request a public hearing.

Section 10.14 Application Fee for Waste Permit

In addition to the specific fee for a FOG disposal permit provided in Division XVI of this chapter and as stated in the Master Fee Schedule, the District shall collect an application fee with each application, which fee shall be separate and apart from any fees or deposits collected or imposed under other ordinances or regulations or by reason of any license, agreement of contract between the applicant and other public agency, and as stated in the Master Fee Schedule. Such application fee is to cover the costs of the District's review and process of the application and therefore shall not be refunded even if the application is denied.

Section 10.15 Waste Treatment Plants or Facilities Required

Except for the mandatory installation of a Grease Control Device required by Division XVI of this chapter, waste treatment plants, pre-treatment facilities or interceptors shall be installed whenever the District shall find as a fact that such facilities are required to safeguard the public health; prevent pollution of streams, or bodies of surface or underground water, prevent damage or increased maintenance costs in the sewage system and District's wastewater treatment plant; prevent damage to public or private property; prevent a public nuisance; or to comply with applicable regulations of any other public agency.

Section 10.16 Installation

Grease Control Devices or other waste treatment plants or pre-treatment facilities shall be installed and constructed so that they shall be at all times easily accessible for inspection and maintenance. The District may require an inspection manhole on the FSE's or owner's property for sampling and measurement of flow.

Section 10.17 Maintenance and Operation of Private Treatment Plants or Facilities

All waste treatment plants or facilities and all appurtenances thereto, now existing or hereafter constructed under jurisdiction of this chapter shall be maintained by the owner or person having jurisdiction of the property affected in good operating condition and safeguards which are required by this chapter for the operation thereof, and all records of such operation shall be maintained in good order.

Section 10.18 Access to Properties

The District shall be permitted at all reasonable hours to inspect waste treatment plants or facilities and to enter and inspect the place, enclosures, or structure where wastes or effluent are discharged or deposited.

Section 10.19 Installation of Sand and Grease Interceptors

Each restaurant shall have an installed sand and grease interceptor. The interceptor shall be installed at the expense of the restaurant owner. The interceptor shall be maintained by the said owner, at the owner's expense, in continuous and efficient operation at all times. The interceptor so installed either shall be of the same type and design as that shown in Exhibit B, attached to this chapter, or shall be of a type and design approved by the District prior to the interceptor's installation. Any other commercial facility used or designed for the preparation, processing and distribution of food products shall comply with this section when so directed in accordance with Section 10.15 of the ordinance and chapter.

Section 10.20 Time for Compliance

Notwithstanding the provisions of Section 10.19 of this chapter, no restaurant, which has been in continuous operation since February 2, 1972, shall be required to install a sand and grease interceptor until forty-five days after the happening of any of the following:

a) The transfer of any ownership interest in the restaurant;

b) The issuance of Mono County of any building permit for any construction to be performed on the premises;

c) The backup or discharge of raw sewage on or from the premises;

d) Or until five years from the date of adoption of this ordinance, whichever shall first occur.

Section 10.21 Waiver of Sand and Grease Interceptor Requirement

The provisions of Section 10.19 and 10.20 of this chapter requiring installation of sand and grease interceptors may be waived by the District with respect to those restaurants whose owners can demonstrate to the satisfaction of the District that wastewater introduced into the District's sewage collection system from the restaurant will not cause or contribute to line seepage or otherwise adversely affect sewage treatment. Any person requesting a waiver pursuant to this section shall provide the following information in writing on a waiver application provided by the District:

1) Types of food prepared and method of preparation.

2) Number of meals served during peak twenty-four (24) hour period.

3) Description of dishwashing facilities and flow capacities.

4) Time that dishwashing facilities are in use during peak twenty-four-hour period.

The restaurant owner and/or operator, their successors or assigns shall notify the District of any change in the information stated in the application within ten (10) days of any such change. The District at any time may revoke any waiver granted upon thirty (30) days written notice to the restaurant owner and/or operator if it finds that wastewater from the restaurant contributes to or causes line stoppage or otherwise adversely affects sewage treatment. The restaurant owner or operator shall comply with the provisions of Section 10.19 of this chapter within the thirty (30) day periods.

DIVISION XI ENFORCEMENT

Section 11.01 Authority of District

A) The rates, fees, and charges levied pursuant to this chapter and as stated in the Master Fee Schedule shall be set by the Board, who shall make and enforce such regulations as may be necessary for safe, economical and efficient management and protection of the District distribution system, and such regulation, collection, creating and refunding of such rates, fees, and charges.

B) In the event of a violation of any of the laws of the State of California, Mono County, or the ordinances of the District or its rules and regulations, the District shall notify the person or persons causing, allowing, or committing such violation, in writing, specifying the violation and upon the failure of such person or persons to cease or prevent further violation within five (5) days after the receipt of such notice, the District shall have authority to disconnect the property served from the District system.

Section 11.02 Public Nuisance

Continued habitation of any building or continued operation of any industrial facility in violation of the provisions of this or any other ordinance, rule or regulation of the District is hereby declared to be a public nuisance. The District may cause proceedings to be brought for the abatement of the occupancy of the building or industrial facility during the period of such violation.

Section 11.03 Public Nuisance, Abatement

During any period of disconnection, habitation of such premises by human beings shall constitute a public nuisance, whereupon the District shall cause proceedings to be brought for the abatement of the occupancy of said premises by human beings during the period so such disconnection. In such event, and as a condition of reconnection, there is to be paid to the District a reasonable attorney's fee and cost of suit arising in said action.

Section 11.04 Discontinuance of Service

Service may be discontinued for any one of the following reasons:

A) Delinquency in the payment of any bill, except that residential service shall not be discontinued for nonpayment in any of the following situations:

    1) During the pendency of any investigation by the District of a customer dispute or complaint.

    2) When a customer has been granted an extension of the period for payment of a bill.

3) On the certification of a licensed physician and surgeon that to do so will be life threatening to the customer and the customer is financially unable to pay for service within the normal payment period and is willing to enter into an amortization agreement with the District and requests permission to amortize, over a period not to exceed 12 months, the unpaid balance of any bill asserted to be beyond the means of the customer to pay within the normal payment period.

B) The unauthorized taking of water or the taking of water in excess of the amount paid for.

C) Failure of the customer to maintain his facilities in a suitable condition to prevent waste of water.

D) The existence of any unprotected cross connections on the customer's premises or the lack of adequate backflow protection at the service connection.

E) Any violation by the customer of any rules and regulations of the District governing water service.

Section 11.05 Notice and Hearing Prior to Discontinuance of Residential Service for Non-Payment

A) At least ten (10) days before any proposed discontinuance of residential service for non-payment of a delinquent account the District shall mail a notice, postage pre-paid, to the customer to whom the service is billed of the proposed discontinuance. Such notice shall be given not earlier than nineteen (19) days from the date of mailing the District's bill for such service and the then (10) day period shall not commence until five (5) days after the mailing of the notice. In addition to the ten-day notice provided for the preceding sentence, the District shall make a reasonable, good faith effort to contact an adult person residing at the premises of the customer by telephone or in person at least forty-eight (48) hours prior to any discontinuance of such service.

B) Every notice of discontinuance of service required by this section, shall include all the following information:

1. The name and address of the customer whose account is delinquent.

2. The amount of the delinquency.

3. The date by which payment or arrangements for payment is required in order to avoid discontinuance.

4. The procedure by which the customer may initiate a complaint or request an investigation concerning service or charges, unless the District's bill for service contains a description of that procedure.

5. The procedure by which the customer may request amortization of the unpaid charges.

6. The procedure for the customer to obtain information on the availability of financial assistance, including private, local, state or federal sources, if applicable.

7. The telephone number and name of a representative of the District who can provide additional information or institute arrangements for payment.

Section 11.06 Notice and Hearing Prior to a Discontinuance Other than a Discontinuance of Residential Service for Non-payment

At least ten (10) days before discontinuing service, other than the discontinuance of residential service for nonpayment of a delinquent account, which is provided in Section 11.05, the District shall provide for in a written notice which shall specify the reason for the proposed discontinuance and inform the customer of the procedure for and the availability of the opportunity to discuss the reason for the proposed discontinuance with the General Manager, or his or her designee, shall be included in any such notice of proposed discontinuance given to a customer.

Section 11.07 Discontinuance of Service on Weekends, Holidays or After Hours

No water service shall be discontinued to any customer or user because of any delinquency in payment on any Saturday, Sunday, legal holiday, or at any time during which the business offices of the District are not open to the public.

Section 11.08 Amortization of Delinquent Bill for Residential Service

Every complaint or request for investigation by a residential customer that is made within five (5) days of receiving the disputed bill, and every request by a residential customer that is made within thirteen (13) days of the mailing of the notice required by Section 11.05 for an extension of the payment period of ill asserted to be beyond the means of the customer to pay in full during the normal period for payment shall be reviewed by the General Manager, or his or her designee. The review shall include consideration of whether the customer shall be permitted to amortize the unpaid balance of the account over a reasonable period of time, not to exceed twelve (12) months. Any customer whose complaint or request for an investigation has resulted in an adverse determination by the General Manager, or his or her designee, may appeal the determination to the Board of Directors.

Section 11.09 Authority to Settle Controversies Relating to Discontinuance and to Permit Amortization of Delinquent Bills

The General Manager, or his or her designee, is hereby authorized to investigate complaints and review disputes pertaining to any matters for which service may be discontinued and to rectify errors and settle controversies pertaining to such matters. The General Manager, or his or her designee, is also authorized upon a proper showing by a residential customer of the customer's inability to pay a delinquent bill during the normal period, to grant permission to amortize the unpaid balance over a reasonable period of time, not to exceed twelve (12) months. At his or her discretion, the General Manager may bring such controversies to the Board for settlement by the Board prior to the discontinuance of any such service.

Section 11.10 Notice Required Prior to Discontinuance of Service for Failure to Comply with Amortization Agreement

If an amortization agreement is authorized, no discontinuance of service shall be affected for any residential customer complying with such agreement, if the customer also keeps the account current as charges accrue in each subsequent billing period. If a residential customer fails to comply with an amortization agreement the District shall not discontinue service without giving notice to the customer at least forty-eight (48) hours prior to discontinuance of the conditions the customer is required to meet to avoid discontinuance, but the notice does not entitle the customer to further investigation by the District.

Section 11.11 Notice of Discontinuance of Residential Service to Customers on Master Meters

Whenever the District furnishes residential service to a master meter or furnishes individually metered service to a multi-unit residential structure, mobile home park, or farm labor camp where the owner, manager, or farm labor employers listed by the District as the customer of record, the District shall make every good faith effort to inform the actual users of the service, by means of a notice, when the account is in arrears, that service will be discontinued within ten (10) days. Such notice shall also inform the actual users that they have the right to become District customers without being required to pay the amount due under the delinquent account. Nothing in this section shall require the District to make service available to actual users unless each actual user agrees to the District's terms and conditions of service and meets the requirements for the District's rules and regulations. If one or more actual users are willing and able to assume responsibility for the entire account to the satisfaction of the District, or if there is a physical means, legally available to the District, of selectively terminating service to those actual users who have not met the requirement of the District's rules and regulation, the District shall make service available to the actual users who have met those requirements.

Section 11.12 Reconnection

When service has been disconnected as provided in this chapter, the customer shall pay the unpaid account balance in full plus a reconnection charge as stated in the Master Fee Schedule before any disconnected service will be reconnected.

Section 11.13 Means of Enforcement Only

The District hereby declares that the foregoing procedures are established as a means of enforcement of the terms and conditions of its ordinances, rules and regulations, and not as a penalty.

Section 11.14 Lien

Each rate, charge penalty, or rental levied by or pursuant to this chapter on property is hereby made a lien upon said property as hereinabove provided.

Section 11.15 Cumulative Remedies

All remedies set forth herein for the collection and enforcement of charges, rates and penalties are cumulative and may be pursued alternatively or consecutively.

DIVISION XII OUT-OF-DISTRICT SEWER SERVICE

Section 12.01 Application of Division

To the extent the provisions of this Division on sewer service outside of the District's boundaries may be inconsistent or in conflict with the provisions of any other division or part of this chapter, the provisions of this Division shall prevail solely with respect to service outside the District's boundaries. All other provisions of any other division, to the extent applicable and not in conflict with this Division, shall apply unless expressly otherwise provided.

Section 12.02 Scope

The provisions of this division shall apply (a) to District service to collect, transport, and treat the discharge or disposal of all wastes, including any material which may cause pollution of underground or surface waters from sources outside the Mammoth Community Water District in, upon, or affecting the territory of the District; (b) to the design, construction, alteration, use, and maintenance of public sewers, house laterals, industrial connections, liquid waste pretreatment plants, sewage pumping plants, sand and grease interceptors; (c) to the collection of fees for District services relating to clause (a) or (b) above; and (d) to provide penalties for violation of any of the provisions hereof.

Section 12.03 Out-of-District Sewer Service

Out-of-district sewer service shall be provided only to new or existing customers who execute an agreement with the District and are acceptable to it, or who own an existing cabin in the Lakes Basin under a long-term lease from the United States Forest Service who comply with all rules and regulations pertaining to out-of-district sewer service promulgated by the District Board of Directors, as they may be periodically amended. No person shall commence, do or cause to be done, construct or cause to be altered, or connect any public sewer, force main, house lateral, sewage pumping plant, or other similar appurtenance of or in the Mammoth Community Water District boundaries without first applying for and obtaining an agreement from the District for Out-of-District Sewer Service consistent with, as applicable, the District's Out-of-District Service Policy or Rules and Regulations.

DIVISION XIII CONSTRUCTION OF SEWER LINES

Section 13.01 Definitions

For the purposes of this Division, the specified terms are defined as follows:

a) "Developer" means any person, excluding those persons specified in Section 5.02, who installs or causes to be installed one or more structures which will be connected to the District collection system.

b) "Force main extension" is any extension of the force main between the existing District force main and the lots which are being improved or which are owned by the developer. A force main extension does not include a force main constructed within the tract of land which is being improved of which is owned by the developer.

Section 13.02 Financial Responsibility for Construction of Sewer Line

A developer who installs, and/or causes to be installed any part of the District collection system is financially responsible for the installation, and all incidents thereof, of that portion of the sewer collection system.

Section 13.03 Construction of Collection System

a) When a developer proposed to construct a force main and/or one or more house laterals, the developer may perform such construction, subject to the requirements of the District.

b) When the developer performs the tap between the house lateral constructed by the developer and a force main constructed by the developer, no tapping fee shall be charged. Other connection related fees will be charged as stated in the Master Fee Schedule.

c) Except as specified in Section 13.03 (a), construction of house laterals, taps, main lines, and all other parts of the District's collection system (excluding private sewer lines and meters, as set forth in Section 3.31) shall be performed solely by District personnel or by independent contractors hired by the District. The time at which the District shall perform such construction shall be scheduled with the District at the time the permit is issued. Time and material costs not covered by the applicable fees and charges imposed under Sections 6.03 and 6.16 and as stated in the Master Fee Schedule shall be charged to the developer in addition to any other fees required by this chapter.

Section 13.04 Performance Guarantee

A developer shall post a surety bond, cash, or other security satisfactory to the District to guarantee the faithful performance of any agreement entered into with the District for the extension of the mainline

or for construction of the collection system. The surety bond, cash, or security shall be in the sum of 100 percent (100%) of the estimated cost of the work, or in such other sum as may be fixed by the District. The surety bond, cash, or security shall, in addition to guaranteeing the faithful performance of the work, guarantee the maintenance of the collection system for a period of one year following the completion and acceptance of the work by the District.

Section 13.05 Liability

The District and its officers, agents and employees shall not be liable for any injury or death to any person or damage to any property arising from the performance of any work by a developer. The developer shall be answerable for, and shall hold harmless the District and its officers, agents and employees from any liability imposed by law upon the District or its officers, agents or employees, including all cost, expenses, attorney fees, and other fees, and interest incurred in defending the same or in seeking to enforce this provision. The developer shall be solely liable for any defects in the performance of the developer's work or any failure, which may arise there-from.

Section 13.06 Formation of Improvement District

a) When a developer installs or causes to be installed any part of the District collection system, the developer may request in writing that the District form an improvement district, pursuant to the California County Water District Law, to include that real property which is served and benefited (or to be served and benefited) by the collection system installed or caused to be installed, by the developer.

b) The District may agree to form an improvement district only after receiving the developer's written request for formation thereof and the developer's written agreement to pay all sums reasonably incurred by the District in the formation and operation of the improvement district.

c) If the District agrees to form an improvement district, the developer shall pay the District an initial fee, to be determined by the District, towards the District's cost of forming the improvement district. The District shall not take any steps toward the formation of the improvement district until it receives this initial fee.

d) The developer may withdraw the request for the formation of an improvement District if no prejudice will result there-from to the District or its customers.

e) The developer shall be liable for all costs reasonably incurred by the District in the formation and operation of the improvement district whether or not the improvement district is formed.

Section 13.07 Size of New Force Main

The District may require the developer to install a force main larger than that necessary to adequately service the developer's proposed construction. When the District requires the installation of larger force

main, the District shall either (a) pay the difference in cost, as determined by the District, between the size necessary to serve the developer's construction and the larger force main of (b) perform the installation itself subsequent to the receipt from the developer of a sum sufficient to cover the cost of installation, and other necessary expenses, of the mainline required by the developer.

Section 13.08 District's Option to Construct Facilities

Whenever a developer applies for an assurance of sewer service or a sewer permit which involves the extension of the District's force main, the District, at its sole option may install such facilities subsequent to the developer's advancement to the District of funds sufficient to cover the costs of construction and other necessary expenses.

Upon completion of construction, the District shall refund any funds advanced in excess of the actual cost to be borne by the developer.

Section 13.09 Application for Force Main Extension Agreement

Whenever a developer applies for a sewer permit or an assurance of sewer service, which involves a force main extension, the developer may also apply to the District for a main line extension agreement, which provides for partial reimbursement to the developer of the developer's costs of constructing the main line extension. The District may accept the application and approve a force main extension agreement.

Section 13.10 Force Main Extension Agreement

Whenever a developer enters into a force main extension agreement with the District, the agreement may provide for a refund to the developer as follows:

a) Within the limits specified herein, when the force main extension has been installed at the developer's sole expense, the developer shall be entitled to 25% of the hook-up fees received by the District for hook-ups into the force main extension paid for by the developer

b) Any amount collected by the District for hook-up fees, subject to section 13.10 (a), shall be refunded to the developer within ninety days following the date of collection; provided that no refund shall be made for collections made after five (5) years from the date of completion of the extension.

c) The total amount to be refunded to the developer shall not exceed 90% of the net amount paid by the developer to the District for the extension, if installed by the District, or 90% of the estimated cost, as determined by the District, for such extension if installed by the developer.

Section 13.11 Dedication Requirements

An offer of dedication of that portion of the collection system to be constructed, excluding private sewer lines, shall be included in any application concerning construction of the collection system.

No portion of the collection system shall be accepted by the District for dedication unless that portion to be accepted has been constructed in conformity with the requirements of the District. When the construction of the collection system has been completed and accepted by the Board, it shall become the property of the District.

DIVISION XIV SEWER IMPROVEMENT DISTRICT NO.1 OF THE MAMMOTH COMMUNITY WATER DISTRICT

(repealed)

DIVISION XV RECYCLED WATER PROGRAM

Section 15.01 Recycled Water Program Policy

It is the policy of the District that recycled water determined to be available pursuant to Water Code Section 13550 shall be used for non-potable uses within the District's designated service area when its use is economically justified; its use is financially and technically feasible; and its use is consistent with legal requirements, preserves the public health, safety, and welfare, and protects the environment.

Production, distribution and use of recycled water in the District designated service area are regulated by State Water Board Order WQ 2016-0068-DDW, provisions in Title 22 of the California Code of Regulations and the Water Code regarding recycled water, and the Title 22 Engineering Report for the Mammoth Community Water District Recycled Water Program including all attachments and appendices, which is attached to and made a part of this Division XV (the "Title 22 Engineering Report").

Section 15.02 Designated Recycled Water Service Area

The District recycled water service area is identified as the "MCWD Recycled Water Service Area" designated as Attachment A to the Recycled Water Program Rules and Regulations which are incorporated into the Title 22 Engineering Report as Appendix C. .

Section 15.03 Recycled Water Use Rules and Regulations

Procedures, restrictions, and other requirements for recycled water use, including the process for a user to obtain recycled water service, and controls to protect public health are set forth in the Recycled Water Program Rules and Regulations, which are contained in Attachment B to Appendix C of the Title 22 Engineering Report and titled "Requirements for Recycled Water Users" (Requirements). The Requirements provide the rules governing the design, construction, operation and maintenance of reclaimed water use facilities, construction specifications, inspections and monitoring of reclaimed water user facilities and sites, procedures for the use of reclaimed water, and enforcement procedures and penalties for violations of the Requirements. All recycled water users are required to comply with the Requirements as a condition of receiving recycled water service and any violation of the Requirements shall be enforced as provided therein.

Section 15.04 Operations and Maintenance Plan

The "Operations and Maintenance Plan for Recycled Water Users," Section III of the Recycled Water Program Rules and Regulations establish the District's standard procedures, specifications, limitations for the safe and orderly development and operation of off-site and on-site recycled water facilities and systems in the District's Designated Service Area, and enforcement procedures and penalties for violations. All recycled water users are required to comply with all applicable provisions of the Operations and Maintenance Plan as a condition of receiving recycled water service and any violations shall be enforced against as provided in the Plan.

Section 15.05 Monitoring and Reporting/ Compliance and Inspection Program

The Monitoring and Reporting / Compliance and Inspection Program, Section V of the Recycled Water Program Rules and Regulations, provides the District's plan for conducting routine compliance inspections and the process for responding to and enforcing against violations. All recycled water users are subject to District monitoring of their recycled water systems and use and any violations shall be enforced against as provided in the Program.

Section 15.06 General Enforcement and Sanctions

A. General

The District reserves the right to take any action necessary with respect to the operation of a user's recycled water system to safeguard the public's health. If existing or potential hazards are evidenced at any time during construction or operation of the recycled water system, the District may terminate recycled water service immediately, without notice. These hazards include but are not limited to cross-connections with the potable system, improper tagging, signing, or marking, or unapproved/prohibited uses.

B. Public Nuisance

Discharge of wastes or the use of recycled water in any manner in violation of this Division XV or of any agreement issued hereunder is hereby declared a public nuisance and shall be corrected or abated as directed by the District. Any person creating such a public nuisance is guilty of a misdemeanor.

C. Injunction

Whenever a discharge of wastes or use of recycled water is in violation of this Division XV or otherwise causes or threatens to cause a condition of nuisance, the District may seek injunctive relief as may be appropriate to enjoin such discharge or use.

D. Agreement Revocation

In addition to any other statute or rule authorizing termination of recycled water service, the District may revoke an agreement issued hereunder if a violation of any provision of this Division XV is found to exist or if a discharge of wastes or use of recycled water causes or threatens to cause a nuisance.

E. Penalty

Any owner and/or operator who violates this Division XV shall, for each day of violation, or portion thereof, be subject to a fine not exceeding $1,000. In addition, recycled water service to the property may be discontinued.

Section 15.07 Incorporation of Title 22 Engineering Report

The complete Title 22 Engineering Report attached to and made a part of this Chapter XV may be amended from time to time by staff as necessary to comply with changes in the law and applicable regulations or as required by the State Water Board or Lahontan RWQCB. The existing version of the Title 22 Engineering Report or any of its attachments and appendices may be discarded and replaced at any time by an amended version of the Report or any component part, including an attachment or appendix, without the need to amend this Ordinance.

DIVISION XVI FOG CONTROL PROGRAM

Section 16.01 Purpose

The purpose of the District's fats, oils, and grease (FOG) Control Program is to prevent FOG from entering the District's sewer collection and treatment system through the establishment of regulations for the discharge of FOG and other insoluble waste from food service establishments (FSE). The purpose of this ordinance is to further implement procedures for recovering costs associated with FOG discharges and blockages, to establish administrative requirements for FSEs, and to establish enforcement procedures for these regulations.

Section 16.02 Definitions

For purposes of this chapter, the following definitions shall apply:

a) **Fats, Oils and Grease (FOG)** shall mean and include any waste containing quantities or concentrations of dispersed biodegradable fats, oils, and greases.

b) **Food Service Establishment (FSE)** shall mean any entity utilizing the District's sewer collection system for operation in a permanently constructed structure, maintained and used or operated for the purpose of storing, preparing, serving, or manufacturing, packaging, or otherwise handling food for consumption by the public or for sale to other entities, its members, or employees.

c) **Food Grinder** or garbage grinder or garbage disposal shall mean any device installed in the plumbing or sanitary sewage system for the purpose of grinding food waste or food preparation byproducts for the purpose of disposing into the District sewer system.

d) **FOG Discharge Permit** shall mean the permit issued by the District to a FSE for utilizing the District sewer system in compliance with the terms, conditions, and criteria of the FOG Control Program set forth in this division.

e) **Grease Control Device (GCD)** shall mean any Grease Interceptor, Grease Trap, or other mechanism, device, or process, which is attached to, or is applied to, wastewater plumbing fixtures and lines, the purpose of which is to trap or collect or treat FOG-laden wastewater prior to its discharge into the District sewer system. "Grease Control Device" also includes any other District approved method to reduce FOG. Grease Control Devices must be sized in accordance with the California Plumbing Code.

f) **Grease Interceptor** shall mean a District approved multi-compartment device that is required to be located, as according to the California Plumbing Code, between a FSE and the connection to the District sewer system. These devices primarily use gravity to separate FOG from the wastewater as it moves from one compartment to the next. Grease Interceptors must be

cleaned, maintained and have the FOG and solids removed and disposed of in accordance with the terms and conditions of the District's FOG Discharge Permit. Grease Interceptor includes a Gravity Grease Interceptor.

g) **Grease Trap** shall mean a District approved Grease Control Device that is used to serve individual fixtures. Grease Traps must automatically expel FOG from its interior into an adjacent collection container. The body must be constructed entirely of stainless steel, have a heating component to liquefy grease, include a flush valve and an integral flow control device on its inlet to prevent flow through the unit excess of the unit's flow rate. The Grease Control Device must be cleaned, maintained, and have the FOG and solids removed and disposed of in accordance with the owner's manual. A Grease Trap is also referred to as a Hydro-mechanical Grease Interceptor.

h) **Property Owner** shall mean a person or entity owning property where a Grease Interceptor is present that is or has potential to serve more than a single FSE.

i) **Remodeling** shall mean a physical change or operational change that increases the amount of FOG discharged to the District sewer system by the FSE in an amount that alone or collectively causes or creates a potential for blockages or sanitary sewer overflows (SSO) to occur.

j) **Waste Hauler** shall mean any person or entity that collects the contents of a Grease Control Device for the purpose of transporting it to a recycling or disposal facility. A Waste Hauler may also provide Grease Control Device maintenance services.

Section 16.03 Prohibition

Every owner, tenant, entity, or person receiving sewer service from the District shall have a duty to not cause, permit or allow the accumulation of FOG in the District sewer system. Such persons and entities shall use industry and District approved methods to reduce FOG accumulation in the District sewer system.

Section 16.04 FOG Discharge Permit Requirement

1. FSE

   No FSE shall discharge into the District's sewer system without obtaining a FOG Discharge Permit from the District. The FOG Discharge Permit is a legally-binding agreement issued to a FSE to utilize the District sewer system setting forth the terms, conditions, and criteria of the FOG Control Program. The FOG Discharge Permit is prepared and maintained by the District, and its provisions may be modified periodically as required to ensure each FSE's compliance with the terms and conditions of this chapter, as they may be amended from time to time. Failure to comply with the FOG Discharge Permit conditions will constitute a violation of this chapter. In addition to the FOG Discharge Permit, the District may also issue specific permit conditions to any FSE. In the event that the District issues specific permit conditions to a FSE, the basis for

those specific permit conditions shall be disclosed to the FSE in writing and appended to the FOG Discharge Permit. Failure to comply with the individual permit conditions will constitute a violation of this division.

2. Property Owners
   Property owners of commercial properties or their designee(s) identified on the FOG Discharge Permit shall be responsible for the installation and maintenance of a Grease Interceptor serving multiple FSEs that are located on a single parcel. The owner of the parcel containing a common use Grease Interceptor shall submit an application for and be the Permittee under a FOG Discharge Permit.

3. FSE/Property Owners Notification Regarding Planned Changes
   Any existing FSE or Property Owner which substantially changes its menu, operation, or remodels shall submit in writing a detailed description of the proposed changes. The applicability of an existing FOG Discharge Permit, waiver, stay or variance from the requirement to install, operate and maintain a Grease Control Device will be assessed by the District based on the information contained in the description and the Permit, waiver, stay or variance may be revoked and replaced or amended as the changed circumstances warrant.

4. Permit Application
   a) Each existing FSE/Property Owner shall submit an FOG Discharge Permit Application to the District within forty-five (45) days following the effective date of this division.

   b) All newly constructed FSEs and FSEs which change ownership, shall submit a FOG Discharge Permit Application at least sixty (60) days prior to startup. Any FSE which fails to submit the required FOG Discharge Permit application in a timely manner may be prohibited from discharging to the District sewer system.

5. Permit Renewal
   Annually, each FOG Discharge Permittee shall renew its FOG Discharge Permit by the expiration date indicated on the Permit, unless the FSE has received a waiver from pretreatment requirements and the FSE has not made any changes to their operations which could increase grease production.

6. Reporting Requirements
   Each FOG Discharge Permittee shall report to the District any spills of FOG and/or sewage and any unauthorized discharges into the District sewer system within the time period following the occurrence of the event as specified in and according to the requirements set forth in the FOG Discharge Permit.

7. Right to Enter and Inspect
   The District shall have the right to enter and inspect each FSE premise or property owner's common use Grease Interceptor for announced or unannounced inspections. The District shall have access to all facilities and records necessary for determining compliance with this division.

An inspection may include a review of all logs and documentation of the FOG Control Program, inspection of all kitchen facilities, and inspection of any and all Grease Control Devices and appurtenant plumbing on the premises.

Section 16.05 Best Management Practices Required

All FSEs shall implement Best Management Practices (BMP) in their operations to minimize the discharge of FOG to the District sewer system. Detailed requirements for BMP shall be specified in the FOG Discharge Permit and any appended specific permit conditions. This may include kitchen practices and employee training that are essential to minimizing FOG discharge.

Section 16.06 Food Grinders

The use of a Food Grinder, which discharges food wastes from a FSE into the District sewer system, is prohibited.

Section 16.07 Pretreatment Requirement

1. Pretreatment Required
   All FSEs are required to install, operate, and properly maintain approved types and adequately sized Grease Control Devices. Grease Control Devices shall separate and remove FOG contained in wastewater discharges from FSEs prior to discharge of the wastewater to the District sewer system. All fixtures, equipment and drain lines located in the food preparation and clean up areas of the FSE that are potential sources of FOG discharge shall be connected to a Grease Control Device. Detailed requirements for device maintenance shall be specified in the FOG Discharge Permit.

   a) Existing FSE
      All existing FSEs are required to have and to properly operate and maintain a Grease Control Device according to the requirements set forth in the FOG Discharge Permit, unless the FSE has obtained a waiver as described in Section 16.07.2 and 16.07.3 below and shall be required to follow all requirements of this division.

   b) New FSE, FSE Which Change Ownership, and FSE Which Undergo Remodeling
      As of the effective date of this division, all newly constructed FSEs, FSEs which change ownership, and FSEs which undergo remodeling, see Section 16.02(k), shall be required to install a Grease Control Device, according to requirements of the FOG Discharge Permit, unless a waiver is granted under Section 16.07.2 and 16.07.3 below, and shall be required to follow all requirements of the grease control program of this division.

2. Waiver for Alternative Pretreatment
   A waiver from the FOG pretreatment requirements to allow alternative pretreatment technology that is at least equally effective in controlling the FOG discharge, in lieu of installing

and operating a Grease Control Device, may be granted to a FSE demonstrating that it is impossible or impracticable to install, operate or maintain a Grease Control Device. The applicant shall bear the burden of demonstrating that the alternative method is at least equally effective. The District's determination to grant a waiver will be based upon, but not limited to, evaluation of the following conditions:

a) District determination there is no adequate location for installation and/or maintenance of a Grease Control Device.

b) District determination there is no adequate slope for gravity flow between kitchen plumbing fixtures and the Grease Control Device and/or between the Grease Control Device and the private collection lines or the District sewer system.

c) District determination that alternative pretreatment technology is equivalent to or better than a Grease Control Device in controlling its FOG discharge. In addition, the FSE must be able to demonstrate, after installation of the proposed alternative pretreatment, its effectiveness to control FOG discharge through downstream visual monitoring of the sewer system at its own expense.

3. Waiver from Pretreatment Requirements

A waiver from installation of a Grease Control Device may be granted to a FSE that has been determined to have negligible FOG discharge and insignificant impact to the District sewer system. FSEs which receive a waiver from pretreatment requirements are not required to renew their permit unless the FSE makes any changes as described in 16.04.3. The District's determination to grant or revoke a waiver shall be based upon, but not limited to, evaluation of the following conditions:

a) District determination that quantity of FOG discharge as measured or as indicated by the size of the FSE based on seating capacity, number of meals served, menu, water usage, amount of on-site consumption of prepared food and other conditions that show contribution to FOG discharges;

b) District determination that adequacy of implementation of BMP and compliance history are sufficient;

c) District determination that sewer size, slope, condition based on visual information, FOG deposition in the sewer by the FSE, and history of maintenance and sewage spills in the receiving sewer system;

d) District determines that the changes in operations that significantly affect FOG discharge; and

e) Any other condition the District deems reasonably related to the generation of FOG discharges.

4. Operations and Maintenance Requirements
   All Grease Control Devices shall be maintained in efficient operation at all times by the FOG Discharge Permittee at the Permittee's expense. Details of required maintenance shall be specified in the FOG Discharge Permit.

Section 16.08 Fees

1. Each FOG Discharge Permit requires an application fee as stated in the Master Fee Schedule. Following a change of ownership, a substantial change in operation, remodeling, or an increase in flow or waste generation of FOG, a revised application must be submitted with payment of a new application fee in the amount stated in the Master Fee Schedule. The application fee must be paid when the FOG Discharge Permit application is submitted to the District.

2. Each FOG Discharge Permit must be renewed annually and requires payment of an annual renewal fee as stated in the Master Fee Schedule, which shall be submitted each calendar year on the month which the initial permit was issued.

3. The District will set the application fee and annual renewal fee in accordance with applicable law, and may amend these fees from time to time as permitted by law and state the amended fees in the Master Fee Schedule.

Section 16.09 Enforcement

Failure to comply with the District's FOG Control Program as provided in this Division, all generally applicable provisions of Chapter 11, and the FOG Discharge Permit or any individual permit conditions will result in enforcement action against the FSE. All fines are defined in this section and published in the District's Master Fee Schedule, as both may be amended from time to time.

1. The first violation of the FOG Control Program will result in a warning issued by the District. For each warning, the District will make one attempt to contact the FSE's responsible party (permittee) as listed on the permit and follow-up any such verbal warning with written confirmation of the violation. If such attempt at direct contact is unsuccessful, the District will mail written notice of the violation to the permittee. The permittee will have seven (7) days from the date of the notice to respond and correct the violation. If the permittee does not respond and correct the violation within this time, a second violation will be issued.

2. Upon the occurrence of two or more violations, the District will notify the permittee in writing by mail of the violation and a fine, as stated in the Master Fee Schedule, will be assessed and collected on the next service bill. The permittee will have seven (7) days from the date of the notice to respond and correct the violation. If the permittee does not respond and correct the violation within the seven (7) days, a per-day fine, as stated in the Master Fee Schedule, will be imposed and charged on permittee's next service bill. The daily fine, up to its maximum, will be

assessed until the earlier of (i) the violation is corrected or (ii) the District declares the permittee to be non-compliant and discontinues sewer service to the permittee pursuant to the Subsection 3 below.

3. When three or more violations of the FOG program have been committed and remain uncorrected, the District, after filing a Notice of Abatement pursuant to Section 16.10 below, may disconnect sewer service to the non-compliant permittee.

Section 16.10 Notice of Abatement

1. The District has the right to abate any violation of this division and to charge the violating permittee or responsible person or entity for damages caused by a prohibited discharge of FOG to the District sewer system. Provided that the District can demonstrate upon reasonable proof that a FSE or responsible person or entity caused FOG build-up or another violation of this division such that a District sewer system or appurtenance is damaged or such that a sewer overflow occurs, or that a sewer overflow is imminent, District shall have the right to serve a Notice of Abatement and to charge the permittee or responsible person or entity for all damages and abatement costs resulting from the violation. In cases of a violation of this division that requires abatement, the District shall have the right to immediately enter a FSE premises and abate the violation to prevent further damages or violations.

2. If the District abates a violation and incurs costs for that abatement, it shall issue a bill for all damages and abatement costs incurred to the permittee or responsible person or entity as soon as practical. With the issuance of a bill for any damages and abatement costs incurred, the District also shall provide the permittee or responsible person or entity with a copy of all evidence that supports the District's determination and a copy of this division. The responsible person or entity shall have the right to appeal the Notice of Abatement and the damages and abatement costs charged by the District in accordance with the following procedures.

3. Upon receipt of Notice of Abatement and any bill for damages and abatement costs, the FSE or responsible person or entity ("Appellant") may file a written reply rebutting the evidence presented an/or charges imposed by the District. The Appellant may attach any supporting evidence to its reply. The Appellant must file the written reply and supporting evidence with the District's General Manager no later than 7 working days before the next regularly scheduled Board meeting. Any rebuttal filed by the Appellant will be limited to the issues raised in the original Notice of Abatement and any District staff report attached to the violation. At the Board meeting where an Appellant's response to a Notice of Abatement will be considered, staff will make a presentation concerning reasons for issuing the Notice of Abatement and supporting evidence, and then the Appellant may present such oral statements, documents, and testimony of witnesses as it may choose. District staff may respond by the production of any additional relevant evidence as staff deems appropriate. The Appellant may only raise those issues in the meeting that were presented in the original Notice of Abatement and any response and staff presentation, unless the Appellant can show good cause and supporting evidence for why the Board should entertain the presentation of any new issues. Any new issues will not be acted on

at the scheduled meeting and will not be made part of the record unless such presentation is first approved by the Board.

At the conclusion of the staff's and Appellant's presentations, the Board may enter into the record of the meeting the facts and its findings with respect to each issue presented by the Appellant and render its decision concerning the Notice of Abatement and District bill, or the Board may choose to take the matter under consideration and issue a written decision setting forth the facts and its findings. If the Board determines to issue a written decision, it shall do so within 15 days after the date of the meeting at which the item is considered. All decisions of the Board are final.

Mammoth Community Water District

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TITLE 22

ENGINEERING REPORT

FOR THE MAMMOTH COMMUNITY

WATER DISTRICT RECYCLED

WATER PROGRAM

February 2022

Professional Certification

This document entitled "TITLE 22 ENGINEERING REPORT FOR THE MAMMOTH COMMUNITY WATER DISTRICT RECYCLED WATER PROGRAM," Dated February 2022, was prepared for the Mammoth Community Water District (MCWD) under the supervision of Garrett Higerd. Garrett Higerd is a registered engineer in the state of California and holds the title of District Engineer at the Mammoth Community Water District. The report is based on design documents and information provided by MCWD and was prepared in accordance with accepted engineering practices.

Garrett Higerd
District Engineer
Mammoth Community Water District
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Mammoth Lakes, CA 93546

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SECTION 1 INTRODUCTION

1.1 Purpose

Mammoth Community Water District (MCWD) provides water and sanitation services to a service area located within the boundaries of the Town of Mammoth Lakes, in the southwestern part of Mono County, California (Figure 1.1).

In 2009 the California Regional Water Quality Control Board, Lahontan Region, adopted Board Order No. R6V-2009-0035 "Master Water Recycling Requirements and Waste Discharge Requirements Mammoth Community Water District Disinfected Tertiary Recycled Water" and shortly after, the MCWD Board of Directors approved Ordinance No. 10-15-09-11 (Appendix B) establishing the MCWD recycled water program.

Since then, MCWD has been providing recycled water to the Sierra Star Golf Course, Snowcreek Golf Course, and the Trucked Recycled Water Program. The primary objective of MCWD's recycled water program is to conserve groundwater, one of the key potable water sources in the region, through beneficial reuse of treated wastewater. The recycled supply is used mainly for landscape irrigation, which represents a major demand during the spring and summer seasons.

MCWD desires to continue to provide recycled water under a new General Use Permit of recycled water (ORDER WQ 2016-0068-DDW) and make minor changes to the trucked recycled water program. This Title 22 engineering report updates and revises the original Title 22 engineering report prepared by HDR Engineering Company in 2008 for this purpose. The report is intended to contain sufficient information to assure the regulatory agencies that the degree and reliability of treatment is commensurate with the requirements for the proposed uses and that the distribution and use of the recycled water will not create a health hazard or nuisance.

Disinfected tertiary recycled water is proposed to be used for surface irrigation by metered users (golf courses).

Disinfected secondary 2.2 recycled water (or tertiary recycled water) is proposed to be used via permitted truck users for the following uses:

Backfill consolidation around non-potable piping,
Soil compaction,
Mixing concrete,
Dust control on roads and streets,
Cleaning roads, sidewalks and outdoor work areas, and
Restricted access (Freeway) landscape irrigation (no food crops, parks & playgrounds, school yards, residential landscaping, etc.)

The State of California Water Recycling Criteria, contained in Sections 60301 through 60355, inclusive, of the California Code of Regulations, Title 22 (Title 22), require the submission of an engineering report (Report) to the California Regional Water Quality Control Board (RWQCB) and the State Water Resource Control Board (SWRCB) and Division of Drinking Water (DDW) before a recycled water program is implemented. This report has been prepared for MCWD's recycled water program, pursuant to Section 60323, by a properly qualified engineer registered in California and experienced in the field of wastewater treatment.

1.2 Report Organization

The report has five sections.

Section 1 provides program background information, responsibilities, and specific regulatory requirements for the program.

Section 2 covers treatment and recycled water production.

Section 3 covers recycled water transmission and distribution systems.

Section 4 covers the recycled water use permit program.

Section 5 covers use area sites. References to applicable Title 22 sections and articles are made where required.

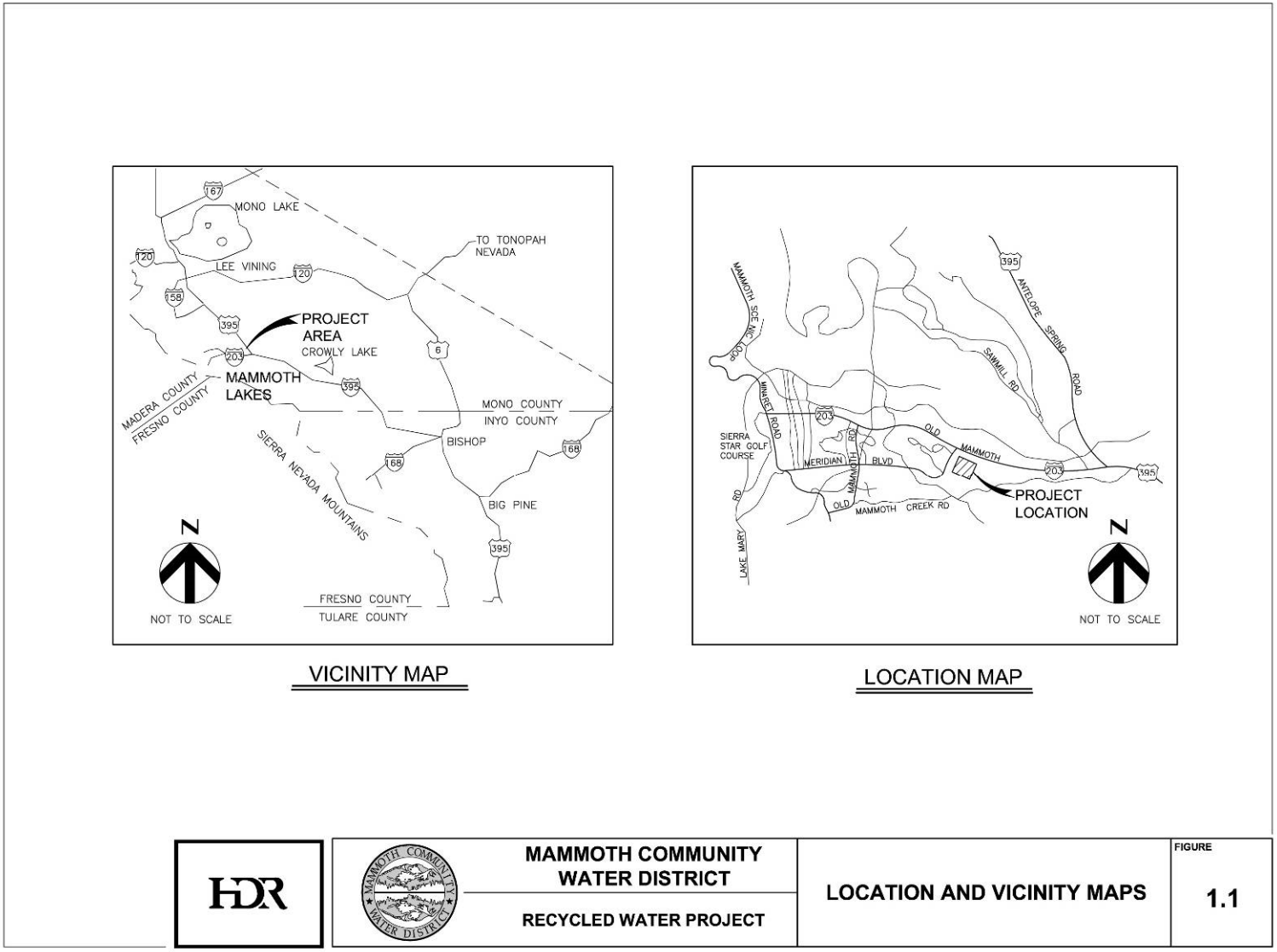

Figure 1. 1 Location and Vicinity Maps

1.3 History and Description of Recycled Water Facilities

In 1991, the Town of Mammoth Lakes approved the construction of the Sierra Star Golf Course project with a condition of using either recycled water or other non-potable water supplies for golf course irrigation. Following the golf course approval, MCWD approved the Mammoth Lakes Wastewater Treatment Plant (MLWWTP) upgrade to a tertiary treatment system, suitable for providing recycled water. In 1996, MCWD initiated an environmental review to examine effects of the plant upgrade, as well as the construction of a transmission system to convey recycled water to Sierra Star Golf Course and two other proposed users, Snowcreek Golf Course and Shady Rest Park. The MCWD Board of Directors certified the Environmental Impact Report (EIR), adopted all mitigation measures, and approved the recycled water project in October 1998. The approval included plant modifications to produce recycled water up to 1.55 million gallons per day (MGD), and construction of a recycled water pumping station, but did not include construction of a transmission system to deliver the recycled water to use areas. A subsequent EIR in 2006 evaluated the environmental effects associated with construction of the recycled water transmission system and use of recycled water for irrigation in the golf course and identified mitigation measures to be adopted for the recycled water project. The MCWD Board of Directors certified this EIR in March 2007 and modifications were constructed at the treatment plant including secondary effluent pumping, coagulant/polymer addition and mixing, filtration, disinfection, recycled water in-plant storage, and a recycled water pumping station. The distribution system was also constructed consisting of two pipelines which serve the Sierra Star and Snowcreek golf courses. Both Sierra Star and Snowcreek golf courses have privately owned recycled water storage impoundments.

In 2009 the California Regional Water Quality Control Board, Lahontan Region, adopted Board Order No. R6V-2009-0035 “Master Water Recycling Requirements and Waste Discharge Requirements Mammoth Community Water District Disinfected Tertiary Recycled Water” and shortly after, the MCWD Board of Directors approved Ordinance No. 10-15-09-11 (Appendix B) establishing the MCWD recycled water program. Sierra Star Golf Course was the first metered user to receive tertiary recycled water in 2010 followed by Snowcreek Golf Course in 2015. The trucked recycled water program started in 2015.

The existing MCWD recycled water system currently delivers recycled water to the Sierra Star Golf Course, Snowcreek Golf Course, and the Trucked Recycled Water Program.

Table 1.1 summarizes roles and responsibilities of agencies or entities involved with the MCWD recycled water program.

Table 1. 1 Entity Responsibilities

Agency or Entity	Role	Responsibility
MCWD	Producer/Distributor	Responsible for treatment, distribution, and operation and maintenance of recycled water facilities.
SWRCB Division of Drinking Water (DDW)	Regulator	Responsible for establishment of General Use Permit of Recycled Water, review and approval of engineering report, and issuance of General Use Permit for recycled water.
RWQCB	Regulator	Responsible for review and approval of Notice of Intent.

Agency or Entity	Role	Responsibility
U.S. Forest Service, Inyo National Forest	Regulator	Responsible for special use permit to allow installation of recycled water distribution pipeline on federal lands.
Town of Mammoth Lakes	Regulator	Responsible for inspection of recycled water distribution pipelines located within Town's right-of-way.
Sierra Star Golf Course and Snowcreek Golf Course	User	Responsible for maintaining public notification signs and working with MCWD to maintain compliance with all rules and regulations.

1.3.1 Producer and Distributor

MCWD will be both the producer and distributor of all recycled water. It is intended that MCWD will hold a General Use Permit issued by the RWQCB, SWRCB, and DDW, which will delegate reuse oversight responsibility to MCWD.

1.3.2 User

The initial user of recycled water has been the Sierra Star Golf Course with use beginning in 2010. The Snowcreek Golf Course began using recycled water in 2015. MCWD began the Trucked Recycled Water Program in 2015. Other potential users in the future include the Town of Mammoth Lakes for parks and roadway landscaping and condominium or public school landscape sites, construction projects, and other industrial users. The user will be responsible for public notification signs and working with MCWD to maintain compliance with all rules and regulations. The user will also be responsible for assigning a Use Area Supervisor.

1.4 Rules and Regulations

Recycled water operation procedures, restrictions, and other requirements for the MCWD recycled water system are described in "Rules and Regulations for Recycled Water Use," prepared and adopted by MCWD. MCWD also adopted an ordinance establishing a recycled water program and implementing procedures. See appendixes B and C, respectively.

1.5 Regulatory Requirements, Guidelines, and Standards

1.5.1 Regulatory Requirements

The Uniform Statewide Recycling Criteria was established for the protection of public health and are codified in the California Code of Regulations, Title 22, Division 4, Chapter 3 (herein referred to as Uniform Statewide Recycling Criteria). Approved uses of recycled water under the Uniform Statewide Recycling Criteria depend on the level of treatment and potential for public contact. There are four categories of recycled water relevant to this General Order; they are listed here and defined in the indicated regulations section:

a. Undisinfected secondary recycled water (Cal. Code Regs., tit. 22, § 60301.900.)
b. Disinfected secondary-23 recycled water (Cal. Code Regs., tit. 22, § 60301.225.)
c. Disinfected secondary-2.2 recycled water (Cal. Code Regs., tit. 22, § 60301.220.)
d. Disinfected tertiary recycled water (Cal. Code Regs., tit. 22, § 60301.230.)

When used in compliance with the Recycled Water Policy, the Uniform Statewide Recycling Criteria, and all applicable state and federal water quality laws, the State Water Board finds that

recycled water is safe for approved uses, and strongly supports recycled water as a safe alternative to raw and potable water supplies for approved uses. The General Order authorizes beneficial, non-potable recycled water uses consistent with the Uniform Statewide Recycling Criteria and any additional requirements specified in the Notice of Applicability

Two state agencies share responsibility for regulating the application and use of recycled water: the Division of Drinking Water (DDW) of the SWRCB and the RWQCB. Planning and implementing water recycling projects typically entails numerous interactions with these two agencies prior to final project approval. The preparation of this report represents an important step in the process.

The DDW of the SWRCB establishes statewide effluent bacteriological and treatment reliability standards for recycled water uses per Title 22. Under Title 22, the standards are established for each general type of use based on the potential for human contact with recycled water. The highest degree of standards for recycled water is for unrestricted human body contact. This program involves use of disinfected tertiary recycled water for irrigation of landscaped areas and impoundment in the same landscaped areas.

The RWQCB is charged with establishing and enforcing requirements for the application and use of recycled water within the state. Permits are required from the RWQCB for all water recycling operations in California. Regulatory authority and requirements are addressed in Chapter 7: Reclamation (Articles 1-7) of Division 7: Water Quality of the California Water Code. As part of the permit application process, applicants are required to demonstrate that their proposed recycled water operation will not exceed groundwater and surface water quality objectives expressed in the respective Basin Plan and that the operations are in full compliance with Title 22 requirements pertaining to recycled water.

The intent of the regulations is to establish acceptable constituents for recycled water and to prescribe means of ensuring reliability in the production and delivery of the water so that use for specified purposes does not impose undue risks to health. The DDW of the SWRCB has overall responsibility for all health issues. The RWQCB issues the recycled water requirements, which impose all absolute criteria established by the DDW of the SWRCB regulations. Generally, all DDW of the SWRCB recommendations in areas of critical or essential health concerns are also incorporated by the RWQCB. Any other DDW of the SWRCB recommendations are included in the recycled water permit requirements as deemed appropriate by the RWQCB. When measures are excluded, the RWQCB informs the DDW of the SWRCB in writing, clearly identifying the deviations and rationale for the departure.

1.5.2 State and Other Guidelines

"Guidelines for the Preparation of an Engineering Report for the Production, Distribution and Use of Recycled Water" (Guidelines) were prepared by CDPH in March 2001. The original report was prepared in conformance with CDPH's 2001 Guidelines and Title 22, Title 17, and the Water Code. This report has been updated in 2021 with guidance from DDW and the SWRCB.

1.5.3 Standards

Recycled water pipelines were designed and constructed to MCWD Standard Plans and the Town of Mammoth Lakes Standard Plans for Public Works.

SECTION 2 TREATMENT AND RECYCLED WATER PRODUCTION

The MCWD wastewater treatment system production of recycled water is described in this section. The treatment system incorporates the design requirements pursuant to Title 22, Articles 7 through 10. Wastewater sources including characteristics and source control programs are included. Design parameters, reliability, flexibility features, and contingency plans for each treatment unit process are discussed. This section also includes overall treatment system operation and maintenance, sampling and analysis, and monitoring and reporting.

2.1 Description of Wastewater Sources

2.1.1 Wastewater Sources

The Town of Mammoth Lakes population is composed of year-round and seasonal residents. Seasonal residents consist of both ski industry residents in winter, and non-winter visitation and activities primarily occurring during the months of July through September. The major wastewater sources for the recycled water treatment system include domestic sources within the community of Mammoth Lakes and several recreational campground areas located on U.S. Forest Service lands outside the MCWD service area. Commercial and industrial wastewater sources contribute a minor fraction, less than ten percent, of the wastewater.

2.1.2 Raw Wastewater Quality

Table 2.1 shows average raw wastewater quality data as received at the MLWWTP.

Table 2. 1 Raw Wastewater Quality Data Statistics

Values	Water Quality Constituents[a]							
	Temp °C	pH	BOD mg/L	MBAS mg/L	TKN mg/L	NH4-N mg/L	NO3-N mg/L	TSS mg/L
Minimum	9.1	6.8	92	0.15	18	2.8	0	187
Maximum	20.4	9.5	858	30	120	49	13	395
Median	14.1	7.5	315	5.8	40	22	0	271
Average	14	7.2	307	6.0	42	22	0	279
95th Percentile	19.8	8.9	464	12	65	36	0.7	360

[a] Data from 1991 to 2001 except TSS (from 1999 to 2001)
BOD – Biochemical Oxygen Demand; MBAS – Surfactants; TKN – Total Kjeldhal Nitrogen
NH4-N – Ammonia Nitrogen; NO3-N – Nitrate Nitrogen; TSS – Total Suspended Solids

2.1.3 Source Control Programs

MCWD has established and implemented a source control program to reduce the impacts of commercial and industrial wastewater sources and wastewater collection system infiltration on the treatment plant performance. These sources include restaurants, automotive repair shops, and construction sites. A summary of the program as applied to some major wastewater source categories within MCWD is provided below.

a) Restaurants are required to have grease interceptors installed to prevent high concentrations of grease and oil from entering the wastewater collection system. MCWD has developed an enforcement program to monitor and inspect restaurants in an effort to mitigate this source of fats oils and greases.

b) Construction sites are required to protect sewer manholes and storm drain inlets from receiving debris from erosion and construction activities through the use of filtration fabrics.

c) To prevent infiltration into its wastewater collection system, MCWD uses video inspection equipment to evaluate underground pipelines. If locations are identified with infiltration, the pipelines are sealed. Portable flow-monitoring equipment is used to monitor flows during low-flow periods to identify problem areas. Sewer manholes and manhole covers are also inspected and sealed when infiltration is identified entering these facilities.

2.2 Recycled Water Treatment System

This section describes the existing wastewater treatment facility and implemented improvements to produce recycled water. Figure 2.1 is a scaled layout drawing showing the existing treatment units and their improvements implemented under the MCWD recycled water project.

The MLWWTP is an activated sludge plant with the following unit processes: independent grit and trash removal systems, primary sedimentation, conventional activated sludge operated for carbonaceous BOD removal, secondary sedimentation, tertiary disk filtration, and chlorine disinfection. Treated effluent meeting the plant's Waste Discharge Requirements (WDR) is disposed of in Laurel Pond, a minor surface water of varying size located approximately 5½ miles southeast of Mammoth Lakes.

The existing filtration and disinfection systems meet Title 22 requirements for recycled water production and are used to reliably meet customer demand. The process's include secondary effluent pumping to filter, coagulant/flocculant addition and mixing, disk tertiary filter, chlorinators with in-line chlorine gas injection, chlorine contact basin (CCB), yard piping, a recycled water in-plant storage basin, and a recycled water pumping station.

The design capacity of the existing treatment plant is 4.1 MGD maximum 30-day average operating in carbonaceous BOD removal mode. The corresponding maximum-day flow is 5.48 MGD. Current annual-average wastewater flow during the irrigation season is 1.5 MGD. The treatment system modifications for recycled water production are designed for an average-daily flow of 1.5 MGD and a peak-flow rate of 2.9 MGD. Laurel Pond receives all the effluent from the treatment facility that is not used by approved recycled water uses. During the irrigation season recycled water not meeting Title 22 quality requirements, but meeting the WDR will be diverted to Laurel Pond. This includes filter effluent exceeding a turbidity of 2 nephelometric turbidity units (NTU), filter influent exceeding a turbidity of 10 NTU, and disinfected effluent not complying with the recycled water disinfection requirements.

A process flow diagram showing the existing treatment processes with modifications for recycled water production is shown on Figure 2.2. MCWD has the capability of producing secondary disinfected 2.2 recycled water and/or tertiary recycled water by the simple means of adding a coagulant to its secondary influent to achieve turbidities required by Title 22 and sending the filtered effluent through the chlorine contact basin to meet Title 22 CT and MCT requirements via an automated valve that continuously monitors those values. Conventional activated sludge effluent is run through a process of coagulation, flocculation and sedimentation in a secondary clarifier and then passed through a tertiary disk filter to produce filtered wastewater that meets the effluent criteria pursuant to the requirements defined in Title 22, Chapter 3, Article 1, Section 60301.320. A CCB is designed to produce disinfected tertiary recycled water pursuant to the requirements defined in Section 60301.230 of Title 22. Recycled water from the CCB flows to a HDPE-lined on-site storage basin. A recycled water pumping station pumps recycled water to the two initial users, Sierra Star and Snowcreek Golf Courses, using two force mains. Recycled water for approved uses

can be pumped from the CCB to water trucks permitted under the Trucked Recycled Water Program. A chlorine contact tank is also available for trucked recycled water or if needed in the event of a filter failure. This tank can also be used to send effluent to laurel pond if needed.

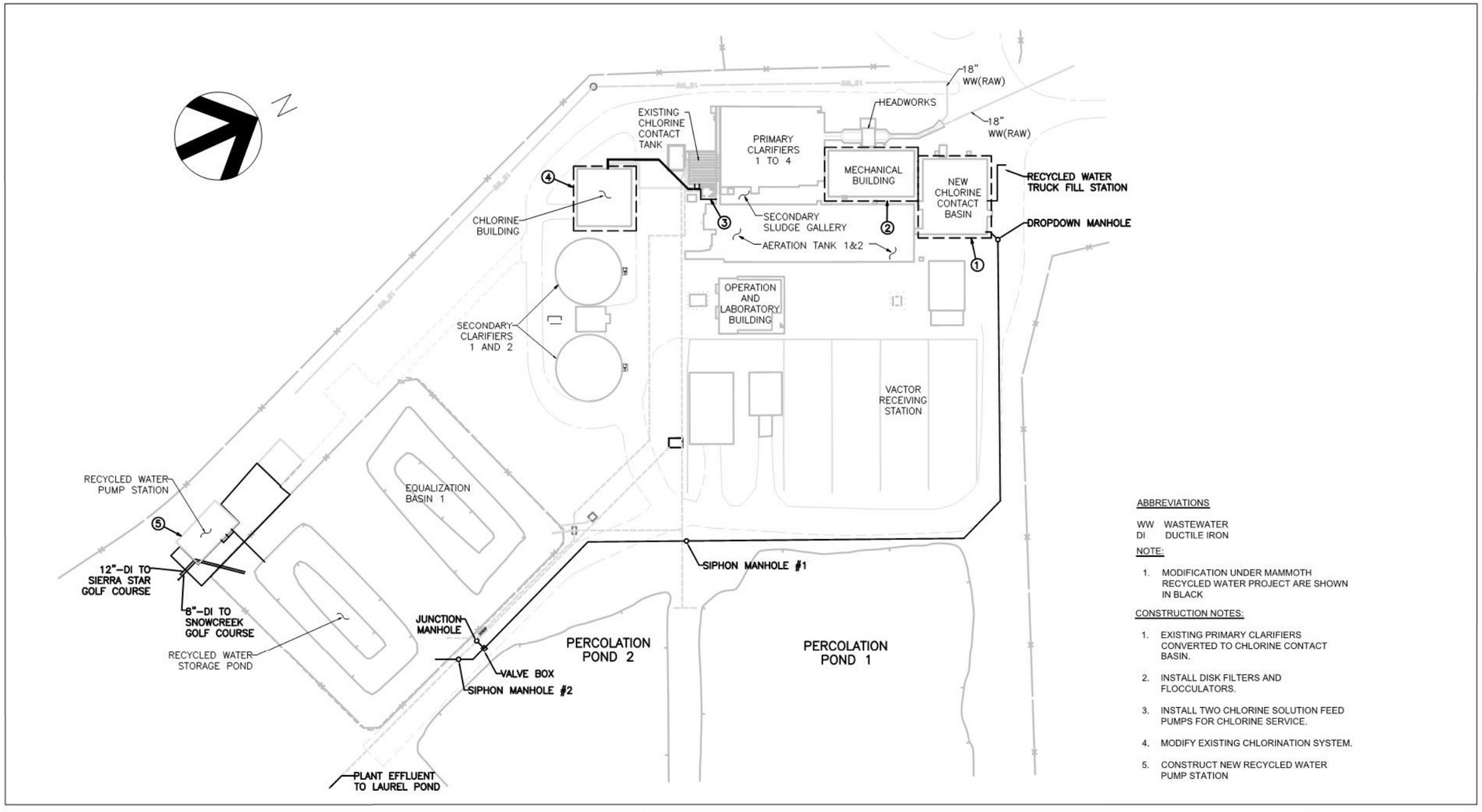

Figure 2. 1 Treatment System Layout Map

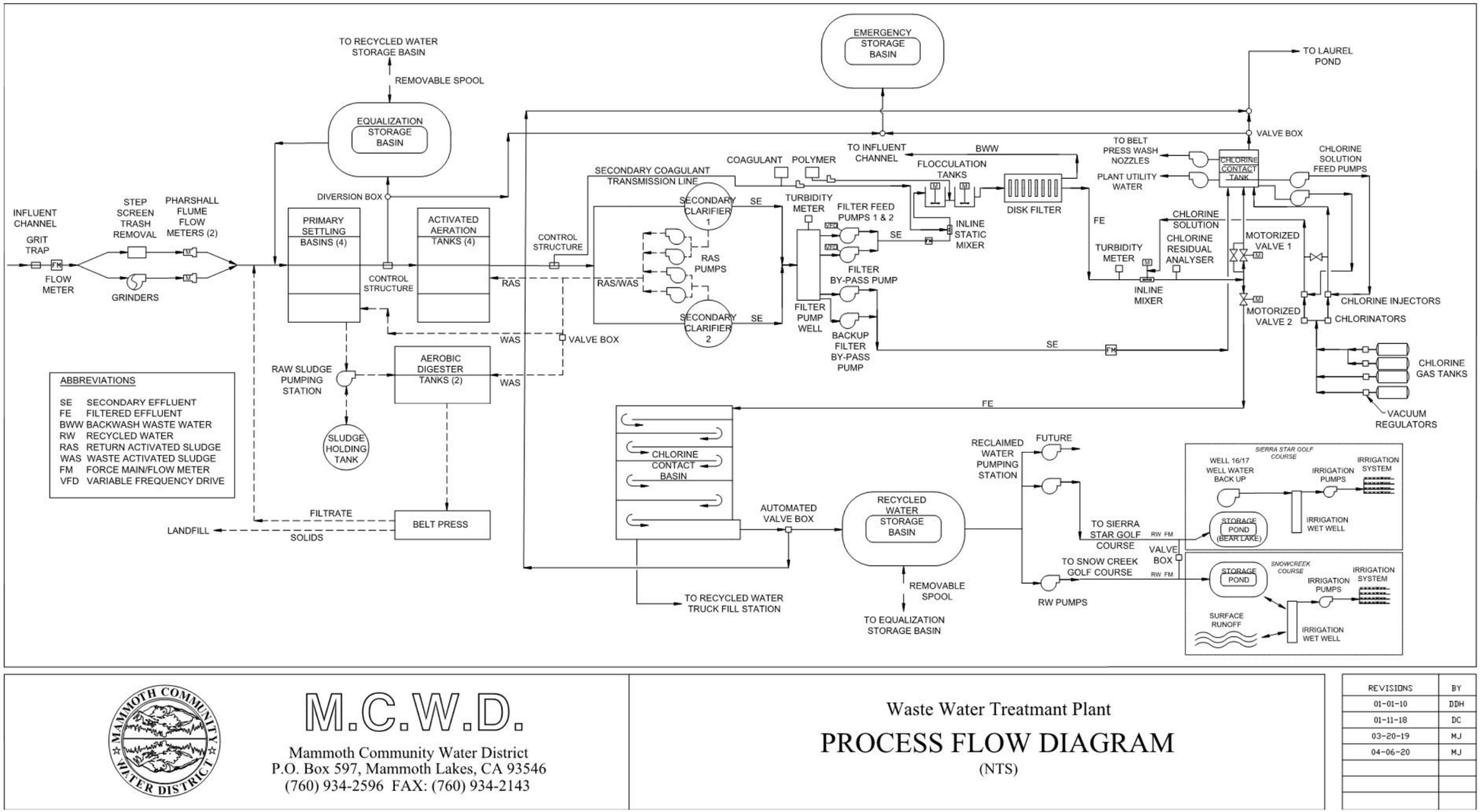

Figure 2. 2 Process Flow Diagram

The following information is listed pursuant to Title 22, Chapter 3, Article 7, and includes design criteria, operation and effluent characteristics for each unit process of the recycled water treatment system. Mandatory design features listed in Article 10 are also addressed. Table 2.2 summarizes plant performance by listing unit process average effluent characteristics, and expected values for unit processes.

Table 2. 2 Unit Process Water Quality Estimates

Process Water	Unit Process Water Quality [a]			
	BOD (mg/L)	TSS (mg/L)	Turbidity (NTU)	Total Coliform (MPN/100 mL)
Raw Wastewater	307	279	-	-
Primary Effluent	280	102		
Secondary Effluent	<10	10	5c	-
Filtered Effluent	<10	8	2[b]	-
Final Effluent	<10	7	2	<2.2[d]

[a] Values estimated for processes at nominal design capacity of 1.5 MGD
[b] in compliance with Title 22 **§60301.320. Filtered wastewater.**
[c] In compliance with title 22 **§60304. Use of recycled water for irrigation.**
[d] In compliance with title 22 **§60301.230. Disinfected tertiary recycled water.**

2.2.1 Preliminary Treatment and Flow Monitoring

Functions – The pretreatment system has four components, a rock/grit trap, one Huber mechanically operated step screen, one Huber WAP SL trash screening washer and one influent channel grinder. The rock/grit trap settles rocks and large grit particles upstream of the influent channel. The Huber mechanically operated step screen removes objects larger than ¼" (6mm) from the headworks influent. The Huber WAP SL trash screening washer washes objects collected by the Huber stepscreen returning all organic solids into the plant influent then separates, dries and compacts the remaining cleaned trash for disposal. The grinder, a Muffin Monster type by JWC Environmental, grinds large solids into solids of less than ½ inch size. The grinder has rotating vertical drum screens on both sides of the cutters. These direct the retained solids into the cutter. Flow monitoring is done in the influent channel and flow data is transmitted to SCADA for plant operation and control. Design data for the preliminary treatment and flow monitoring system is summarized in Table 2.3.

Equipment Type – The rock/grit trap is a widened depression in the influent channel to reduce water velocity and promote heavy particle settling. Rocks, pebbles and large sand particles are stored in the depression and removed with a grit pump and pumped through a grit drying system on a continuous basis. In normal operation all flow runs through channel one and the Huber step screen. In the event the Huber step screen fails or flow reaches more than 26 inches depth in channel one waste water is diverted over a gate into channel two through an in-channel grinder. A level signal starts the stand-by grinder automatically. Step screen and grinder operations are monitored using the SCADA system. Step screen and grinder have blockage and high water level alarms. The grinder is installed such that in case of blockage of both units, influent wastewater can flow over the grinder and enter the primary clarifiers. The open channel flow meter is a Marsh-McBirney Flo-Dar flow meter. The meter uses Doppler radar velocity measurement and ultrasonic level sensing techniques to measure wastewater velocity and depth in the channel. Measured velocity and depth values are then converted into flow rates in the meter.

Operational Characteristics – Continuous operation.

Table 2. 3 Preliminary Treatment Design Data

	Unit	Value
Nominal Plant Flow		
Annual-Average Flow	MGD	1.5
Maximum-Month Flow	MGD	4.05
Maximum-Day Flow	MGD	5.48
Huber Step Screen		
Number	ea	1
Capacity, each	MGD	5.5
Screen opening	inch	¼
Chanel Width	ft	3
In-Channel Grinder		
Number	ea	1
Capacity, each	MGD	6.9
Lateral Drum Screen Opening	inch	½
Channel Width	ft	3
Flow Measurement		
Type	Area/velocity radar and ultrasonic	
Number	ea	1

2.2.2 Primary Treatment

Function – To settle ground solids and suspended solids with gravity sedimentation. Removed solids are sent as primary sludge to aerobic digestion. Design data for the primary treatment system is summarized in Table 2.4.

Equipment Type – Rectangular concrete tanks with rake and chain sludge removal mechanism and helical skimmers for scum removal. Helical skimmers are manufactured by Polytech.

Operational Characteristics – Continuous operation; usually one clarifier is out of service during low flow season.

Table 2. 4 Primary Treatment Design Data

	Unit	Value
Primary Clarifiers		
Number		4
Dimension, W x L x side-water depth (SWD)	ft	2 @ 14 x 90 x 10
	ft	2 @ 20 x 90 x 10
Retention time at average-daily flow	hr	7.3
Overflow rate at average-daily flow	gpd/sf	662
TSS Removal Efficiency		
Sludge Pumps		
Number		6
Capacity, each	gpm	90
Scum Pumps		
Number		1
Capacity, each	gpm	90
Clarifier Overflow Rate		
At average-daily flow	gpd/sf	245
At peak-daily flow	gpd/sf	895
At instantaneous peak flow	gpd/sf	2,454

2.2.3 Flow Equalization

Function – To store and equalize primary clarifier effluent to produce a constant quantity and uniform quality influent to the secondary biological process. Design data for the flow equalization system is summarized in Table 2.5.

Equipment Type – One 1.5-MG concrete-lined earthen basin (Equalization Basin 1) and one 1.5-MG HDPE-lined earthen basin (Equalization Basin 2) with return pumps. Diversion to the equalization tank is controlled with a modulating butterfly valve and a magnetic flow meter, allowing a preset flow rate to go to secondary treatment. During periods of low instantaneous flow exceeding a band of 800 gpm below the forward feed set point, equalization basin return pumps start automatically. A level transducer in the EQ basins control low level pump shut down and triggers a high water level alarm. The basins are mixed and maintained aerobic using a propeller mixer and integrated blower system all contained on a floating platform which is anchored in place by guywires.

Operational Characteristics – During irrigation season, one of the two basins (Equalization Basin 2) will be used for recycled water storage and the other (Equalization Basin 1) as an equalization basin for primary effluent. Both are separate but can be connected through plug valves at the inlet of the return pumps. During the irrigation season, as part of the standard operating practice, the pipe spool allowing basin interconnection located inside the existing return pumping station will be removed before using Equalization Basin 2 for recycled water storage. The rest of the year, both basins will be used as equalization basins by reinstalling the spool piece. Equalization Basin 2 will be cleaned at the beginning of the irrigation season, before it is used for recycled water storage.

Table 2. 5 Flow Equalization Design Data

	Unit	Value
Basins		
Number		2
Capacity, each	MG	1.5
Working capacity	MG	1.3
Return Pumps		
Number		4
Capacity	gpm	2 @ 800
	gpm	2 @ 600
Aeration/Mixing Blowers		
Number		2
Power, each	HP	20
Capacity, each	scfm	400
Aeration/Mixing Pumps		
Number (Total in two basins)		4
Power, each	HP	15
Capacity, each	gpm	2,750

2.2.4 Secondary Treatment

Function – To oxidize and stabilize primary effluent dissolved and suspended organic matter through biochemical action in the presence of dissolved oxygen via a completely mixed activated sludge process. Design data for the secondary treatment system is summarized in Table 2.6.

Equipment Type – Concrete aeration tanks constructed on site, fine bubble ceramic disk diffusers with tapered aeration configuration, anaerobic selector zone with submersible EMU type mixer, Two Neuros turbo blowers that operate on automated DO control system.

Additional equipment includes: Circular clarifiers with flocculating center well; return activated sludge (RAS) vertical turbine pumps with speed control; positive displacement waste activated sludge (WAS) pumps with speed control.

Operational Characteristics – Continuous operation, operates currently on carbonaceous BOD removal mode for energy saving.

Table 2. 6 Secondary Treatment Design Data

	Unit	Value
Aeration Tanks		
Number of trains		2
Length	ft	180
Width	ft	24
SWD	ft	13.25
Volume, each tank	1000 cft	57.2

	Unit	Value
Organic loading rate at average flow	Lbs of BOD/1000 cft/day	30
Air requirement (flow rate 5.48 MGD)	scfm	7,600
Blowers		
Number		4 (1 or 2 stand by)
Capacity, each	scfm	3,000
Discharge pressure	psig	6.7
Secondary Clarifier		
Number		2
Diameter	ft	60
SWD	ft	16
Surface loading rate		
At average daily flow	gpd/sft	265
At peak daily flow	gpd/sft	969
Return Activated Sludge Pumps (variable speed)		
Number		4
Capacity, each, maximum speed	MGD	1.5
Waste Mixed Liquor Pumps		
Number		2
Capacity, each	gpm	25
Secondary Scum Pumps		
Number		2
Capacity, each	gpm	240

2.2.5 Tertiary Treatment

Function – This process includes Coagulation, flocculation and sedimentation of secondary influent followed by cloth disk filtration. Secondary effluent is pumped into the filter using vertical turbine pumps. Two bypass pumps in the same wet well allow flow to be diverted from the filters for secondary effluent disinfection in the existing chlorine contact tank (CCT) and discharged to Laurel Pond. Design data for the tertiary treatment system is summarized in Table 2.7.

Equipment Type –

- Feed pumps- Two 15 HP variable speed vertical turbine pumps. A single pump is required for average flows while both pumps are required during peak flows. Both pumps are VFD controlled based on level in the secondary effluent pumping well.
- Filters- Packaged Cloth-Media Disk Filter by U.S. Filter-Kruger Products. The manufactured disk filter is a CDPH approved filtration system to produce filtered wastewater that complies with the criteria as defined in Title 22, Chapter 3, Article 1, and Section 60301.320. Conditions of CDPH acceptance are: 1) hydraulic loading rate not to exceed 6 gpm/ft^2; 2) the filter will be complemented with a downstream disinfection process compliant with Section 60301.230 of Title 22; 3) influent turbidity not to exceed 10 NTU more than 5-percent of the time within a 24-hour period; and 4) scheduled inspections of cloth conditions is required.

Operational Characteristics – Continuous operation when recycled water system is in service. All the discs are backwashed simultaneously on a timer without interrupting filter operation. During backwash the discs rotate allowing the top portion above the water to be backwashed with filter effluent pumped through nozzles. Filter feed flow is constantly monitored to maintain a hydraulic loading rate below 6 gpm/ft^2 of cloth media. When at this flow the filter is not capable of passing the feed flow, an internal weir in the filter vessel allows excess unfiltered flow to bypass. This flow is directed to the existing CCT for disinfection and discharge to Laurel Pond as disinfected secondary effluent. During the winter season, when there is no demand for recycled water, a portion of the secondary effluent will be filtered and then directed to the secondary effluent CCT, CCB along with a portion that may bypass the filters. Combined effluent will be disinfected and sent to Laurel Pond.

Coagulant dosing is automatically flow paced to allow flocculation in secondary clarifier. When secondary effluent reaches or exceeds a turbidity of 10 NTU an interlock shuts down the filter feed pumps. All secondary effluent is then diverted to the existing secondary effluent disinfection and disposal system. When filter effluent has turbidity greater than 2 NTU a diversion valve at the filter discharge automatically diverts filter effluent to the existing secondary effluent disinfection and disposal system.

Table 2. 7 Tertiary Treatment Design Data

	Unit	Value
Filter Feed Pumps		
Number (total)	ea	2
Capacity, each	gpm	1,050
Discharge pressure, TDH	ft	30
Power	HP	15
Chemical Feed		
Coagulant type		Propac 929
Coagulant dose	mg/L	15-30
Filter		
Type		Kruger/Hydrotech Discfilter
Filter Media		Woven polyester
Number		1
Total surface area	ft^2	543
Filter pore size	µm	10
Filter flow		
Average daily flow	MGD	1.5
Peak hourly flow	MGD	2.9
Hydraulic loading		
Loading at peak flow	gpm/ft^2	3.67
Backwash Rate	gpm	94
Filter Influent Quality		

	Unit	Value
Average Turbidity	NTU	≤5
Filter Effluent Quality		
Turbidity	NTU	≤2

2.2.6 Disinfection

Function – Kill pathogenic organisms in the tertiary filter effluent by injecting a chlorine solution and providing sufficient initial mixing and contact time. Design data for the disinfection system is summarized in Table 2.8.

Equipment Type –

- Chlorine contact basin (CCB): Concrete tank with fiberglass reinforced plastics (FRP) baffles and covers. The tank has a total of eight passes. Tank level is maintained constant with effluent flowing over a weir out of the last pass.
- Chlorine Solution Supply: Chlorine gas is used to produce a concentrated solution with the use of venturi injectors. The solution is injected into the filter effluent line using an in-line chemical induction system to promote mixing and dispersion of the chlorine solution. Main components of the chlorination system include: four one-ton chlorine gas cylinders, automatic shut-off valves, vacuum regulators, automatic switch-over valves, chlorine gas detector, flow-paced and residual-trimmed chlorinators, chlorine injectors, chlorine solution feed water supply pumps, in-line chemical induction system, and two total chlorine residual analyzers.

Operational Characteristics – The recycled water CCB is sized to provide more than 90 minutes of modal contact time at the peak instantaneous flow of 2.9 MGD. Chlorine gas is fed to a dilution stream with constant flow, using vacuum chlorinators. Chlorine dose is controlled at the chlorinator with a combination of flow signal (filter effluent flow) and total residual chlorine signal measured at the inlet of the CCB by an amperometric total chlorine residual analyzer. The continuous flow and chlorine residual signal allows the system to dose chlorine based on filter effluent flow. The chlorine dose is trimmed based on the total chlorine residual measured by a second chlorine analyzer installed at the CCB outlet. This ensures maintaining over 450 mg-min/L CT (residual chlorine concentration, C, times modal contact time, T) at all times, which is required to meet Title 22 disinfection requirements. The point of compliance sampling for total and fecal coliform is the outlet of the CCB, at the same location where total residual chlorine is monitored for compliance with the recycled water disinfection requirements. In 2009 a Porter Modal Contact Time Tracer Study was conducted by HDR Engineering Inc. for the MCWD chlorine contact tank (Appendix A). Tracer tests are conducted as required by the California Department of Public Health (DPH) Title 22 regulations to determine that the chlorine contact tank, as constructed, does indeed provide the minimum modal contact time (MCT) of 90 minutes for all anticipated flow rates. Rhodamine dye tracer tests were performed on the CCT at the Mammoth Community Water District reclamation plant. The MCT's were obtained for several different flow rates and these values were plotted to create curves from which the MCTs at a given flow rate could be obtained by interpolating from the given data points. The testing indicated that all flow rates through the CCT within the expected flow range will experience at least 90 minutes of MCT. The testing also indicated that the CCT exceeded the 0.75 MCT-HRT design ration substantially at approximately 0.92. Please reference Appendix A for Disinfection Contact Time Tracer Study and results. There is additional contact time in the recycled water storage tank, but this is not factored into the CT calculation. The CCB outlet chlorine analyzer will be used to alarm, close the CCB inlet valve, and open the filter effluent diversion valve if the measured CT value falls below the target CT value.

This automatic action will send filter effluent to the secondary effluent CCT for disinfection and ensure that no inadequately disinfected water enters the CCB and RW storage basin. The CCT effluent will be disposed in Laurel Pond. An automated valve (switch track) that switches flow from the RW basin to Laurel Pond is used to maintain constant flow and chlorine residual when the RW basin is full and to supply the recycled water truck fill station. When the RW basin reaches a depth of 15ft., it closes the valve to the RW basin and opens the valve to Laurel pond, when it reaches 14.5 ft. it opens the valve to the RW basin and closes the valve to Laurel Pond.

Table 2. 8 Disinfection Design Data

	Unit	Value
Chlorine Cylinder		
No. of one-ton cylinders (duty)		4
No. of one-ton cylinders (storage)		6
Storage at 10 mg/L based on ADF	days	159
No. of automatic shut-off valves		4
No. of vacuum regulators		4
No. of automatic switch-over valves		1
Chlorinators		
No. of chlorinators for recycled water service		1
No. of chlorinators for secondary effluent service		1
Capacity, each	lbs/day	500
Injectors		
No. of injectors for recycled water service		1
No. of injectors for secondary effluent service		1
Capacity, each	lbs/day	500
No. of chlorine solution pumps for recycled water service		1
No. of chlorine solution pumps for secondary effluent service		1
Capacity of chlorine solution pump, each	gpm	25
Eductors		
No. of eductors for RW service		1
Capacity, lbs/day		500
No. of eductors for existing CCT (1 duty, 1 standby)		2
Capacity, each,	lbs/day	500
Chlorine Contact Tank (for RW service)		
Length	ft	60
Width	ft	56
Avg. SWD	ft	10
Volume	1000 cft	35.28
Number of passes		8
Average pass width	ft	7
Pass length to width ratio		69

	Unit	Value
HRT at peak flow of 2.9 MGD	min	137
MCT/HRT, at peak flow of 2.9 MGD (assumed)		0.92
Modal contact time (MCT) at peak flow of 2.9 MGD	min	110
Chlorine dose	mg/L	10
Minimum CT value	mg-min/L	450
Design Flow		
Average daily flow	MGD	1.5
Peak hour flow	MGD	2.9
Compliance Effluent Quality, Total Coliform Bacteria		
Median in last seven days	MPN/100 mL	< 2.2
Not more than one sample in 30-day period	MPN/100 mL	> 23
Any sample	MPN/100 mL	<240

2.2.7 Power Supply

Power supply for the treatment plant is provided by an electrical service from Southern California Edison, Co. The supply is 480-volt, 3-phase, 60-hertz, with a maximum current rating of 2500 amps. The plant has a 400-kW diesel backup generator. This generator powers all equipment necessary to treat wastewater in the event of a power outage. The SCADA system has an uninterruptible power supply (UPS). This ensures that the plant can continue operating during an outage. The new recycled water pumping station is not backed up by a secondary source of power. The golf courses have on-site recycled water storage and a continuous supply of recycled water is not necessary. Power requirements for all process equipment part of the recycled water filtration and disinfection system is approximately 70 kW. Recycled water pumping and hydraulic surge protection uses approximately 260 kW.

2.2.8 Chemicals

Table 2.9 lists information on all the chemicals that are used in the recycled water treatment processes. This includes name of chemicals, point of applications, the method and degree of mixing, the dosage, and the chemical storage and handling methods.

Table 2. 9 Chemicals Used in the Recycled Water Treatment System

Name of Chemical	Point of Application	Method of Mixing	Dose	On site Storage and Spill Containment	Bulk Storage
Propac 929	secondary clarifier inlet	flash mix through diversion channel, slow paddle mixing in flocculation zone	20 mg/L	Double-walled cross linked high density polyethylene (XDPE) 1000 gal. tanks; Raised concrete curb for spill containment inside chemical room.	Bulk supply tanker pumps directly to the two service tanks.
Chlorine	Filter effluent pipe inside the filter room		15 mg/L	1-ton cylinders per Chlorine Institute guidelines.	Minimum six cylinders in store with four on service. Use overhead crane to transfer.

2.3 Reliability/Flexibility Features

The following information is listed pursuant to Title 22, Chapter 3, Article 8, Sections 60333 and 60335, Article 9, and Article 10. Included are listings of monitoring devices, alarms, and reliability and flexibility features for each unit process or operation. Under the heading "Reliability Features" for each unit process or operation, specific references are given to the section(s) in Title 22 that the subject feature is satisfying. Figure 2.3 schematically illustrates key alarm and monitoring devices for the MCWD recycled water system. All monitoring information and alarms described in the following sections are local and communicated to two central telemetry rooms using twisted shielded pair (TSP) and fiber optic cable using Allen Bradley Data Highway Plus (DH+) as the communication protocol.

2.3.1 Preliminary Treatment and Flow Monitoring

Monitoring Devices –

- Power and fail status.
- Step screen fault, high level alarm, wash system fault, and high channel level alarm.
- In-channel grinders torque overload, operation, and fail status.
- Non contact area-velocity influent flow meter/transmitter readout and operation. Also provides continuous influent channel level indication. No fail status.

Alarms –

- Loss of power.
- Influent channel high level.
- Grinder failure (non-start or blocked after three reverse rotation and re-start trials).
- Flow meter failure. No status.

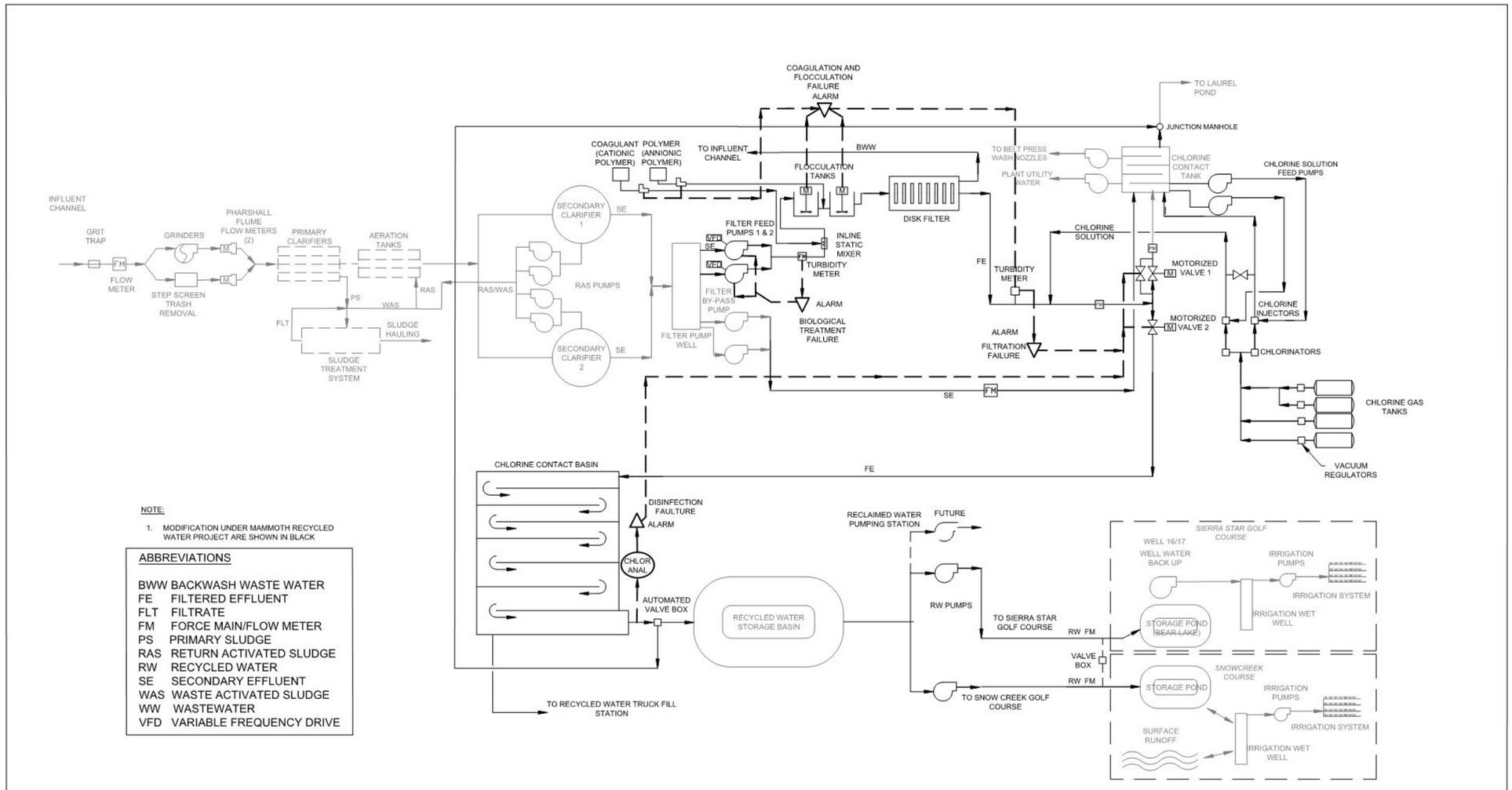

Figure 2. 3 Treatment Process Failure Schematic

Reliability Features – For influent flow meter, if channel is full and meter submerged, a pressure cell can measure depth as a backup to the ultrasonic level sensor. All flow runs through the step screen channel one, channel two influent gate is closed with overflow capacity set to 26 inch depth. When influent level indicates 25.5 in., SCADA system starts the emergency bypass grinder in case of over flow into bypass channel two. SCADA calls out to operator on call when bypass grinder is running. On call operator will respond to call by completely opening bypass gate or reset screen fault. Influent will still flow through screen when faulted and over bypass if needed.

Flexibility Features – the grinder has a motor shaft extensions to allow overflow in case the unit is out of service so that influent flow does not backup in influent sewers. Unground solids will settle or float in the primary clarifier.

2.3.2 Primary Treatment

Monitoring Devices –

- Power and fail status.
- Primary sludge pumps operation and fail status.
- Primary sludge flow meter.
- Helical skimmer drive operation and fail status.
- Scum pump operation and fail status.
- Primary effluent bypass flow meter readout and operation and fail status.
- Primary effluent bypass flow control valve position and status.

Alarms –

- Loss of power.
- Sludge pump failure.
- Skimmer drive failure.
- Scum pump failure.
- Bypass flow meter and valve failure.

Reliability Features – Multiple clarifier units capable of treating the entire flow with one unit out of service. Multiple sludge pumps capable of providing full sludge pumping efficiency with two pumps out of service.

Flexibility Features – Inlet gates can be used to take any number of clarifiers off-line for maintenance. Primary sludge pumps have interconnected suction to allow any pump to pump from any clarifier.

2.3.3 Flow Equalization

Monitoring Devices –

- Power and fail status for EQ Basin area MCC.
- Basin high and low level.
- Basin aeration blower operation and fail status.
- EQ Basin return pumps operation and fail status.

- Return flow meter readout and operation and fail status.

Alarms –

- Loss of power.
- Basin high level.
- Blower failure.
- Return pump failure.
- Return flow transducer failure.

Reliability Features – Multiple return pumps capable of pumping the entire flow with one unit not in operation. Two jet aeration/mixing blower units capable of providing mixing/aeration of the two basins when needed.

Flexibility Features – Primary clarifier effluent up to 4.9 MGD can be sent directly to secondary treatment process when the two activated sludge basins are on line. This allows winter flow peak conditions to be handled with minimal or no equalization when treating carbonaceous BOD only. In maximum-day conditions, the secondary system can operate at average flow and store diurnal peaks in the equalization basins for up to 21 hours before returned to secondary treatment process.

2.3.4 Secondary Treatment

Monitoring Devices –

- Aeration tank:
  - Blower MCC power fail
  - Blower operation and fail status
  - Air flow meters for each aeration basin readout and operation and fail status
  - Position and status for air flow control valves in two main air headers
  - Dissolved oxygen analyzer readout and operation and fail status
  - Blower discharge pressure and temperature
- Secondary clarifier:
  - RAS pump operation and fail status
  - RAS flow meter readout, operation and fail status
  - Rotating skimmer and sludge rake drive operation and fail status
  - WAS pumps flow operation and fail status.

Alarms –

- Aeration tank:
  - Loss of power in blowers
  - Blower failure
  - Blower flow meter failure
  - Dissolved oxygen analyzer failure
  - Low dissolved oxygen

Air flow control valve failure
Basin 1 & 2 air flow high/low/transducer fail
Basin 1 & 2 Dissolved oxygen high/low/transducer fail
manifold pressure high/low/transducer fail
Blower 1 & 2 back up blower start Failure/Fault
Backup blower speed high/low/transducer fail

- Secondary clarifier: Loss of power in clarifier drives
  RAS pump failure
  RAS flow meter failure low flow alarm
  WAS pump failure
  WAS flow meter failure
  Secondary scum pump failure
  Skimmer failure

Reliability Features –

- Aeration tank: Alarm (dissolved oxygen low-level) and multiple biological treatment units capable of producing oxidized wastewater with one aeration tank not in operation (reference Section 60345 [a]). This is the case during the season when recycled water is produced, which corresponds to low flows into the plant (off snow season)
  Multiple units capable of providing aeration for entire flow with one blower not in operation
- Secondary Clarifier: 2 clarifiers available with one capable of treating average flow (reference Section 60347 [a])
  Biological process failure resulting in high secondary effluent turbidity automatically shuts off the filter feed pumps and activates filter bypass pump to divert secondary effluent to the effluent CCT and then to Laurel Pond (reference Section 60345 [e])
  RAS pump failure results in automatically starting standby RAS pump
  WAS pump failure and automatically start standby WAS pump

Flexibility Features –

- Aeration tank: Can utilize piping manifold and valves to remove a blower for maintenance without affecting the treatment process
  Can utilize gates and valves to take an aeration tank offline without affecting the treatment process
- Secondary clarifier: Can utilize gates to take a clarifier off line without affecting the treatment process

Can automatically adjust return and waste sludge pumping rate to optimize process control. This is done using a RAS flow meter signal

Can isolate RAS and WAS pumps for maintenance

skimmer drive speed is manually adjusted to optimize sludge and scum collection

2.3.5 Tertiary Treatment

Monitoring Devices –

- Coagulation and Flocculation: Flocculator speed, operation and fail status

  Propac 929 storage tanks level
- Filter: Filter feed pump speed and operation and fail (high temperature, high pressure) status

  Filter flow

  Secondary effluent wet well level

  Secondary effluent turbidity analyzer readout, operation and fail status

  Filter water level

  Backwash pump operation and fail status

  Filter disk drive operation and fail status

  Filter effluent turbidity analyzer readout, operation and fail status

  Filter effluent diversion valve position, operation and fail status

Alarms –

- Coagulation and Flocculation:

  Propac 929 storage tank high and low level and sensor failure

  Chemical metering pump failure

- Filter: Filter feed pumps failure

  Filter feed flow over high set point to maintain approved hydraulic loading rate

  Secondary effluent wet well high level

  Secondary effluent turbidity analyzer readout more than 10 NTU and failure, for assessing failure of biological treatment process (reference Section 60335 [a.2])

  Filter high water level

  Backwash pump failure

  Filter disk drive failure

Filter effluent turbidity analyzer readout more than 2 NTU and failure, for assessing failure of filtration process (reference Section 60335 [a.5])

Reliability Features –

- Coagulation and Flocculation: Standby replacement equipment (chemical feed pump shelf spares), adequate chemical storage 2000 gallons and conveyance facilities, adequate reserve chemical supply delivered by bulk tank truck for uninterrupted coagulant and flocculant supply (reference Section 60349 [a])

  Alarm (Propac 929 storage tanks low level, chemical metering pump failure, and anionic polymer blending/feed unit failure), long-term tertiary effluent disposal provision (reference Section 60349[b.3])

  During complete or partial shutdown of coagulant system, secondary effluent flow can be diverted to the existing CCT and then into the Laurel Pond

- Filter: Alarm for high influent turbidity allowing automatic bypass of tertiary treatment system for disinfection and disposal as secondary effluent. Long-term effluent disposal provision (reference Section 60351[c]); also, automatically actuated filter effluent diversion valve for bypass of effluent with turbidity higher than 2 NTU to the existing CCT for disposal into the Laurel Pond (reference Section 60341[a, b, d, e] and Section 60351 [d])

  Multiple filter feed pumps capable of pumping average daily flow with one pump out of service. Also, during complete or partial shutdown, bypass pump in secondary effluent wet well will pump secondary effluent to the secondary effluent CCT for disinfection and disposal into the Laurel Pond. (reference Section 60341[b, e])

  Alarm (high level) and automatic backwash pump start for filter backwash

Flexibility Features – Manually and automatically adjust chemical feed pump rate to optimize dosage. Automatic adjustment based on signal from filter effluent flow meter for flow-proportioned control (reference Section 60349[a.4]). Backwash cycles can be initiated manually by override or automatically by filter head loss or filter run time. The intended recycled water uses allow the supply to be interrupted temporarily. The golf courses have on-site storage and alternative well water sources. This is the justification for limited back-up on filter feed pumping station.

2.3.6 Disinfection

Monitoring Devices –

- Disinfection System: Chlorine cylinder weighing scale

  Cylinder automatic shut-off valve status and failure. Battery power status and charging status - local only

  Storage and chlorinator room chlorine gas detector probes operation and status; chlorine readouts local only

Gas cylinder empty local status

Vacuum line pressure (local only)

Switch-over module status

Chlorine gas flow rate

Chlorine solution feed pump (submersible) operation and fail status (high temperature, thermal overload, and moisture leak)

CCB inlet flow meter readout and operation and fail status

CCB influent residual chlorine analyzer readout and operation and fail status

CCB inlet control valve position, operation and fail status

CCB bypass valve to secondary effluent disinfection, valve position, operation and fail status

CCB effluent residual chlorine analyzer readout and operation and fail status; for assessing failure of disinfection process (reference Section 60335 [a.3])

Alarms –

- Disinfection System:

Cylinder automatic shut-off valve failure

Low chlorine notifies operator

Chlorinator failure

Chlorine solution feed pump failure

Chlorine solution in-line injector/mixer failure

CCB inlet flow meter failure

CCB effluent residual chlorine analyzer failure

Low CCB effluent chlorine residual and system not meeting the set CT-value (450 mg-min/L minimum) calculated using CCB influent flow

CCB inlet control valve failure

CCB bypass valve to secondary effluent disinfection

Reliability Features –

- Disinfection System:

Chlorine scales, standby chlorine supply (connected cylinder), manifold system to connect chlorine cylinders with automatic switchover module for switching to full chlorine cylinder, automatic chlorine residual measuring and recording, automatic chlorine dosing system based on plant flow and residual chlorine readings (reference Section 60353[a])

Tracer test studies conducted to develop a modal contact time versus flow curve over the entire CCB operating flow range. A look-up table developed from the tracer study is used on the programmable logic controller (PLC) to

calculate modal contact time for any flow and use this contact time value in conjunction with CCB effluent total chlorine residual to calculate CT. The CT set point will be 500 mg-min/L. Falling below the set point will trigger an alarm

Alarm (for CCB effluent chlorine residual analyzers) and standby chlorinator (reference Section 60353[b.1]); also, long-term disposal provision for off-spec recycled into the Laurel Pond after disinfection in the existing CCT. (reference Section 60341[b] and Section 60353 [b. 3])

Flexibility Features –

- Disinfection System: Can attach other stored cylinders to supply system via chlorine gas manifold piping (reference Section 60353[a.2]); also, can weigh connected cylinders via chlorine scales (reference Section 60353[a.3])

  Can utilize compound loop chlorine feed system with chlorine fed proportional to flow upstream of the chlorine contact tank and proportional to flow and deviation from residual set-point measured downstream of the chlorine contact tank

  If chlorination CT is not met an alarm is triggered, the filter effluent diversion valve located downstream of the chlorine injection point opens and chlorinated flow goes to the secondary effluent CCT and from there to Laurel Pond. A manual gate upstream of the recycled water storage basin allows effluent from the recycled water CCB to be diverted to Laurel Pond without entering the storage basin. This is used when the CCB must be flushed to remove off-spec water. Once the required CT is met again the manual diversion gate is closed

2.3.7 Emergency Power Supply

The emergency power supply includes a generator powered by an internal combustion engine, and an automatic 800 amp transfer switch, and a back-up battery unit at each PLC. The generator provides a 480-volt, 3-phase, 60-hertz supply with a power output of 400 kilowatts. The internal combustion engine delivers 585 brake horsepower and utilizes diesel fuel. Storage is provided for 1050 gallons of fuel, which allows approximately 36 hours of service under specified operation.

The automatic transfer switch is actuated by failure in the normal power supply. During the brief interim period between the loss of normal power and the onset of emergency power, the back-up battery unit (UPS) provides a source of power to the PLC's, affording a smooth transfer. This ensures uninterrupted operation of alarm, monitoring, and data transfer systems.

Emergency power is supplied to all buildings and equipment necessary to treat wastewater. There is a separate generator for the SCADA system. Power failure dials operator on call.

2.3.8 Emergency Disposal to Laurel Pond

As previously discussed, off-spec recycled water can be diverted to Laurel Pond through automated motorized valves after disinfection in the existing secondary effluent CCT. These automated

motorized valves which divert off-spec recycled water to Laurel Pond are SCADA controlled. Effluent can be sent to this CCT before or after filtration under various failure conditions. The specific process flows disposed of in this manner are enumerated in the preceding subsections for unit processes or operations under the heading "Reliability Features."

In an emergency, the following flows may be disposed of in Laurel Pond:

a) Filter feed flow exceeding a turbidity of 10 NTU (secondary biological treatment effluent)

b) Filter effluent exceeding a turbidity of 2 NTU

c) CCB effluent not meeting a CT value of 450 mg-min/L. Flow through the CCB stops and automatic diversion valve sends filtered chlorinated flow to the secondary effluent CCT and from there to Laurel Pond

MCWD has waste discharge requirements (WDRs) issued by the RWQCB to dispose of disinfected secondary effluent in Laurel Pond.

2.3.9 Central Telemetry

The central telemetry room or SCADA is located in the server room which is located in the engineering building. Telemetry for the recycled water system, including the distribution facilities, is housed at this location. Most of the plant monitoring information and all major failure alarms are registered there as referenced in the preceding subsections. Alarm devices include both audible and visual indications.

Those alarms explicitly required by Title 22 (reference Section 60335) and located at the central telemetry room are as follows: loss of power from the normal power supply, failure of the biological treatment process (high-level turbidity in secondary effluent), failure of the coagulation process (loss of chemical feed), failure of the filtration process (high-level turbidity in filtered effluent), and failure of the disinfection process (low-level chlorine residual in final effluent).

All alarms and control devices located in the central telemetry room are powered by a separate power supply. In the event of a power failure, a transfer is made to the dedicated generator for the telemetry room for emergency power supply (see Emergency Power Supply).

Provisions are made so that alarm indications in the central telemetry room are transmitted to a telephone dialing system (reference Section 60335[d]). The operator on standby is then immediately notified of the alarm condition by the system with several back up numbers in que should the first operator not respond, allowing a prompt response (reference Section 60335[c]). All alarm conditions will call out using the dialing system. This provides 24-hour coverage of alarm conditions.

2.4 Contingency Plan

This section covers design provisions for failure response as required under Title 22, Chapter 3, Article 7, Section 60323[c]. Depending on the duration of the remedial response, notification of this condition will be made by MCWD to the regulating agencies in a timely manner. A written agreement may have to be drafted that delineates the features of such notification: circumstances, response time, individuals involved, required response action, and required follow-up action.

The failure of a particular process may include both process performance degradation and equipment failure. The plan does not include a discussion of treatment procedures whereby the nominal performance of unit treatment processes is ensured; remedial procedures whereby process performance can be corrected; or instruction for the disassembly, repair, or maintenance of equipment items. These topics are more appropriately covered in an operation and maintenance

manual developed for the entire treatment system. However, it is recognized that the diverted effluent to the Laurel Pond will meet the WDR requirements.

Figure 2.3 shows all the treatment process failures and their contingency responses through alarms and automatic responses. A common feature of these contingencies is that the design response is automatic and immediate, being triggered by an online analytical system or something equivalent. In all failure cases, the design response involves the cessation of recycled water pumping to the use areas and diversion of all process water to the existing CCT and disposal in the Laurel Pond.

In all failure cases, correction of the alarm condition must be manually made. Such correction of the alarm condition may involve a long-term response that is different than the initial (short-term), automatic response. For example, the short-term response to a process failure would be automatic diversion of process flow to the CCT, while the long-term response could involve the installation and interim use of standby equipment.

2.4.1 Biological Treatment Process

Failure – Secondary effluent turbidity greater than 10 NTU as determined by continuously operating online turbidity analyzer in filter influent line.

Action – Following time delay and automatic reading confirmation, the analyzer alarm signal will automatically stop the filter feed pumps stopping the recycled water production. This will increase the secondary effluent wet well water level and start the bypass pump when the water level reaches the set pump-on position. The bypass pumps are designed for full bypass of the secondary effluent to the existing secondary effluent CCT and disposal in Laurel Pond.

Alarm and call out to standby personnel.

2.4.2 Coagulation Process

Failure – Chemical feed pumping as determined by loss of coagulant due to pump failure, low chemical level in coagulant.

Action – Failure in the chemical feed system would reduce filtration efficiency. Unless responded to in a timely manner, filter effluent turbidity will increase. The filter effluent turbidity analyzer will provide a second alarm when the filter effluent turbidity value increases to the set point of current running day average of 2 NTU. This second alarm will automatically open the filter effluent bypass valve, which will divert filter effluent to the secondary effluent CCT.

2.4.3 Filtration Process

Failure - Filtered effluent turbidity greater than 2 NTU as determined by continuously operating in-line turbidity analyzer.

Action - Following confirming time delay, the analyzer alarm signal will automatically open the filter effluent bypass valve allowing filter effluent after chlorine injection to flow by gravity to the secondary effluent CCT for discharge to Laurel Pond.

2.4.4 Disinfection Process

Failure – CT value lower than the required 450 mg-min/L, as calculated by the PLC, using modal contact time as a function of flow rate and CCB effluent chlorine residual measured with continuously operating in-line analyzer.

Action - Following the confirming time delay, the alarm signal will automatically open, through the PLC, the filter discharge bypass valve allowing filter effluent after chlorine injection to flow by gravity to the secondary effluent CCT for discharge to Laurel Pond.

Calls out to standby personnel. To resolve the chlorine dosage problem, a diversion valve adjacent to the recycled water storage basin will be opened to allow flow from the recycled water CCB to be diverted to Laurel Pond without entering the storage basin. The filter effluent diversion valve will also be open to Laurel Pond and flow will proceed through the recycled water CCB. Once the appropriate CT-value is attained, the manually operated diversion gate will be closed to Laurel Pond and direct CCB effluent to the recycled water storage basin.

2.4.5 Normal Power Supply

Failure – Power outage interrupting normal power supply to plant.

Action - Loss of normal power supply will automatically start the emergency generator and activate an automatic transfer switch. Full load power from the emergency generator will be available for selected equipment after a time delay of about five minutes from the loss of normal power supply. Loss of normal power will also automatically activate a backup battery unit immediately after loss of the normal power supply. The backup battery unit provides a power supply to the selected equipment during the transition from the normal power supply to the emergency power supply. The emergency power will be available to all buildings but will not be able to power recycled water distribution pumps.

The control telemetry room has a separate emergency generator that will be automatically started upon loss of normal power. Switchover from emergency power to normal power supply will be automatic.

Loss of the normal power supply will constitute an alarm in the central telemetry common-alarm system which will result in a call out to the on call operator.

2.5 Operation and Maintenance

2.5.1 Personnel

MCWD's recycled water system is provided with a sufficient number of qualified personnel to operate the facility effectively so as to achieve the required level of treatment at all times. Qualified personnel meet the requirements established pursuant to Chapter 9 (commencing with Section 13625) of the Water Code.

2.5.2 Operation and Maintenance

MCWD has developed and follows an operation and maintenance (O&M) manual to reliably operate and maintain the recycled water treatment system and meet the recycled water quality requirements at all times. MWCD has developed and uses standard operation and maintenance log sheets to record treatment system operation and maintenance history. A preventive maintenance program has been provided for the recycled water system to ensure that all equipment is kept in a reliable operating condition.

2.5.3 Sampling and Analysis

Samples for total coliform bacteria are collected daily at the CCB effluent discharge point and analyzed by an approved laboratory. The sample is collected at a time of day when wastewater characteristics are most demanding on the treatment facilities and disinfection procedures. Filtered sample downstream of the disk filter is sampled continuously for turbidity measurement by an on-line turbidity analyzer and the data logged by a recorder.

2.5.4 Operating Records and Reports

Operating records of the recycled water system are maintained at the plant site. These records include analyses specified in the reclamation criteria; records of operational problems, plant and equipment breakdowns, and diversions to existing Laurel Pond disposal system; and all corrective or preventive action taken.

Process or equipment failures triggering an alarm are recorded and maintained as a separate record file. The recorded information includes the source of the alarm, a description of the alarm condition, date/time, and who was notified.

2.6 Monitoring and Reporting

The treatment process is monitored through a program that combines continuous on-line monitoring and periodic grab and composite sampling as necessary to optimally run the treatment process and comply with the regulatory requirements.

MCWD files a report including, but not limited to, the following information with the RWQCB in compliance with the Title 22, Section 13522.

a) Treatment plant effluent monitoring data including average, minimum, and maximum values for all water quality parameters required to be monitored for compliance with the Title 22 requirements.

b) Any discharge of untreated or partially treated wastewater to the use area, and the cessation of same, will be reported immediately by telephone to agencies as per the requirements of the General Permit.

c) A monthly summary of any operational problems and maintenance activities is submitted to the Regional Board with each monitoring report. This summary lists items to be included in the monitoring report:

- Modifications or additions made to the recycled water treatment, distribution, and disposal facilities;
- Major maintenance conducted on the recycled water treatment, distribution, and disposal facilities;
- Major operational problems that occurred in the recycled water treatment, distribution, and disposal facilities;
- Calibration of recycled water system measuring devices (flow, turbidity, and residual chlorine meters).

SECTION 3 RECYCLED WATER TRANSMISSION AND DISTRIBUTION SYSTEMS

Section 3 provides information on the MCWD recycled water transmission and distribution systems. The transmission and distribution facilities include recycled water pumping station, transmission pipelines, and storage lakes. Design details, reliability and flexibility features, contingency plans, operation and maintenance, and monitoring and reporting details for the recycled water pumping station and the transmission pipelines are described in this section. Above features for the storage reservoir are discussed in Section 5, Use Area Sites, and are not included in this section.

3.1 Description of Transmission and Distribution Systems

The transmission and distribution systems deliver recycled water to the two current irrigation use areas, Sierra Star and Snowcreek Golf Courses. A recycled water pumping station is located at the recycled water treatment system near Equalization Basin 1 (Figure 2.1). Dedicated pumps pump recycled water to each golf course in separate transmission pipelines. Figure 3.1 shows the location of the recycled water pumping station and layout of the transmission pipelines for the two golf courses. Details for the recycled water pumping station and the transmission pipelines layout, profile and location of other features in proximity of the pipelines are available in MCWD design drawings.

3.2 Transmission and Distribution Facilities

3.2.1 Recycled Water Pump Station

Function – To pump recycled water from the recycled water storage basin to the use area site storage lakes. Design data for the recycled water pumping station is summarized in Table 3.1.

Equipment Type – Vertical turbine pumps manufactured by Weirfloway, wet well level control, and pump controller.

Operational Characteristics – Normally continuous operation (when recycled water system in service). Constant-speed pump drives; manual and automatic actuation, with automatic actuation based on water levels at onsite RW storage basin and golf course storage lakes.

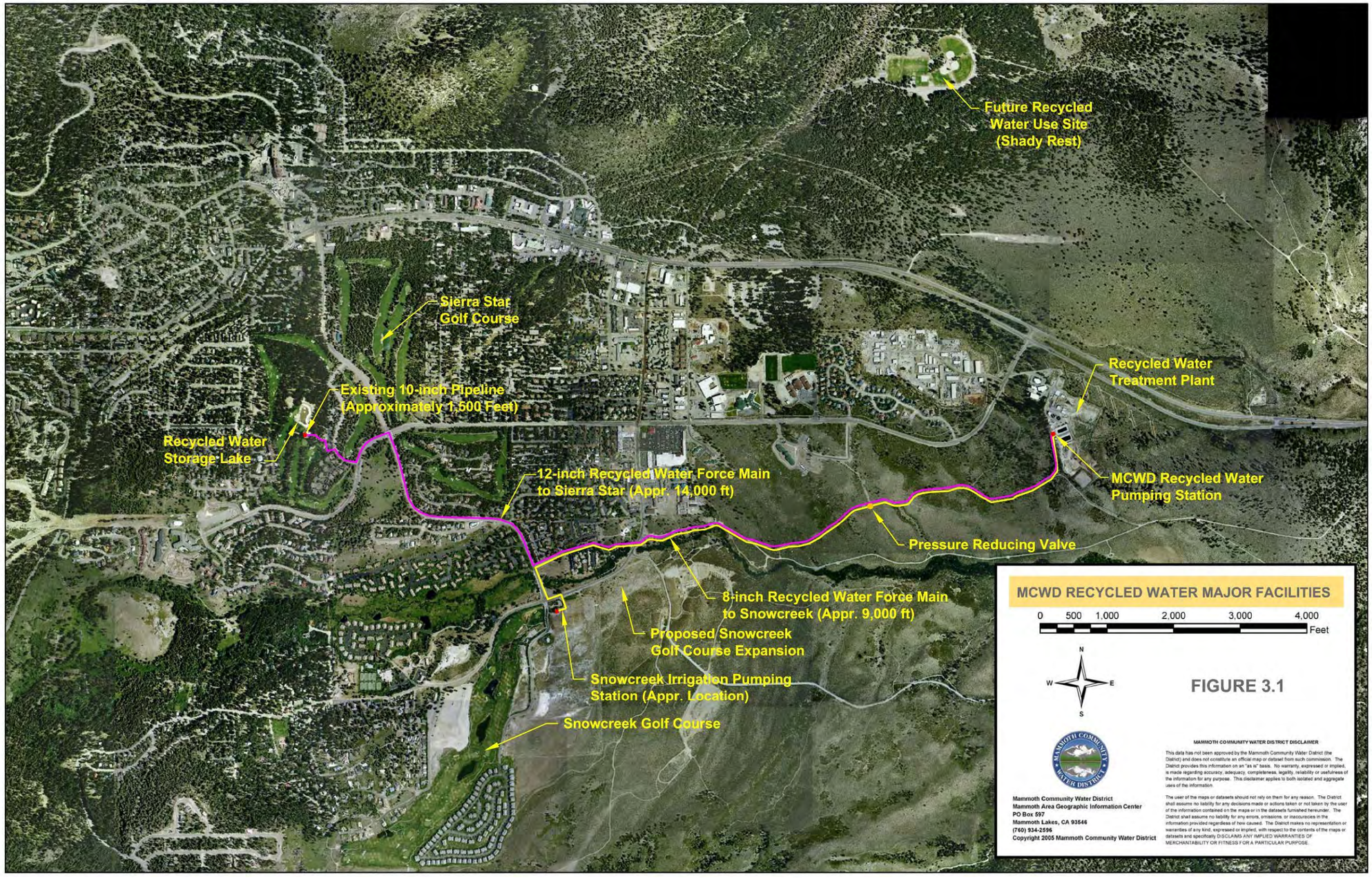

Figure 3. 1 MCWD Recycled Water Major Facilities

Table 3. 1 Recycled Water Pumping Station Design Data

	Unit	Value
RW Storage Basin		
Maximum SWD	ft	14
Minimum SWD	ft	3
Volume	MGal	1.5
Sierra Star RW Pump		
Number (duty)		1
Capacity, each	gpm	1,100
TDH	ft	450
Power	HP	200
Surge tank volume	gal	500
Snowcreek RW Pump		
Number (Duty)		1
Capacity, each	gpm	500
TDH	ft	291
Power	HP	50
Surge tank volume	gal	500

3.2.2 Transmission and Distribution Pipelines

Function – To convey recycled water from the recycled water storage basin to the use area site storage lakes. Design data for the transmission and distribution pipelines is summarized in Table 3.2.

Equipment Type – Ductile iron circular pipeline, valves, and accessories.

Operational Characteristics – Normally completely filled pipeline and continuous operation (when respective recycled water pump is in service).

Table 3. 2 Transmission and Distribution Pipelines Design Data

	Unit	Value
Sierra Star transmission Pipe		
Diameter of pipe	inch	12
Approximate length of pipeline	ft	14,000
Rated pressure	ft head	450
Flow	gpm	1,100
Snowcreek Transmission Pipe		
Diameter of pipe	inch	8
Approximate length of pipeline	ft	9,000
Rated pressure	ft head	291
Flow	gpm	500

3.3 Reliability/Flexible Features

The following information includes listings of monitoring devices, failure alarms, reliability features, and flexibility features for each transmission and distribution system's facilities. There are no specific reliability and flexibility requirements for elements of the recycled water transmission pipelines, so the below features are described only for the recycled water pumping station elements.

3.3.1 Recycled Water Pumping Station

Monitoring Devices - All monitoring information from the following monitoring devices are local and at central telemetry room unless otherwise specifically mentioned for any monitoring device.

Sierra Star Pump:	Loss of power and failure lights
	Pump status, speed, discharge pressure, and failure (High temperature, high load)
	Flow meter status and failure
Snowcreek Pump:	Loss of power and failure lights
	Pump status, speed, discharge pressure, and failure (High temperature, high load)
	Flow meter status and failure
Storage Basin:	Loss of power
	Sensor failure
	Water level
	Low water level
	High water level

Alarms – All local and through SCADA system unless otherwise stated for any alarm

Sierra Star Pump:	Loss of power and failure
	Pump failure
	High discharge pressure
	Pump high temperature
	Flow meter failure
Snowcreek Pump:	Loss of power and failure
	Pump failure
	High discharge pressure
	Pump high temperature
	Flow meter failure
Storage Basin:	Loss of power
	Sensor failure
	Low water level
	High water level

Reliability Features –

Pump failure and basin high level alarm signal can be used to manually divert the recycled water to Laurel Pond. Basin level set points are used to control automated fill valves. No standby pump is in place. Spare pump is in store. In addition, the storage basins can provide up to 22 hours of recycled water storage.

Flexibility Features –

Fixed speed pumps with only start and stop control. Pump start/stop controlled by end user onsite storage level transducers.

3.3.2 Transmission and Distribution Pipelines

Not applicable

3.4 Contingency Plan

The contingency plan for the treatment facilities, in conjunction with inherent physical features, assures that no untreated or inadequately treated wastewater will be delivered to the recycled water on-site storage lakes or the use areas. Therefore, failure in the distribution facilities is primarily significant because of the possible indirect impact on the operation of the treatment facilities and/or the need for emergency disposal to Laurel Pond. Specific impacts on the operation of the treatment facilities and considerations regarding contingency plan are discussed in the contingency plan for the recycled water treatment facilities. This section only discusses contingency plan for the recycled water pump failure.

Failure – Pumping failure due to loss of power, unit failure, and low water level in the basin as determined by continuous monitoring.

Action – Alarms will automatically stop the secondary pumps.

All the above failure alarm signals will be transmitted to central telemetry common-alarm system. If no personnel are present, common alarm will automatically alert on call personnel through a telephone based call out system to request operator to facility for response.

3.5 Supplemental Water Supply

A supplemental water supply suitable for golf course irrigation is available through MCWD wells, with available capacities ranging from 0.4 MGD to 1.3 MGD. Water from these wells was used for golf course irrigation prior to the availability of recycled water. The groundwater from the wells can be pumped to the on-site storage lakes through an above-ground pipe. An air gap between untreated groundwater and recycled water in the lakes will be maintained. If failure in transmission and distribution system continues to last for more than eight hours, well water supply system can be initiated to deliver groundwater to the storage lakes for use in use areas.

3.6 Operation and Maintenance

The recycled water transmission and distribution facilities will be operated and maintained by MCWD. MCWD will provide sufficient number of qualified personnel to operate the facilities effectively to ensure that no untreated or inadequately treated wastewater will be delivered to the recycled water on-site storage lakes or the use areas. Qualified personnel will meet the requirements established pursuant to Chapter 9 (commencing with Section 13625) of the Water Code.

SECTION 4 DESCRIPTION OF RECYCLED WATER USE PERMIT PROGRAM

MCWD (the Recycled Water Program Administrator) has implemented a Use Permit Program for the existing Master Permit and will continue the existing Use Permit Program under the California State General Permit. This Use Permit Program is designed to ensure the recycled water is safely and legally applied at the recycled water use sites. The program is described in the following sections and includes the authority, program design, monitoring and reporting procedures, and methods used to ensure regulatory compliance with General Water Reuse Order WQ 2016-0068-DDW.

4.1 Authority and Regulations

MCWD adopted a recycled water ordinance on October 15, 2009 (Appendix B). The ordinance specifies how MCWD Recycled Water Program will be implemented. Currently under the Master Recycled water permit, MCWD issues permits to recycled water users to establish recycled water site supervisors, designate use areas, specify application methods, dictate self-monitoring and reporting requirements, and provide notification of applicable regulatory requirements. As needed, MCWD may also secure recycled water use agreements with contracted users. This process will continue under the California General State Permit. The specific requirements for recycled water use, excerpted from the CCR Title 22, the provisions of Order WQ 2016-0068-DDW, and the recycled water ordinance will be attached to the recycled water permit and reviewed with each user during their initial training event.

4.2 Permit System for Metered Recycled Water Users

The Administrator has implemented a permit system to regulate "Metered Recycled Water Users." Metered Recycled Water Users are those users who are connected to the recycled water distribution pipeline. Currently Sierra Star Golf Course and Snowcreek Golf Course are the only users connected to the recycled water distribution system.

The steps that will be taken to issue and maintain a permit for the metered recycled water users are described in **Table 4.1**. Existing recycled water users will be permitted as soon as the Notice of Applicability (NOA) is received from the Regional Water Board.

Table 4. 1 MCWD Process to Obtain Recycled Water for Direct Users

Process	Applicable Documents or Actions Required	Responsible Entity
Step 1 – Consult with District to determine recycled water availability and project feasibility; Review Rules and Regulations	Discuss with District General Manager and District Engineer; District's Rules and Regulations	User
Step 2 – Prepare draft plans and specifications	Department of Drinking Water (DDW) requirements in California Code of Regulations (CCR) Titles 17 and 22 District rules and regulations	User
Step 3 – Submit Application for recycled water use	Districts User Application Form	User

Step 4 – Identify Distribution issues, verify allowed uses, estimate quantity of water and delivery schedule	Verification of information provided in the Application Form. Send conditional approval in writing with caveat that project commencement is contingent upon User receiving all regulatory approvals.	District
Step 5 – Complete California Environmental Quality Act (CEQA) Process	Make sure there is proper CEQA documentation for the Site	User
Step 6 – Consult with health agencies (recommended)	Describe project and show draft plans to DDW and LRWQCB	District / User
Step 7 – Finalize and submit plans and specifications	Plans and specifications submitted to DDW; DDW Cross-Connection Plan Approval Application and fee.	User
Step 8 – Provide materials and/or training to User on proper operation of a recycled water system	District's Recycled Water Users Rules and Regulations to be provided by District; Site Supervisor training to be provided by District (or another equivalent program can be substituted)	District / User
Step 9 –Consult with LRWQCB(recommended)	Describe project and discuss Engineering Report needs	User / District
Step 10 – Final plans and specifications	Obtain approval of final plans and specification from District	User
Step 11 – Prepare / amend Engineering Report	DDW Guidelines for Preparation of an Engineering Report for the Production, Distribution and Use of Recycled Water; District's information on water reclamation plants; User completes the Engineering Report; the District provides information related to treatment facilities; the report must be prepared and stamped by a professional engineer registered in California.	District / User
Step 12 – Submit Engineering Report to District, DDW and LRWQCB	Completed Engineering Report	User
Step 13 – If applicable, submit revised Engineering Report to agencies	Revisions/additional information may be requested by District, DDW and/or the LRWQCB	User
Step 14 – Authorization of project under existing or new LRWQCB permit	Letter or permit	District, LRWQCB; possibly DDW
Step 15 – Notification of Final Regulatory Approvals	District sends copy of DDW or LRWQCB letter or permit to User	District
Step 16 – Draft User Agreement or amendment (if Site is not covered under existing Agreement)	District's User Agreement	District / User
Step 17 – Approve User Agreement or Amendment	Present User Agreement or amendment to District Board and User for approval	District / User

Step 18 – Pre- and post-construction inspections	Contact District prior to construction to arrange for site inspections, initial cross connection and backflow prevention device testing; District Rules and Regulations	User or Purveyor
Step 19 – Approval of final Construction	By District	User
Step 20 – Begin project implementation		User
Step 21 – Submit revised as-built drawings of recycled water distribution system if necessary	Must be provided to District if any modifications have been made to original drawings	User

All metered users must complete the Application for Recycled Water Service (Appendix C), the information to be provided includes:

- Property information
- Site Owner information
- Design Contact
- Site Supervisor
- Application Checklist
    - Engineering Report
    - Operations and Maintenance Plan
    - Irrigation Management Plan
    - O&M Staff Training verification
    - Site Signage Plan
    - Monitoring and Inspection Plan
    - Emergency Cross-Connection Plan

The Recycled Water Site Supervisor will be the contact person at the user site and the person responsible for day-to-day operation of the recycled water system. The designated individual will have complete knowledge of the storage/irrigation system and will be available at all times to respond to emergencies or calls for assistance from the administrator.

The administrator will verify the information provided in the application through a site visit and discussion with the potential user. Any distribution issues will be resolved by the user and the Administrator and incorporated into the Recycled Water Use Agreement (if needed). Reference materials that contain information on the proper operation and maintenance of the recycled water system will be provided to the user during the permit issuance process. These materials will include, but not necessarily be limited to, MCWD Recycle Water Program Rules and Regulations, CCR Titles 17 & 22, Order WQ 2016-0068-DDW, and the recycled water ordinance.

The Recycled Water Use Permit will be issued to a metered user only after completion of a Cross-Connection Control Investigation and Test to identify and remove any connections between recycled and potable water supplies (see the following section entitled “Cross-Connection Control Program” for more information). The Administrator will review the investigation and test results to ensure that the necessary repairs are made before issuing the permit. “Additional Permit Terms and Conditions” will be attached to the permit to outline the required monitoring sites and frequencies, and any site-specific permit conditions that may be necessary.

4.3 Permit System for Trucked Recycled Water Users

The process for obtaining a permit for trucked recycled water use is presented in **Table 4.2.** Individual owners of tanker trucks and truck operators will be issued a permit, this permit demonstrates they have been trained on proper use and transport of recycled water.

All trucked recycled water users must submit information to the Administrator to receive the Recycled Water Truck Program permit. For more information see the MCWD Trucked Recycled Water Program (Appendix D). The information to be disclosed includes:

- User information
- Approved Type of Use

The contact person will be the truck driver or representative of the trucking company, and will be contacted by the Administrator or the Regional Water Board when questions arise pertaining to recycled water use guidelines and regulatory compliance. The contact person must have knowledge of all truck activities and specific uses of recycled water by each truck. This person must also be available to respond to emergencies or calls for assistance from the administrator.

When a trucker picks up recycled water, the trucker must fill out a form with the following fields:

- Date
- Permit number
- Amount filled
- Contractor who holds Permit
- Address RW is being delivered to

Each truck must have appropriately place recycled water signage (3 signs: one on each side of the truck, one at the rear of the truck). The Administrator will periodically verify adherence to the recycled water use requirements through unannounced site inspections. Improper use of recycled water could result in repeal of the Trucked Recycled Water Use Permit.

Table 4. 2 MCWD Permit Process for Trucked Recycled Water Use

Process of Issuing and Maintaining a Trucked Recycled Water Use Permit	**Recycled Water Program Document** and/or Actions Required	**Responsible Entity**
Step 1 – Request a copy of the MCWD Trucked Recycled Water Program Guidelines and Use Permit Application. Apply for the Trucked Recycled Water Use Permit	Trucked Recycled Water Program Guidelines Contact the MCWD Chief Wastewater Operator at 760-934-2596 ext. 235. Provide information to ensure User will comply with MCWD and State Requirements for trucked recycled water use	Truck Owner/ Operator
Step 2 – Issue a Trucked Recycled Water Use Permit (Dec. 31 expiration)	Trucked Recycled Water Use Permit. If all information is verified, issue final numbered permit	MCWD
Step 3 – Permitted Users may access MCWD's recycled water pump station during regular business hours. (NOTE: Recycled	Trucked Recycled Water Release Log	Truck Owner / Operator

water is not guaranteed to be available. Availability is subject to water quality conditions and production limitations)	Complete a log entry at the pump station every time recycled water is collected. Carry a copy of the permit and User Guidelines.	
Step 4 – Follow regulations for recycled water transport and distribution	Trucked Recycled Water Program Guidelines	Truck Owner / Operator
Step 5 – Conduct site inspections to verify adherence to recycled water use regulations	Site Compliance Inspection Report Confirm application site was properly posted in the release log; Confirm BMP's in effect; Confirm operators are following User Guidelines. Unannounced site visits may be conducted at any time.	MCWD
Step 6 – Renew permit annually	Trucked Recycled Water Program Guidelines	Truck Owner / Operator MCWD

4.4 Cross-Connection Control Program

The program to control cross-connections and maintain backflow prevention devices at user sites is described below. The specific activities and frequencies are identified in **Table 4.3.** The requirements of CCR Title 17 are enforced through site inspections and on-going permit conditions.

Prior to Recycled Water Permit Issuance (and every four years thereafter), a Certified Cross Connection Control Specialist (as described in CCR Title 17, Section 7605) must conduct a site investigation and test the recycled water system to identify any cross-connections (see the Cross-Connection Control Investigation and Test Report, **Appendix E**). During the next investigation, the Specialist will inspect the recycled water equipment and interview the Recycled Water Site Supervisor to determine if any equipment changes have been made since the last inspection. If activities were conducted that could compromise the integrity of the potable water supply system, a cross-connection test may be performed and/or corrective actions prescribed. The results of the investigation and testing are recorded by the specialist on the form and any deficiencies are noted along with the prescribed corrective action. All backflow prevention devices must be tested on an annual basis (see Backflow Prevention Device Test Report, **Appendix E**).

Table 4. 3 MCWD Recycled Water Program Cross-Connection Control

Required Action	Frequency	Documentation
Investigate site to determine cross-connection potential, perform shutdown test of recycled water system to ensure no cross-connections are present.	Prior to issuance of Recycled Water Use Permit	Cross-Connection Control Investigation and Test Report (**Appendix E**)
Test all backflow prevention devices to determine if functioning properly	Prior to issuance of Recycled Water Use Permit	Backflow Prevention Device Test Report (**Appendix E**)
Test all backflow prevention devices to determine if functioning properly.	Annually	Backflow Prevention Device Test Report (**Appendix E**)
Investigate site to determine cross-connection potential. If potential problem identified, shutdown recycled water system to test for cross connections.	Every four years (or more frequently if necessary)	Cross-Connection Control Investigation and Test Report (**Appendix E**)

4.4.1 User Cross-Connection Control Activities

On an annual basis, the user provides access to all relevant site locations and equipment by a Certified Cross-Connection Control Specialist, Certified Backflow Prevention Device Tester, and MCWD staff. All backflow prevention devices located onsite will be tested annually. The user must address any deficiencies noted by the Specialist or Tester within the deadline specified by MCWD in order to initiate or continue delivery of recycled water.

Prior to Recycled Water Permit issuance and every four years (of more frequently if necessary), the user will hire a Certified Specialist to perform a shutdown test of the recycled water system to identify cross-connections with the potable water system. The User must address any deficiencies noted by the Specialist within the deadline specified by MCWD in order to initiate or continue delivery of recycled water.

4.4.2 Administrator Cross-Connection Control Activities

The Administrator implements the Cross-Connection Control Program by sending annual and every four year testing notices to the users, reviewing test results, and enforcing compliance. The Administrator ensures CCR Title 17 requirements are met at each user site and that backflow prevention devices are installed at all potable water supply wellheads and connections. If deficiencies are noted by a Certified Specialist, the Administrator will establish a delaine for compliance and assist with the inspections to identify when corrections are completed.

The results of user investigations and testing are incorporated into the user's file and may be included in the Recycled Water Annual Report to the Regional Water Board. A recycled water shutdown test is required prior to permit issuance and every four years if potential problems are identified. Interim testing may be conducted if a user installs new equipment, significantly changes its recycled water operation, or a possible cross-connection is identified at the user site.

4.5 Monitoring Program

To ensure public safety and operation of the Recycled Water Program with legal guidelines, periodic site monitoring is conducted by the users and the Administrator. Monitoring results are reported to the Regional Water Board annually, and if necessary, as events occur that violate permit requirements or the California Health and Safety Code. The activities associated with the Monitoring and Reporting Program and detailed in **Table 4.4** along with required sampling frequencies and methods for compiling and recording results.

Table 4. 4 MCWD Recycled Water Program Monitoring and Reporting Requirements

Monitoring/Reporting Activity	Responsible Entity	Frequency	Data Compilation and Recording
Conduct self-monitoring and submit results to the Administrator	User	Once per month	Complete a Recycled Water User Self-Monitoring Report (**Appendix C**)
Report possible permit violations to the Administrator by telephone immediately	User	As needed	Record the time and date of the phone call and circumstances of the event
Contact Regional Water Board by telephone within 24 hours of determining non-compliance and copy Regional Water Board on any correspondence between the Administrator and User concerning non-compliance.	Administrator	As needed	Record the time and date of the phone call and circumstances of the event and maintain electronic files that contain the correspondence concerning non-compliance

Conduct periodic inspections of User sites	Administrator	At least annually	Complete a Site Inspection Report (**Appendix C**)
Monitor recycled water quality and amount of water delivered to Users	Administrator	Continuously	Maintain electronic files that contain water quality and delivery data
Report data collected, inspection results, violations corrected, and program changes to the Regional Water Board	Administrator	Annually (by April 1st)	Prepare and submit an Annual Report for each calendar year

4.5.1 User Self- Monitoring

As part of the terms and conditions of the Recycle Water Use Permit, the users are required to perform observations of site conditions and verify proper operation of the recycled water distribution system. Monitoring locations are specified in the Recycled Water Use Permit for metered users. Both land sites and pond (or impoundment) observation sites may be specified. The users must perform the observations and data collection identified in **Table 4.5** and record the results in the Recycle Water User Self-Monitoring Report (**Appendix C**). A copy of the monitoring report must be submitted to the Administrator within 15 days after the end of the calendar quarter.

Table 4. 5 MCWD Recycled Water Program Use Area Monitoring Requirements

Constituent	Units	Sample Type	Monitoring Frequency
Acreage Applied[1]	Acres	Calculated	Monthly[2]
Recycled Water Applied[3]	Acre-ft	Measured	Monthly[2]
Fertilizer Applied[4]	lb N/acre	Measured	Monthly[2]
Backflow or Cross-Connection Incident	---	By Occurrence	By Occurrence
Soil Saturation/Ponding[5]	---	Observation	Monthly[2]
Nuisance Odors/Vectors[5]	---	Observation	Monthly[2]
Discharge Off-Site[5]	---	Observation	Monthly[2]
Notification Signs[6]	---	Observation	Monthly[2]
Any Other Condition of Note	---	Observation	Monthly[2]

[1]Acreage applied is the total number of acres to which recycle water is applied during the monitoring period.
[2]Monthly when recycled water is used. Adverse conditions should be immediately reported to the Administrator.
[3]If known, report the amount of recycled water applied to each irrigation block or industrial process.
[4]Amount of Commercial fertilizers applied.
[5]Noteif any of these conditions occurred during the monitoring period.
[6]Verify notifications signs are in place according to CCR Title 22, section 60310 (g)

Although submittal of User Self-Monitoring Reports are required on a quarterly basis, user awareness must be continuous to note any violations of recycled water use requirements. If a permit violation or adverse condition is noted, the user must contact the administrator immediately by telephone. The user also has a responsibility to discuss any planned operational changes with the Administrator prior to implementation. Depending on the nature of the changes, the Administrator will inform the Regional Water Board and may change the terms and conditions of the Recycled Water Use Permit.

4.5.2 Administrator Monitoring

The Administrator is responsible for recycled water quality leaving the WWTP and the permitted use of recycled water at the users sites. As Distributors, MCWD is responsible for transport of recycled water from the WWTP to the use sites. WWTP operations are continuously scrutinized to ensure production of high quality recycled water. User sites are randomly inspected at least once a year to ensure proper usage of recycled water. Details of the two types of administrator monitoring are presented below.

The Administrator monitors the quality and quantity of recycled water leaving the WWTP under conditions specified in the regional WWTP WDR's/WRR's and any Recycled Water User Agreements in place. Meters installed at each delivery point record the total number of gallons distributed to each user. These metered amounts, recorded on a monthly basis, are used to quantify the monthly delivery to each user. The Administrator also monitors recycled water quality to determine the presence and concentrations of constituents of concern for landscape irrigation. The results are reported to users on an annual basis, so they can utilize this information to determine fertilizer application rates or incorporate soil amendments.

A list of required constituent sampling and frequencies specified by the General Order is presented in **Table 4.6**. Samples are collected after disinfection and prior to recycled water pumping. Samples from this location are representative of the recycled water quality being distributed to users. If the limits specified in CCR Title 22 are exceeded, the Administrator must notify the Regional Water Board within 24 hours and discontinue delivery to users until the violations have been corrected.

The Administrator will perform unannounced, randomly timed inspections of user sites at least once per year. Observations are recorded on the Site Inspection Report (**Appendix**). The observations are used to verify information reported in the User Self-Monitoring Reports and include such items as recycled water use, operation of storage and irrigation systems, placement of warning signs, and evidence of runoff or ponding.

All monitoring results will be disclosed to the Regional Water Board in the Recycle Water Annual Report, or sooner if any violations of permit conditions occur.

Table 4. 6 MCWD Recycled Water Program Administrator Monitoring Requirements[1]

Sampling Site	Constituent	Sample Type	Sample Frequency	CCR Title 22 Limits[2]
Downstream of Disinfection Facilities at the WWTP	Total Coliform Organisms (MPN/100 mL)	Grab	Daily	Tertiary Recycled Water ≤ 2.2 MPN/100 mL (median for past 7 days) ≤ 23 MPN/100 mL (exceed no more than 1 time in 30 days)
	Turbidity (NTU)	Recorder	Continuous	(2) So that the turbidity of the filtered wastewater does not exceed any of the following: (A) An average of 2 NTU within a 24-hour period; (B) 5 NTU more than 5 percent of the time within a 24-hour period; and (C) 10 NTU at any time.

[1]Monitoring required by Order WQ 2016-0068-DDW
[2]CCR Title 22, Section 60301.230 and section 60301.320

4.6 Reporting Requirements

The Administrator is required to periodically submit reports to the Regional Water Board to summarize operation of the Recycled Water Program, report any violations of the General Order, and actions taken or planned to correct the violations and prevent future violations.

4.6.1 Recycled Water Annual Report

The Administrator must submit a Recycled Water Annual Report to the Regional Water Board that describes operation of and changes to the Recycled Water Program. The Recycled Water Annual Report covers program activities during the previous calendar year and is due each April 1st. The following information will be included in the Annual Report:

- A summary table of all recycled water users and use areas. Maps may be included to identify use areas. Newly Permitted recycled water users and use areas shall be identified.
- Volume of recycled water produced and used (Acre-ft.)

- A summary table of all inspections and enforcement activities imitated by the Administrator. Include a discussion of compliance and the corrective actions taken, as well as any planned or proposed actions needed to bring the discharge into compliance with the NOA and/or General Order. Copies of any enforcement actions taken by the Administrator shall be provided.

- 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;

- Tabular and graphical summaries of all monitoring data collected during the year.

- Information on how Irrigation Management Plans are being implemented and whether large applicators have applied both recycled water and nutrients at agronomic rates. Identification of any adjustments or modifications for the upcoming year to ensure appropriate amounts are applied.

- Summary of training events conducted and the number of participants.

- The name and contact information for the recycled water operator responsible for operation, maintenance, and system monitoring.

A letter will accompany the annual report that includes the number and severity of any violations found during the reporting period, actions planned/taken to resolve violations, and the penalty of perjury statement.

4.6.2 Significant Violation Report

If the General Order provisions are violated, the administrator must notify the Regional Water Board by Phone within 24 hours. The information to be provided is outlined in the Significant Violation Report (**Appendix C**). When the violations have been corrected or the user has been removed from service, the Regional Water Board will be notified of the final resolution.

4.7 Operation and Maintenance Program

Operations and maintenance (O&M) associated with the Recycled Water Program is the responsibility of the User, the Distributor, and the Administrator. The point of separation for the contracted users is located just downstream of the point of delivery.

4.7.1 User Responsibilities

The User is responsible for operating and maintaining all recycled water equipment located beyond the point of delivery.

4.7.2 Distributor Responsibilities

The Distributor is responsible for operating and maintaining the recycled water distribution equipment between the WWTP and the point of delivery.

4.7.3 Administrator Responsibilities

The Administrator is responsible for operation of the WWTP's. The specific O&M requirements are specified in the MCWD WWTP O&M Manual.

4.8 Compliance Program

The Regional Water Board is guaranteed access, for inspection and monitoring purposes, to premises where recycled water is being produced or used. Records maintained for the Recycled Water Program will be made available to Regional Water Board upon request. Each user is responsible for implementing the MCWD Recycled Water Program Rules and Regulations, CCR Titles 17 and 22, Order WQ-2016-0068-DDW, and the recycled water ordinance.

Compliance activities and notification triggers are shown schematically in **Figure 4.1**. The users perform self-monitoring by routinely observing operation of the recycled water storage facilities and distribution system. If any possible violations of their permit conditions are noted, the users will contact the Administrator immediately. At that time, the Administrator will assess the incident, inspect the site (if necessary), and determine if a violation has occurred. In addition, the California Office of Emergency Services (Cal OES) must be notified by telephone as soon as possible of any release of hazardous materials to surface waters. If the incident is determined to be a violation, the Administrator will notify the Regional Water Board (and Cal OES, as appropriate) of the violation within 24 hours. The Administrator and user will discuss the cause of the violation, and the approach/timing for correction. If a violation has occurred, the Administrator will prescribe action and deadlines. The Regional Water Board will be copied on any correspondence concerning non-compliance between the Administrator and user. The Administrator will conduct a site inspection on the deadline date to determine if compliance has been achieved. If the user fails to implement the prescribed actions, the Administrator has the authority to shut off the recycled water supply to the site. The delivery of recycled water shall not be resumed until all conditions which caused the violations have been corrected.

Administrator-conducted inspections of use sites will be completed at random during times of recycled water use. During the visit, the Administrator will verify site operation according to permit conditions. If permit violations are noted, the actions described above will be implemented. The Administrator will notify the Regional Water Board (and Cal OES, as appropriate), prescribe corrective actions, establish a deadline, and verify implementation. When violations have been corrected or the user has been removed from service, the Regional Water Board will be notified of the final resolution.

4.9 Training of Users and Employees

Training is conducted through initial meetings with user representatives and provision of the regulatory and program documents to users and MCWD Recycle Water Program employees. If necessary, further assistance will be offered through on-site discussions and/or classroom instruction.

4.9.1 User Training

When a Recycled Water Use Permit is issued, a training session is held with each designated Recycled Water Site Supervisor regarding recycled water regulations, safety precautions for personnel handling recycled water, how to complete the program forms, and when to submit the required information. A copy of the MCWD Recycled Water Program Rules and Regulations, Order WQ 2016-0068-DDW, CCR Titles 17 and 22, and the recycled water ordinance is provided to facilitate understanding of the permit program and regulatory requirements. The Recycled Water Site Supervisors are responsible for training all employees that interact with recycled water and developing a precautionary safety plan for employees that repair/replace recycled water equipment. Employee training is verified by the Administrator during user site inspections. Additional training of user employees is provided by the Administrator if particular issues are noted. Trucked recycled water users also attend a training at the MCWD WWTP on fill-up procedures.

4.9.2 Administrator Employee Training

MCWD employees are given an initial training on recycled water program operation, regulatory requirements, and safety precautions. The MCWD Recycled Water Program Rules and Regulations, Order WQ 2016-0068-DDW. CCR Titles 17 and 22, the recycled water ordinance, and O&M Manual sections on recycled water equipment are reviewed by all employees that interact with the recycled water program. Recycled water handling procedures and safety precautions are reviewed with employees that repair/replace recycled water equipment. For new employees, a facility tour is conducted to demonstrate recycled water production, recycled water distribution, and recycled water truck fill-up procedures. A tour of the use sites is also conducted to introduce staff to Recycled Water Site Supervisors, identify site characteristics, and locate storage and distribution equipment. Follow-up training is provided every 2 years or more often if needed.

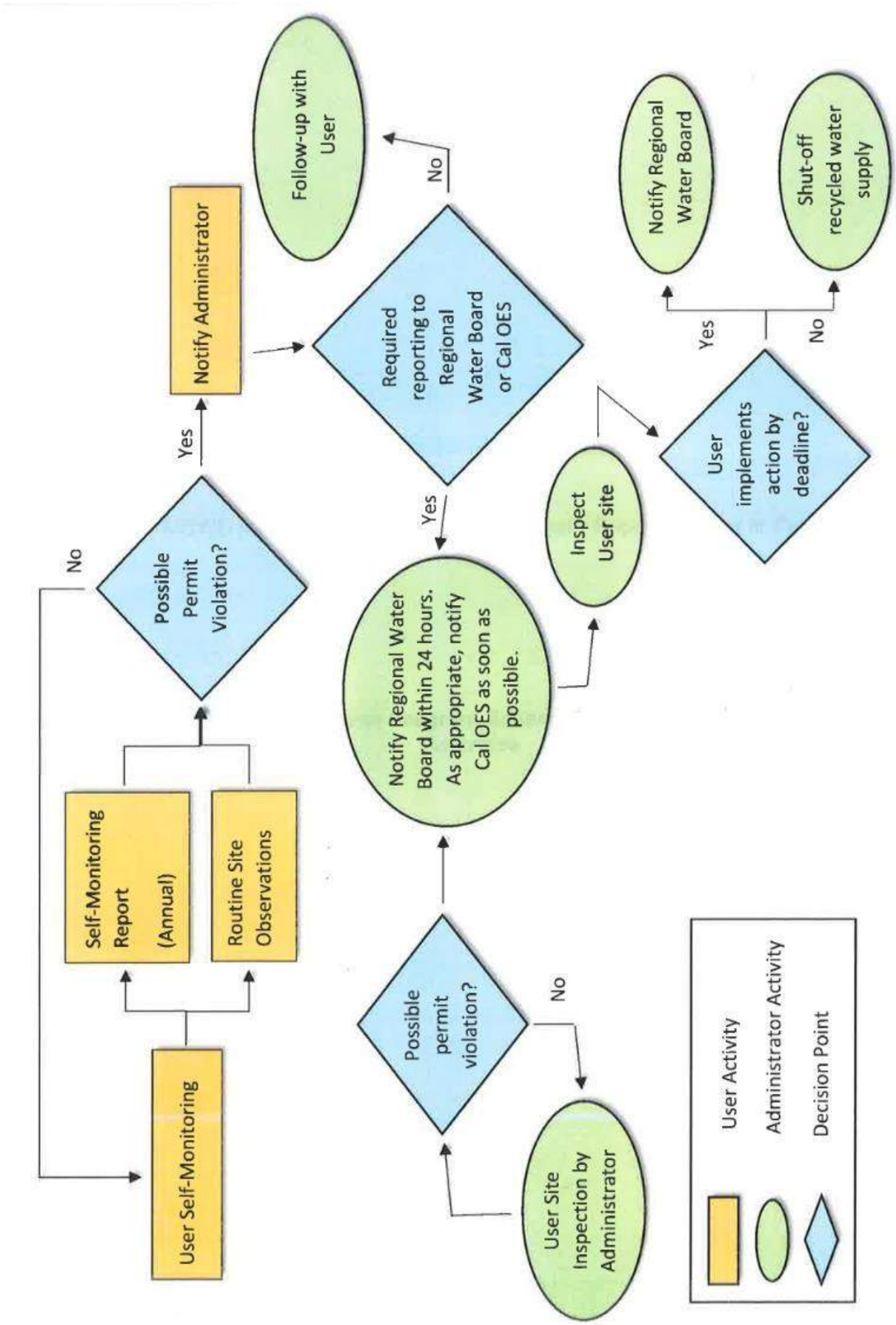

Figure 4.1 MCWD Recycled Water Program Schematic Representation of Compliance Activities

4.10 Emergency Procedures and Notification

Emergencies, such as equipment failures, cross-connection, earthquakes, and power outages, may occur at user sites or at the WWTP. In the event of such emergencies, notification of the Administrator, the Distributor, or the user (as applicable) must take place as soon as possible. An immediate change in operation or termination of flow may be required to minimize risks to human health. Emergency procedures for Distributors, Users, and Administrator are detailed in the following sections. Emergency contact information for the recycled water Distributors is presented in **Table 4.7**. Emergency contact information for the existing Recycled Water Site Supervisors is presented in **Table 4.8**. The list will be updated when distribution systems are completed and new user permits are approved. Emergency contact information for trucked recycled water users will be developed when user permits are approved (**Table 4.9**).

4.10.1 Distributor Emergency Procedures

In case of a recycled water emergency within the distribution system (i.e., pipe break, pump failure), the Administrator must be contacted in order to terminate flow from the WWTP. The MCWD Coordinator is the primary contact person and is knowledgeable about the Recycled Water Program and its facilities. The MCWD Operations Center is available 24 hours a day, 7 days a week for recycled water emergencies.

4.10.2 User Emergency Procedures

In case of a recycled water emergency at a user site, the Administrator and Distributor must be contacted in order to terminate flow to the site. Depending on the nature of the emergency, the user may also be directed to shut down the potable water system. The MCWD Coordinator is the primary contact person and is knowledgeable about the Recycled Water Program and its facilities. The MCWD Operations Center is available 24 hours a day, 7 days a week for recycled water emergencies. Emergency contact phone numbers are included in the Recycled Water Use Permit and on the User Self-Monitoring Report for easy reference.

4.10.3 Administrator Emergency Procedures

If a system failure occurs at the WWTP and properly treated recycled water cannot be guaranteed to the user, the Administrator will shut off the recycled water supply pumps. The water will be stored in on-site basins. The Users will be notified by telephone as soon as possible of the flow termination, the nature of the failure, and an estimation of the required down time. If inadequately treated water was already delivered to the user, the Administrator will recommend precautions to be implemented (limitations of public access, avoidance of contact, prevention of runoff, etc.).

Table 4. 7 Contact information for MCWD Recycled Water Distributor

Recycled Water Distributor	Contact	Contact Information
Mammoth Community Water District	Tyler Nelson Chief Plant Operator	Phone: (760) 934-2596 Fax: (760) 934-2143

Table 4. 8 Contact Information for MCWD Metered Recycled Water Users

Recycled Water Use Site	Contact	Contact Information
Sierra Star Golf Course	Patrick Lewis Golf Course Superintendent	Phone: (760) 934-2060 Email: Plewis@mammoth resorts.com
Snowcreek Golf Course	Cindy Hougland Golf Course Superintendent	Phone: (760) 914-1615 Email: Thehouglands@hotmail.com

Table 4. 9 Contact Information for MCWD Trucked Recycled Water Users

Recycled Water Use Site	Recycled Water Site Supervisor	Contact Information
Contact information for trucked recycled water users will be added at the begining of each Trucked Recycled Water Use season		

SECTION 5 USE AREA SITES

This section describes the proposed and future recycled water use areas for the MCWD recycled water project. Disinfected secondary 2.2 recycled water is produced for all Trucked Recycled Water uses.

The use sites which receive tertiary grade recycled water are Sierra Star Golf Course and Snowcreek Golf Course. In the future, a Snowcreek Golf Course expansion and new transmission project to Shady Rest Park may use the recycled water for irrigation. Pursuant to Article 4 and CDPH Engineering Report guidelines, the following characteristics are discussed for each use area:

- Description of use area sites,
- Use area design,
- Responsibilities and governmental jurisdiction over the use areas,
- Operation and maintenance,
- Compliance with use area requirements,
- Inspection, monitoring and reporting, and
- Employees training.

5.1 Description of Trucked Recycled Water Use Areas

Disinfected secondary 2.2 recycled water is produced for all Trucked Recycled Water uses. If secondary 2.2 is not available, trucked users may receive potable water or tertiary grade recycled water solely for the uses described in the Trucked recycled water program.

5.1.1 Freeway Landscape Irrigation

Disinfected secondary-2.2 recycled water is distributed through the Trucked Recycled Water Program for all Trucked Recycled Water freeway landscape irrigation uses. MCWD intends to supply disinfected secondary 2.2 recycled water through the Trucked Recycled Water Program to customers who require irrigation water for nonedible vegetation where access is controlled so that the irrigated area cannot be used as part of a park, playground or school yard. MCWD will revise the Engineering Report and seek DDW approval if MCWD is planning to supply recycled water for non-trucked freeway landscape irrigation uses.

5.1.2 Cooling

A pilot study was conducted in 2001 at Mammoth Pacific Geothermal Power Plant to utilize recycled water for cooling purposes; however, there are currently no plans to supply recycled water for cooling water uses. MCWD will revise the Engineering Report and seek DDW approval if MCWD is planning to supply recycled water for this use.

5.1.3 Fire Fighting

Mammoth Lakes and the surrounding areas are susceptible to wild fires and recycled water could become an important back-up source of water for non-structural fire-fighting supply. However, this is not currently being proposed. MCWD will revise the Engineering Report and seek DDW approval if MCWD is planning to supply recycled water for this use.

5.1.4 Construction

Disinfected Secondary 2.2 Recycled water for construction purposes may be used only for dust control, soil compaction during grading operations, and consolidation and compaction of backfill in trenches for non-potable water, sanitary sewer, storm drain, gas and electric pipeline trenches. Secondary 2.2 Recycled water shall not be used for water jetting and consolidation or compaction of backfill in trenches for potable water pipelines.

The operation, maintenance and surveillance of all on-site non-potable water systems facilities shall be under the management of the Use Supervisor designated by the user and approved by MCWD. MCWD has the right to enter upon the user's premises during reasonable hours for the purpose of inspecting the non-potable facilities and their operation.

Procedure to Obtain Recycled Water for Construction Use

Use of recycled water for construction purposes requires authorization of the district prior to using recycled water at construction sites. Sufficient time should be allowed to acquire the necessary approval prior to beginning construction.

The recycled water use applicant must complete and submit the user authorization form to the district. The user must identify an on-site supervisor who will be responsible for use of recycled water in conformance with MCWD Rules and Requirements for recycled water use. MCWD will review the authorization form to deny, provide approval or conditional approval for recycled water use.

Advisory Signage and Identification

All sites using recycled water must post clearly visible sign(s) conforming to District approval and installed per the locations(s) indicated by the approved user authorization form. Recycled water identification signage must be a minimum of 4" x 8", however of the reasonable size to be readable to the public.

Identification Signage, Tags, Markings, and Stickers

Any vehicle used to transport recycled water must be clearly marked with labels or signs that contain the words **"RECYCLED WATER – DO NOT DRINK,"** IN BOTH English and Spanish, in 2-inch high letters on a purple background. The signs should include the "Do Not Drink" symbol. One label or sign should be placed on the tank closest to the driver's door, with a second label or sign being placed on the rear surface of the tank at the outlet. All labels and signs must be placed where they can easily be seen by the personnel using the vehicle.

If required, 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 lettering stating **"RECYCLED WATER – DO NOT DRINK"** in English and in Spanish.

If required, potable water identification tags and labels must have a blue background with **"POTABLE WATER"** and **"AGUA PARA TOMAR"** in permanent lettering.

Recycled Water Construction Use Operational Requirements

Equipment

Vehicles used for distributing recycled water for soil compaction and dust control or other uses shall have an adequate tank and plumbing systems to ensure that leaks and ruptures will not occur in the course of normal use. In addition:

- Non-potable water should not be introduced into any domestic water piping system. No unprotected connection should be made between equipment containing non-potable water and any part of domestic water system.
- Hoses, drop tanks, etc. shall be identified as containing recycled water and not suitable for drinking water.
- Control valves shall be provided and configured such that recycled water can be applied in a controlled fashion on the construction site and completely retained during transit.
- Spray heads or nozzles shall be provided and configured such that recycled water is applied to prevent runoff, ponding, or windblown spray conditions.
- Each tank shall be equipped with an approved air-gap separation between the filler tube and the tank to prevent back siphonage.
- Above Ground recycled water appurtenances shall be color-coded purple and labeled or tagged "**RECYCLED WATER – DO NO DRINK"**. Labeling or tagging shall be in English and in Spanish.
- Each tank used to store and/or transport recycled water must be flushed and disinfected prior to storage and/or transport of potable water or recycled water to better quality.
- Equipment operators shall be instructed about the requirements contained herein and the proper use of recycled water.
- Recycled water shall not be introduced into any domestic water piping system.
- Any equipment or facilities such as transport vehicles, tanks, temporary piping or valves, and portable pumps which have been used with recycled water shall be cleaned and disinfected before moving to another job site. This disinfection and cleaning shall ensure the protection of public health in the event of any subsequent district-approved use.

Ponds

Ponds used for storage of construction non-potable water should be fenced and posted to limit public access.

Runoff Conditions

Conditions which directly or indirectly cause a runoff outside of the approved use area are prohibited.

Ponding Conditions

Conditions which directly or indirectly cause ponding outside of or within the approved use area are prohibited.

Overspray Conditions

Conditions which directly or indirectly permit windblown spray or overspray to pass outside of the approved use area are prohibited.

Unapproved Uses

Use of nonpotable water for any purpose other than those explicitly approved in the currently effective user authorization, and without the prior knowledge and approval of the MCWD, is prohibited.

Reuse / Disposal in Unapproved Areas

Reuse / Disposal of nonpotable water for any purpose, including approved uses, in areas other than those explicitly approved in the current user authorization, and without prior knowledge and approval of MCWD, is prohibited.

Cross-Connection

Cross-Connection resulting from the use of nonpotable water service, whether by design, construction practice, or system operations are prohibited.

Hose Bibs

Hose bibs on nonpotable water systems are prohibited, replacement of hose bibs with quick couplers is recommended.

Violations

The District reserves the right to determine whether a violation of these guidelines has resulted from any action or occurrence which is the responsibility of the user. If a violation is not corrected within a reasonable time, the District may discontinue recycled water service to the User.

Unauthorized Discharge

An unauthorized discharge is any amount of recycled water that leaves the designated use site. The Site Supervisor must report to the District any unauthorized discharged of recycled water, at which time the District will specify if a written report is required. In the event of an unauthorized discharge, the Site Supervisor should make every effort to contain the recycled water and prevent it from entering the storm drain system. Contact the District for further directions and disposal instructions.

Contamination of Potable Water

If contamination of the potable water system is suspected or known due to the accident or cross-connection on the user's premises, the user must immediately stop recycled water use and notify the District. In case of contamination of the District potable water system due to a cross-connection on the User's premises, the User must immediately notify the District and the County Health Department.

5.1.5 Other Industrial Uses

Future industrial and commercial uses of recycled water may include use in industrial boiler feeds as well as industrial process water that will not come into contact with workers. No industrial use areas are part of the present recycled water project and are not discussed in this report.

5.2 Golf Course Landscape Irrigation Uses

5.2.1 Use Area Description

Figure 5.1 and Figure 5.2 show the location of Sierra Star and Snowcreek Golf Courses, respectively. Sierra Star is located in the northwest area of Mammoth and Snowcreek is located in the Old Mammoth Meadow area (in the south part of Mammoth). Contiguous housing units border the Sierra Star recycled water use area and existing Snowcreek Golf Course. The Snowcreek expansion, which will receive recycled water irrigation, borders vacant lands and roads planned for future development. Table 5.1 presents characteristics such as irrigation acreage, design, grass type, and typical irrigation period of the two golf courses.

The irrigation season for both golf courses is relatively short, typically including the months from May through October. During winter, the facilities are typically covered in snow, and irrigation is suspended. However, the annual irrigation period and resulting water demands can vary from year to year, depending on the amount of snowfall and the length of the golf course operation season. Both Snowcreek and Sierra Star utilize automated irrigation systems that use soil humidity sensors to maximize efficiency and optimize water use. Irrigation typically occurs over about nine hours at night.

Table 5. 1 Golf Course Characteristics and Irrigation

Item	Sierra Star	Snowcreek
Irrigated Area	70 acres	63.3 acres
Storage Lake Area	1.7 acres	0.3 acres
Vicinity Water Supply Wells	Wells No. 16, 17, 20, 25	Wells No. 10 and 6, and one private well
Grass Type	Cold-season. Mainly ryegrass, fescues, and bluegrass	Cold-season. Ryegrass, fescues, and blue grass
Irrigation Period	May through October	May through October

Disinfected tertiary recycled water is used for unrestricted golf course turf irrigation and applied primarily through spray (sprinklers) irrigation with a minor amount through drip emitters. Current irrigation practices will be continued for irrigation using the recycled water.

Four MCWD domestic water supply wells (Wells No. 16, 17, 20, and 25) are located near the Sierra Star Golf Course. The distances of these wells from the perimeter of the golf course turf area range from 200 feet to 850 feet. Table 5.2 summarizes construction details of these wells. Groundwater from all of these wells is pumped to a central water treatment facility located approximately 500 feet from the perimeter of the golf course.

There are two water supply wells (Wells No. 6 and 10) located within the existing 9-hole Snowcreek Golf Course and approximately 4,000 feet from the expanded 18-hole golf course area where recycled water irrigation will be practiced. Construction details of these wells are included in table 5.2. Groundwater from all these wells is pumped to a central water treatment facility located approximately 2,000 ft from the perimeter of the golf course.

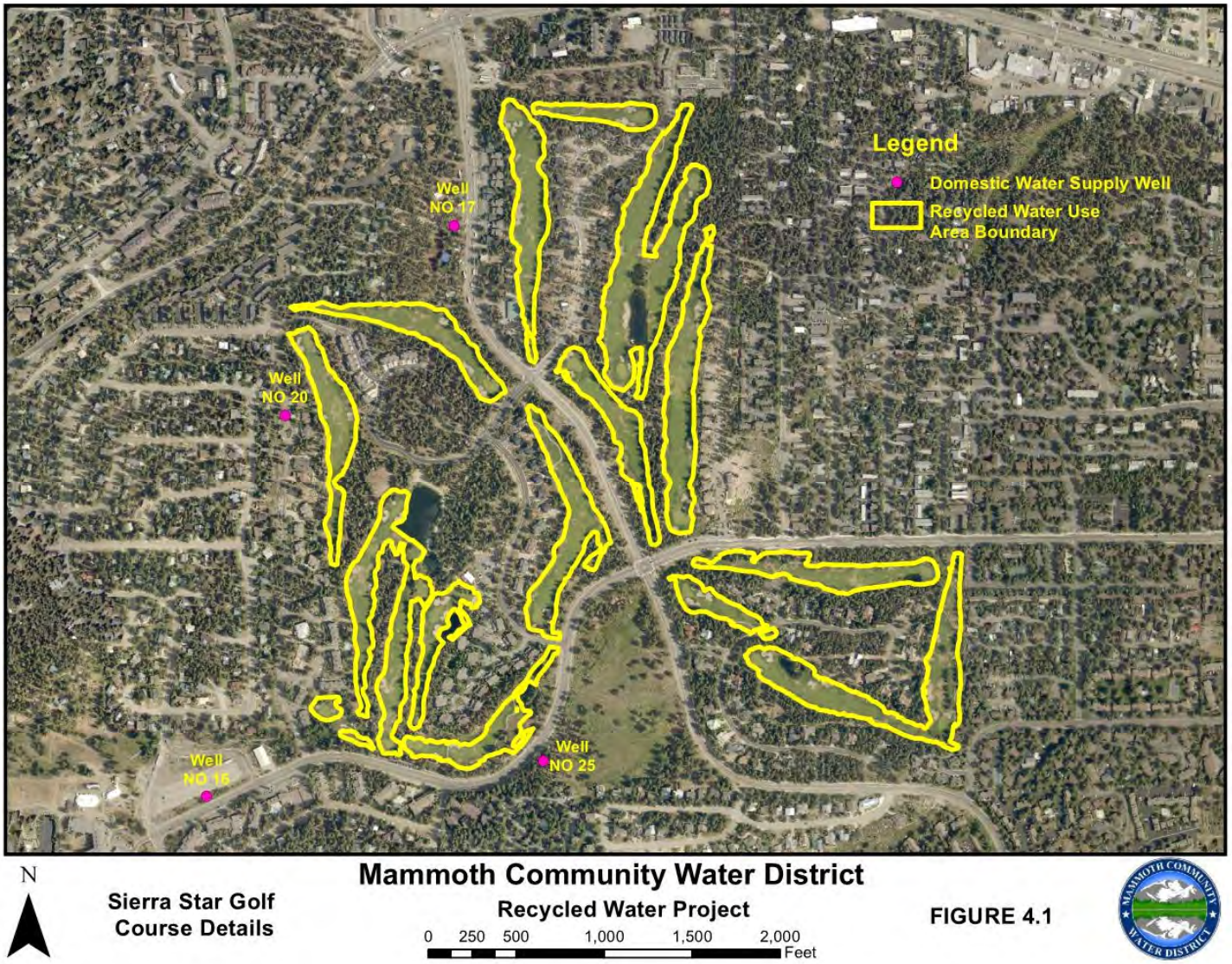

Figure 5. 1 Sierra Star Golf Course Details

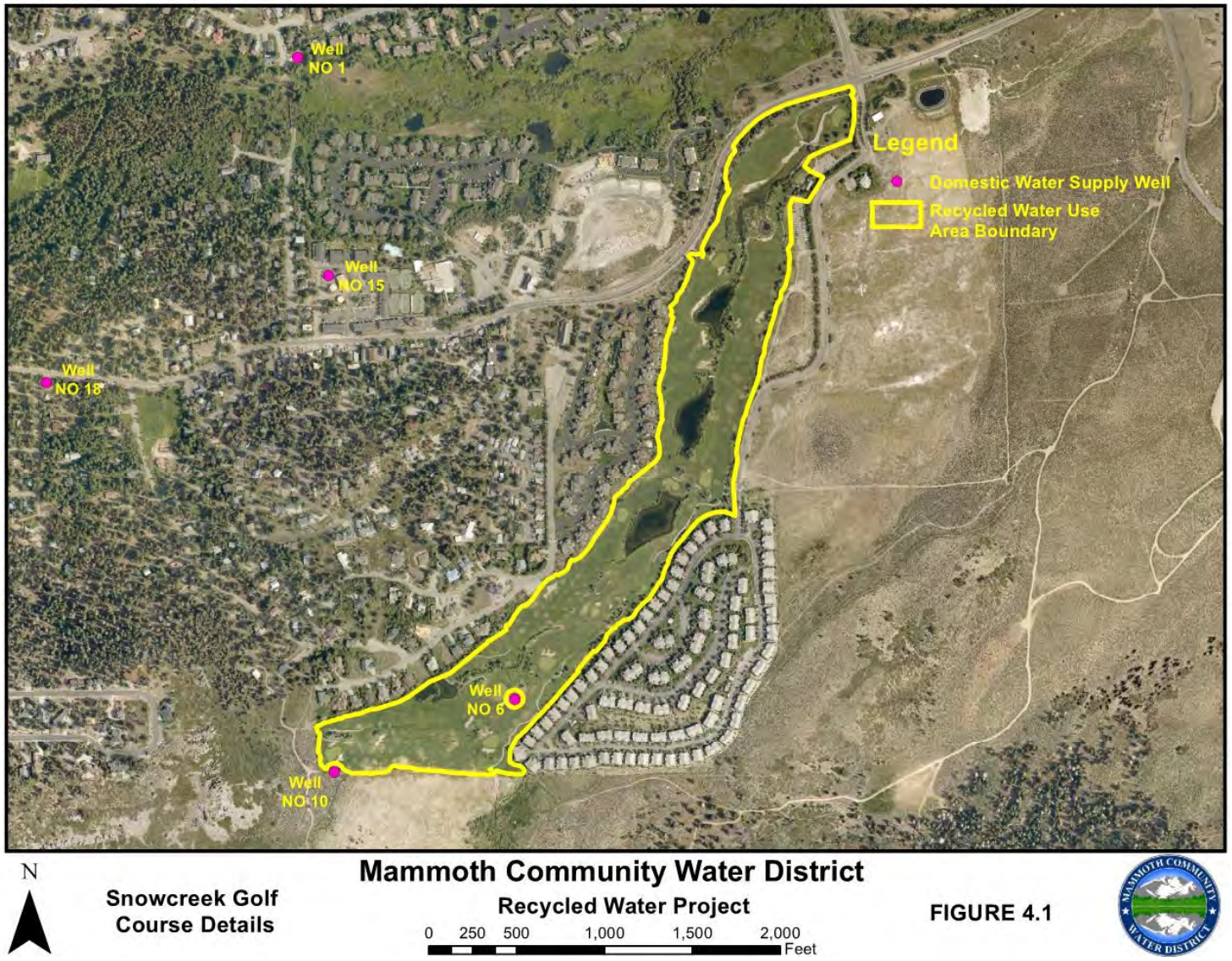

Figure 5. 2 Snowcreek Golf Course Details

Table 5. 2 Production Well Construction Data

Well No.	Date Drilled	Drilled Depth (ft)	Cased Depth (ft)	Perforated or Open Interval (ft)	Annular Seal (ft)
6	10/28/1987	670	670	196 - 670	0 - 52
10	11/02/1987	700	700	136 - 700	0 - 52
16	8/1992	710	710	420 - 470 500 - 680	0 - 60
17	7/1992	710	513	400 - 710	0 - 60
20	9/1992	710	420	240 - 420 470 - 710	0 - 60
25	8/01/2002	700	530	340 - 700	0 - 60

5.2.2 Responsibility

All recycled water facilities will be managed by MCWD under the terms of a General Use Permit to be issued to MCWD by the SWRCB, and DDW. MCWD will continue to administer Recycled Water Use Permits to recycled water users including Sierra Star and Snowcreek Golf Courses. Recycled water users will be responsible to comply with all permit requirements including proper maintenance of backflow prevention devices, prevention of public contact with the recycled water through implementation of best management practices, control of irrigation runoff from the use area, designation of a recycled water supervisor to oversee the recycled water project and monitoring and reporting, and close communication with MCWD.

5.2.3 Governmental Jurisdiction

Governmental agencies that will have regulatory jurisdiction over the reuse sites include the, SWRCB, and DDW. Other agencies associated with the project include the U.S. Forest Service, Mono County Health Department, and Town of Mammoth Lakes.

5.2.4 Use Area Design

The existing irrigation distribution system in each golf course includes a recycled water pumping station with booster pumps, main header pipe from the pumping station to the course, laterals inside the course, sprinklers, and valves and accessories. The existing irrigation facilities for Sierra Star Golf Course as well as Snowcreek Golf Course are used for recycled water irrigation. Record plan drawings showing all piping networks within the golf courses including recycled, potable, sewage, and others are available from MCWD. Additional installations including, but not limited to, signage and hose bibs in compliance with the use area requirements of Section 60310 will be installed appropriately and are described in other parts of this section.

As mentioned above, recycled water will be used in all portions of the Snowcreek Golf Course, including the expanded portion. New irrigation facilities will be designed to comply with the recycled water design requirements.

The following design information is listed for recycled water irrigation facilities in Sierra Star Golf Course.

a) Pumping Station and Pumps

Function - To deliver recycled water from the storage lakes and domestic supply wells to the golf course sprinkler system.

Equipment Type – Pumps on Variable Frequency Drive (VFD). Pumping station design data is listed in Table 5.3.

Operational Characteristics – Normally continuous operation when irrigation is required

Table 5. 3 Sierra Star Golf Course Pumping Station and Pumps Design Data

	Unit	Value
Number of pumps		2
Capacity, each	gpm	1,500
TDH	psi	100
High water level elevation in wet well	ft above sea level	8020.75
Pumping station top finish elevation	ft above sea level	8024.75

b) Lateral Pipe and Sprinkler System

Function – To distribute irrigation water throughout the course and irrigate the turf area using the sprinklers.

Equipment Type – Underground lateral pipes, solenoid valves, and Rain Bird Eagle and Rain Bird T-Bird Sprinklers. Table 5.4 summarizes some important design data for the pipe and sprinkler system.

Operational Characteristics – Normally continuous operation when irrigation is required

Table 5. 4 Sierra Star Golf Course Lateral Pipe and Sprinkler System Design Data

	Unit	Value
Pipe sizes	inch	2 to 8
Sprinkler counts	each	1,000
Quick coupler valves	each	79
Sprinkler pre-set pressure setting	psi	70

The following design information is listed for recycled water irrigation facilities in Snow creek Golf Course.

a) Pumping Station and Pumps

Function - To deliver recycled water from wet well to golf course sprinkler system.

Equipment Type – 72” CMP wet well with 3 vertical turbine type irrigation pumps, see Table 5.5.

Operational Characteristics – During the golf course irrigation season, water is pumped from the lake to the course when irrigation is required. The pumps use variable frequency drives (VFD’s), and pumping is controlled by an automatic computerized irrigation control system. The automatic computerized irrigation programs can be overridden by the operator to irrigate the course manually.

Table 5. 5 Snowcreek Golf Course Pumping Station and Pumps Design Data

	Unit	Value
Number of pumps		3
Capacity, each	gpm	2,000
TDH	feet	115
High water level elevation in wet well	ft above sea level	7871.3
Pumping station top finish elevation	ft above sea level	7875.3

b) Lateral Pipe and Sprinkler System

Function – To distribute irrigation water throughout the course and irrigate the turf area using the sprinklers.

Equipment Type – Underground header pipes run from the irrigation pump station to the course. The distribution system consists of laterals, solenoid valves, sprinklers (TORO NO.634 and 655 rotary sprinkler), and other fittings. Details of the sprinklers, valves and accessories are shown in table 5.6.

The main header irrigation supply lines are located 3 feet below ground surface. The laterals are typically installed at a depth of 1.5 ft.

Operational Characteristics – Automated system that irrigates the course based on soil moisture content measure by moisture sensors. Normally continuous operation when irrigation is required or intermittent if overridden by the operator.

Table 5. 6 Snowcreek Golf Course Lateral Pipe and Sprinkler System Design Data

	Unit	Value
Pipe sizes	inch	2 to 8
Sprinkler counts	each	900
Quick coupler valves	each	79
Sprinkler pre-set pressure setting	Psi	70

c) Reliability/Flexibility Features

Multiple pumps will provide flexibility of operating one pump while other pump is failed for any reason. An alarm system (pump failure) will indicate failure and rising level in wet well will start the other pump automatically. Also, during complete or partial shutdown of the pumps, the high water level sensor can signal the recycled water pumps at the MCWD treatment plant to stop pumping, thus stopping delivery of recycled water to the storage lake.

The automatic computerized irrigation programs incorporate two override features that allow the operator to set watering percentages and apply water to each area for short periods at one-hour intervals until the daily water requirements are met. This flexibility feature will prevent irrigation runoff inside the golf course.

5.2.5 Contingency Plan

Irrigation needs of Sierra Star and Snowcreek can be met by supplying groundwater from the domestic wells should the recycled water production and delivery system fail for any reason.

5.2.6 Compliance with Use Area Requirements

Pursuant to Section 60310, the following information is provided for compliance with the use area requirements applicable to Sierra Star golf course and Snowcreek golf course irrigation area. The facilities design for other use areas including the Snowcreek golf course expansion and trucked water program will adopt the same design requirements.

a) All edges of irrigated area will be more than 50 feet away from the domestic water supply wells. The closest domestic water supply well in Sierra Star is approximately 200 feet from the perimeter of the golf course use area and the closest domestic water supply well in Snowcreek is greater than 50 ft. from the perimeter of the golf course use area (Figures 5.1 and 5.2).

b) No irrigation runoff from Sierra Star golf course nor Snowcreek golf course is expected due to the use of an automated computer irrigation system to optimize the irrigation efficiency and minimize the irrigation runoff.

c) Drinking water fountains will be protected against recycled water spray at all times. Also, no spray or mist will enter any dwellings, designated outdoor eating areas, or food handling facilities.

d) All use areas where recycled water will be used and accessible to the public will be posted with signs. These signs will be visible to the public, in a size no less than 4 inches high by 8 inches wide, and will include the following wording: "RECYCLED WATER - DO NOT DRINK." A typical sign is shown in Figure 5.3.

e) There will be no physical connection between any recycled and potable water systems.

f) The portions of the recycled water piping system that are in areas subject to access by the general public will not include any hose bibs. Suitable quick couplers will be used if needed.

5.2.7 Use Area Containment Measures

To prevent irrigation runoff, each golf course has multiple separate irrigation zones, each with control valves. Depending on weather conditions and specific location, irrigation may be terminated very quickly in order to avoid soil saturation. Frequent, brief irrigation periods allow for more precision and help to minimize the potential for runoff. Close inspection and monitoring of the irrigation system would eliminate recycled water runoff resulting from any kind of irrigation system failure.

5.2.8 Potential Access by Employees or Public

The recycled water use areas will be readily accessed by employees of the golf courses and golfers playing the courses. Also, transient and non-transient residential units located adjacent to the golf course will be occupied and individuals may walk on the courses during non-playing hours.

Figure 5. 3 Proposed MCWD Use Area Sign

5.2.9 Cross-Connection Control and Backflow Prevention

MCWD has implemented a cross-connection control program, pursuant to Title 17, at all use areas within MCWD to prevent a non-potable pipeline from mistakenly being connected to a potable system. Following are measures to avoid cross connections or inappropriate uses inside the recycled water use areas.

MCWD ensures that the users provide adequate maintenance and periodic testing of the backflow prevention devices to ensure proper operation. The backflow preventers will be tested by persons who have demonstrated competency in the testing of these devices to MCWD. The backflow preventers will be tested at least annually and more often if necessary. They will also be tested immediately after installation, relocation, or repair. They will not be placed in service until made functional. Any device found to be defective must be repaired or replaced in accordance with Title 17, Chapter 5. MCWD will inform the users when to test backflow devices and will provide a notice that contains the date when the test must be completed. All reports of testing and maintenance will be maintained by MCWD for a minimum of three years.

Prior to Recycled Water Permit Issuance (and every four years thereafter), a Certified Cross Connection Control Specialist (as described in CCR Title 17, Section 7605) must conduct a site investigation and test the recycled water system to identify any cross-connections (see the Cross-Connection Control Investigation and Test Report, **Appendix E**). During the next investigation, the Specialist will inspect the recycled water equipment and interview the Recycled Water Site Supervisor to determine if any equipment changes have been made since the last inspection. If activities were conducted that could compromise the integrity of the potable water supply system, a cross-connection test may be performed and/or corrective actions prescribed. The results of the investigation and testing are recorded by the specialist on the form and any deficiencies are noted along with the prescribed corrective action. All backflow prevention devices must be tested on an annual basis (see Backflow Prevention Device Test Report, **Appendix E**).

Table 5. 7 MCWD Recycled Water Program Cross-Connection Control

Required Action	Frequency	Documentation
Investigate site to determine cross-connection potential, perform shutdown test of recycled water system to ensure no cross-connections are present.	Prior to issuance of Recycled Water Use Permit	Cross-Connection Control Investigation and Test Report (**Appendix E**)
Test all backflow prevention devices to determine if functioning properly	Prior to issuance of Recycled Water Use Permit	Backflow Prevention Device Test Report (**Appendix E**)
Test all backflow prevention devices to determine if functioning properly.	Annually	Backflow Prevention Device Test Report (**Appendix E**)
Investigate site to determine cross-connection potential. If potential problem identified, shutdown recycled water system to test for cross connections.	Every four years (or more frequently if necessary)	Cross-Connection Control Investigation and Test Report (**Appendix E**)

5.2.10 Cross Connection Control Best Management Practices

Minimum Depth – The top of the recycled water pipe are a minimum of 36 inches below the finished street grade.

Minimum Separation – Recycled water lines parallel to potable water lines are installed at least ten feet horizontally from and one foot lower than potable water lines.

Recycled water lines should cross a minimum of one foot below potable water lines.

Pipe Identification – All buried distribution piping in the recycled water system, including service lines, valves, and other appurtenances, are colored purple (Pantone 512) and embossed or be integrally stamped as "CAUTION: NONPOTABLE WATER – DO NOT DRINK," or "CAUTION: RECYCLED WATER – DO NOT DRINK," or be installed with a purple identification tape or a purple polyethylene vinyl wrap, color to be Pantone 512.

Valve Box and Other Surface Identification - Valve boxes include a special triangular, heavy-duty cover. All valve covers on off-site recycled transmission lines are of a non-interchangeable shape with potable water covers. They will have a recognizable inscription cast on the top surface. All above-ground facilities are consistently color-coded (purple, Pantone 512) and marked to differentiate recycled water facilities from potable water or wastewater facilities.

5.3 Impoundments

5.3.1 Use Area Description

Disinfected tertiary recycled water is stored in storage lake(s) located at each of the two golf course sites. Impoundment lakes within Snowcreek Golf Course are planned to be modified/designed when the Snowcreek Golf Course expansion will be completed in the future. The use area description in the following sections are limited to only the existing Sierra Star and Snowcreek golf courses.

Figure 5.1 shows the location of the lake within Sierra Star Golf Course. The lake is a lined impoundment with golf course turf areas bordering all sides of the lake except for a club house on the south side of the lake.

Figure 5.2 shows the location of the RW impoundment pond directly east of the northern most boundary of the golf course. The RW pond is a lined impoundment with golf course turf areas bordering all sides of the pond with the relocated driving range on the south side of the pond.

5.3.2 Responsibility

Golf course management will operate and maintain all impoundments and lake systems located on the golf courses. Responsibilities set forth in Section 5.2.2 will apply for the impoundment use areas. The Use Area Supervisor is responsible for all on-site uses and therefore responsible for both irrigation and impoundment use areas.

5.3.3 Governmental Jurisdiction

The golf course impoundments are located on private land and the agencies having regulatory jurisdiction over the reuse sites include the SWRCB and DDW, Mono County Environmental Health, and the Town of Mammoth Lakes.

5.3.4 Use Area Design

5.3.4.1 Basic Design

Design data for the Sierra Star Golf Course recycled water storage lake is listed in Table 5.8.

Table 5. 8 Sierra Star Golf Course Recycled Water Storage Lake Design Data

	Unit	Value
Lake Area	sf	62,800
Existing Bottom of Lake Elevation	ft	8005
Existing Water Surface Elevation	ft	8019.5
Existing Spillway Level	ft	8020.3
Liner Type		20 MIL PVC membrane

Design data for the Snowcreek Golf Course recycled water storage lake is listed in Table 5.9

Table 5. 9 Snowcreek Golf Course Recycled Water Storage Lake Design Data

	Unit	Value
Lake Area	sf	11,866
Existing Bottom of Lake Elevation	ft	7,862
Existing Water Surface Elevation	ft	7,871.3
Existing Spillway Level	ft	7,872.3
Liner Type		40 MIL HDPE liner

5.3.4.2 Reliability/Flexibility Features

In case of recycled water system failure, well water stored in existing golf course on-site lakes would be used to provide uninterrupted supply for irrigation. MCWD would continue feeding the golf course lakes by pumping well water to maintain water level lost to evaporation. These lakes are landscape features and water level will be maintained for aesthetic value.

If irrigation demand during the irrigation hours exceeds recycled water production, the additional irrigation demand can be met by pumping well water into the storage lake. Also, if MCWD recycled water quality does not meet the water quality requirements, the entire irrigation water supply to the golf courses can be supplemented through pumping of well water.

5.3.5 Contingency Plan

In case of storage lake impoundment system failure for any reason, the lake connection can be disconnected temporarily and well water can be pumped to the golf courses for uninterrupted supply for irrigation.

5.3.6 Compliance with Use Area Requirements

The location of the storage lake for Sierra Star Golf Course and Snow Creek Golf Course is more than 200 feet away from the nearest MCWD domestic water supply well. The same setback distance will be maintained for other recycled water impoundments.

According to Title 22 Section 60305, the total coliform bacteria concentrations in recycled water used for non-restricted recreational impoundments, measured at a point between the disinfection process and the point of entry to the use impoundment, will comply with the criteria specified in Section 60301.230 (b) for disinfected tertiary recycled water. Requirements for signage are as specified in paragraph 5.2.6.d) of this report.

5.3.7 Use Area Containment Measures

Impoundments will be adequately protected against overflow resulting from a 25-year, 24-hour storm event. Berm height around the lake was increased by 0.2 feet to contain 25-year storm event. However, the lake will overflow during incidental overlapping occurrences of a 25-year storm with a 25-year snow melt. Overflow from the Sierra Star lake will be through a spillway located on the east side of the lake and will enter Murphy Gulch, subsequently draining to Mammoth Creek. A study conducted on the impact of lake overflows on Murphy Gulch water quality showed insignificant impact on Murphy Gulch and Mammoth Creek water quality due to the high dilution effect caused by a large drainage area runoff to the Murphy Gulch. Overflow from the Snowcreek lake will be through a spillway located on the east side of the lake and will enter a retention basin and ditch conveyance, subsequently draining to Mammoth Creek. The results of this study also show that the high dilution effect caused by the large drainage area of the Snowcreek retention basin and ditch conveyance will have an insignificant effect on Mammoth Creek water quality.

5.3.8 Potential Access by Employees or Public

The degree of access to these impoundments will be limited to those members of the public playing golf and to golf course maintenance personnel as described in Section 5.2.8.

5.3.9 Cross Connection Control and Backflow Prevention

The recycled water will be delivered to the storage lakes at the two golf courses. At Sierra Star and Snowcreek, the existing pipe connected to the lake will discharge the recycled water into the lake. The existing irrigation pumping station with two pumps will deliver the recycled water to the golf course irrigation system. Groundwater from domestic supply wells would also supply untreated groundwater to the pumping station with at least a one-foot air gap between the pipe end and wet well water surface. The groundwater discharge connection would also have isolation and check valves to prevent recycled water from entering into the groundwater well. Other features as described in paragraph 4.2.9 above would also be provided.

No cross connection risk exists for the transmission line from the MCWD waste water effluent.

5.4 Operations and Maintenance

The Use Area Supervisor is responsible for all operations and maintenance at the use site. The user will provide adequate maintenance and periodic testing of the backflow prevention devices to ensure proper operation as discussed in Section 4.2.9. All reports of testing and maintenance of backflow preventers at the use site are maintained by MCWD for a minimum of three years pursuant to Section 7605(f) of Title 17 Code of Regulations.

5.5 Inspections, Monitoring, and Reporting

5.5.1 Inspections and Monitoring

Cross connection control and site inspections and monitoring is performed by MCWD at the use sites to monitor compliance with state requirements and the General Permit. Inspections may be performed by local health officers to identify any cross-connection hazards and determine appropriate backflow prevention.

5.5.2 Reporting

Pursuant to Section 13523.1(4), MCWD submits a report quarterly in a tabular form with the list of users that were supplied recycled water during the quarter, the amount of recycled water delivered to each user, and the use of the recycled water. A summary of these data will be included in the annual report. MCWD will also submit Quarterly reports to the DDW-San Bernardino office email address at DWPDIST13@waterboards.ca.gov

Pursuant to 60329(d) of Title 22 Code of Regulations, MCWD immediately reports any discharge of untreated or partially treated wastewater to the use area, and the cessation of same, by telephone to the regulatory agency, the CDPH, and the local health officer.

Additionally, the Use Area Supervisor reports any of the following occurrences to the MCWD Use Area Representative immediately.

- Any situation that may endanger the public's health or the environment.
- Discovery of a cross connection of a recycled water system with a potable water system.
- More than minimum unplanned or uncontrolled discharge of recycled water resulting from water line breaks, malfunctioning control system, or any other circumstances.
- More than minimum discharge of recycled water outside of the approved use area due to on-site line breaks, runoff, direct spray, overspray or windblown spray or discharge outside the regular hours of operation for any reason.

5.6 Personnel and Employee Training

A Use Area Supervisor is designated for Sierra Star Golf Course, Snowcreek Golf Course and other use areas. The Use Area Supervisor must be certified by an MCWD-approved recycled water site supervisor training program. The Use Area Supervisor is responsible for operating and overseeing the use site systems, knowing MCWD-supplied "Rules and Regulations for Recycled Water Use", and reporting to MCWD any of the occurrences listed in Section 4.5.2. The Use Area Supervisor is also available by telephone 24 hours a day for off-hours emergency contact by the MCWD Use Area Representative.

Appendix A

(Disinfection Contact Time Tracer Study)

Appendix A

Modal Contact Time Tracer Studies in Two Chlorine Contact Tanks

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ABSTRACT

Chlorine contact tank (CCT) design is crucial for proper disinfection of treated wastewater effluent (recycled water). Appropriate dimensions must be utilized in order to ensure that contact times are adequate for complete disinfection. Tracer tests are conducted as required by the California Department of Public Health (DPH) Title 22 regulations to determine that the chlorine contact tank, as constructed, does indeed provide the minimum modal contact time (MCT) of 90 minutes for all anticipated flow rates. Rhodamine dye tracer tests were performed on CCTs at both the Los Alisos Water Reclamation Plant (LAWRP) in Lake Forest, California, and the Mammoth Community Water District (MCWD) reclamation plant in Mammoth Lakes, California. At each facility, the MCTs were obtained for several different flow rates, and these values were plotted to create curves from which the MCTs at a given flow rate for each facility could be obtained by interpolating from the given data points.

KEYWORDS: modal contact time, chlorine, tracer tests, concentration, contact tank, design, disinfection, flow rates, hydraulic retention time, residual.

INTRODUCTION

Newly constructed or modified chlorine contact tanks used for disinfection and production of recycled water in California are required to have a tracer test conducted prior to distribution of the water. The tracer test is a California Department of Public Health (DPH) Title 22 (the section of the California Code of Regulations that governs recycled water) requirement to determine the ability of the chlorine contact tank (CCT) to provide the minimum modal contact time (MCT) of 90 minutes. Additionally, the product of MCT and total residual chlorine (TRC) must be at least 450 milligram-minutes per liter (mg-min/L). As defined by Title 22, the MCT is the "amount of time elapsed between the time that a tracer, such as a salt or dye, is injected into the influent at the entrance to a chamber and the time that the highest concentration of the tracer is observed in the effluent from the chamber."

Rhodamine dye tracer tests were performed on CCTs at the Los Alisos Water Reclamation Plant (LAWRP) in Lake Forest, California, and the Mammoth Community Water District (MCWD) reclamation plant in Mammoth Lakes, California. The results of these two tests were compared to each other. The concentration of dye was measured as fluorescence using a fluorometer. For each facility, tests were performed over a range of flow rates that covered the expected minimum, average, and peak. The flow rates were plotted against MCT to develop a characteristic curve, which can be used to interpolate MCT at any flow rate the CCT may experience.

Appendix A

Significance

The results of the individual tracer tests are essential to ensure that the CCTs were properly designed and constructed to provide adequate opportunity for chlorine disinfection. The disinfection process at water reclamation facilities is the last line of defense to protect the public from contact with pathogens in recycled water. Sufficient hydraulic retention (HRT) time is provided by adequately sizing the tanks, but the potential for short-circuiting requires that adequate baffling and sufficient length-to-width (L/W) and depth-to-width (H/W) ratios are also provided. Comparison of the tracer tests for the two separate facilities provides insight into how design features can maximize MCT without over-sizing the CCT. CCTs are typically designed to provide at least 120 minutes of HRT with the expectation that the relationship of MCT:HRT will be at least 0.75.

METHODOLOGY

Testing consisted of three main steps: achieving the desired CCT flow rate, injecting the tracer into the system, and measuring the concentration of tracer in the CCT effluent. The test procedure used to determine MCT at both facilities was as follows:

1. The Turner Designs 10AU Field Fluorometer was calibrated for in-line operation as specified by Turner Designs. The calibration included adjustment of the sensitivity knob. Adjustment of the sensitivity knob is not necessary when the equipment has been used to detect similar concentrations in prior usage. Adjustment of the sensitivity determines the expected sampling concentration range. Readings kept within the medium range give more accurate results. Correct adjustment of the sensitivity knob was checked by preparing a solution with a concentration near the expected testing values (10 ppb). The known concentration was then entered into the fluorometer through the calibration screen. The calibration was checked by repeating the process of sampling a prepared solution with a known concentration. A blank solution consisting of distilled water with a concentration of 0 ppb was then tested to check for accurate calibration.

2. Appropriate equipment and software for data collection (provided by Turner Designs), including a computer, fluorometer, and sample pump and tubing, were acquired. Communication was tested between the fluorometer and laptop computer. See Figure 1.

3. A data reading and storage rate of one recording per 10 seconds was selected.

4. A volume of Rhodamine WT was measured using a graduated cylinder. The selected volume was determined with the intent of achieving a peak concentration of approximately 10 parts per billion.

5. Preparations were made to send the CCT effluent to an appropriate location that would not reach the recycled water distribution system.

6. A desired flow rate through the CCTs was achieved by adjusting the influent pumping rate until a constant level in the CCT effluent wetwell was maintained. Totalizer values on the

influent pumps were recorded and actual flow rates were calculated. The influent pumps were adjusted based on the totalizer calculations.

7. Rhodamine WT dye was injected into the CCT influent box (for LAWRP) and the filter effluent channel (for MCWD). See Figure 2.

8. The tracer was injected in a turbulent location to ensure that the tracer was adequately mixed. See Figure 3.

9. Data logging began prior to tracer injection, and the official start of the test began when the tracer was injected into the influent box. The test start time and beginning fluorescence reading were noted.

10. Discrete samples of the CCT effluent were collected at the start of the test, at 0.75 the HRT for the given flow rate, at the apparent concentration peak (MCT), and at 1.25 times the HRT. These samples were collected for verification of test results.

11. The testing procedure was repeated for each scheduled flow rate (26,874 m^3/d [7.1 MGD], 18,925 m^3/d [5.0 MGD], and 11,355 m^3/d [3.0 MGD] for LAWRP and 2,839 m^3/d [0.75 MGD], 5,678 m^3/d [1.5 MGD], 7,570 m^3/d [2.0 MGD], and 10,977 m^3/d [2.9 MGD] for MCWD).

Figure 1: Fluorometer and Data Collection Setup

Appendix A

Figure 2: Injection of Rhodamine WT Dye into CCT Influent Box at LAWRP

Figure 3: Tracer Injection Location (CCT Influent Box) at LAWRP

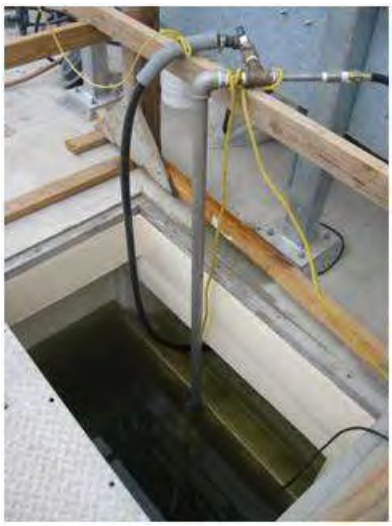


Figure 4: Effluent Sampling Location at LAWRP

Appendix A

RESULTS

The MCT testing at LAWRP provided the following conclusions:

- All test flow rates tested exceeded the 90-minute MCT minimum. Therefore, all expected flow rates through the CCT are acceptable for the production of Title 22 recycled water, given a proper chlorine dosage is supplied to result in the required effluent TRC.

- The highest flow rate of 28,425 m^3/d (7.51 MGD) met the 90-minute MCT requirement with a MCT of 99 minutes.

- The relationship between influent flow rate and MCT was determined by graphing flow rate versus MCT for each of the test runs. A plot of all data from each of the test runs results in a linear relationship between MCT and flow rate with an R^2 value of 0.99, as shown in

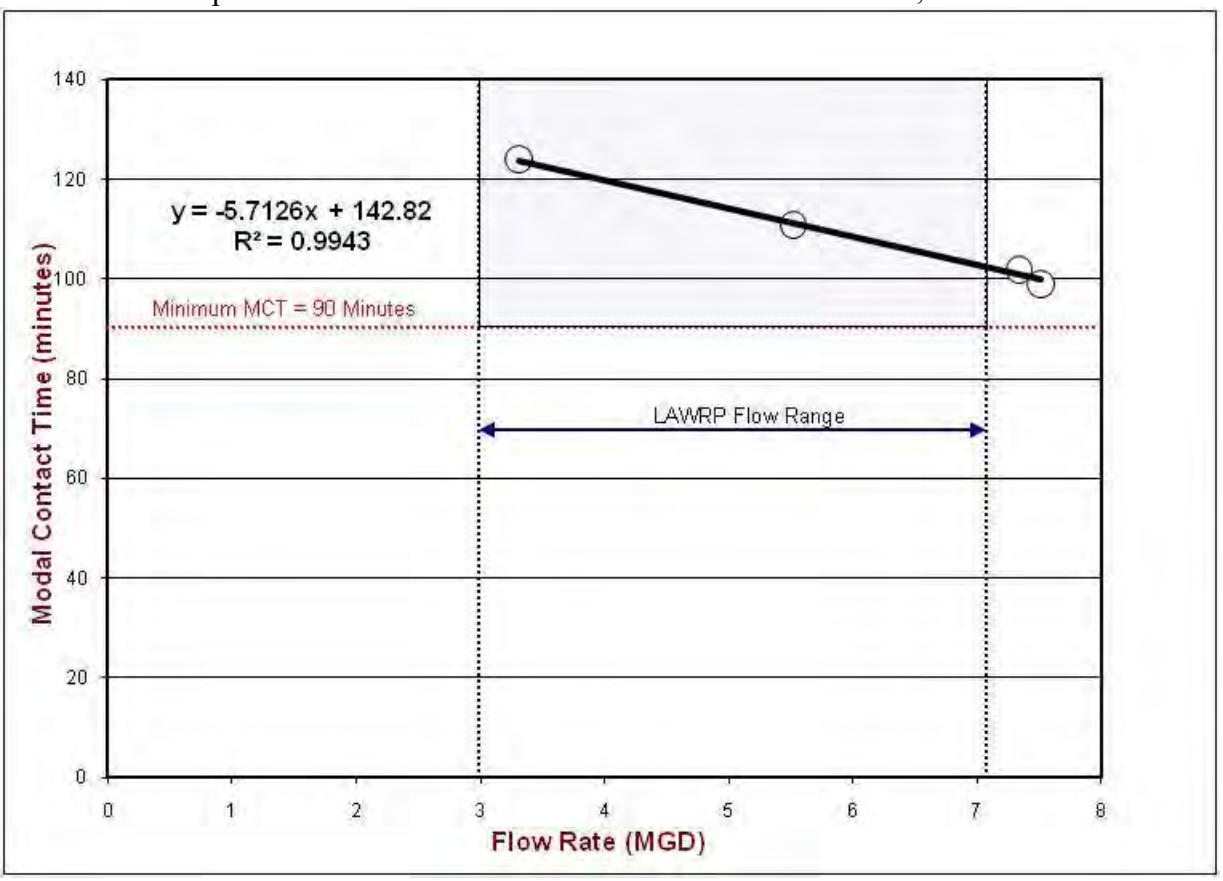


Figure 5.

Appendix A

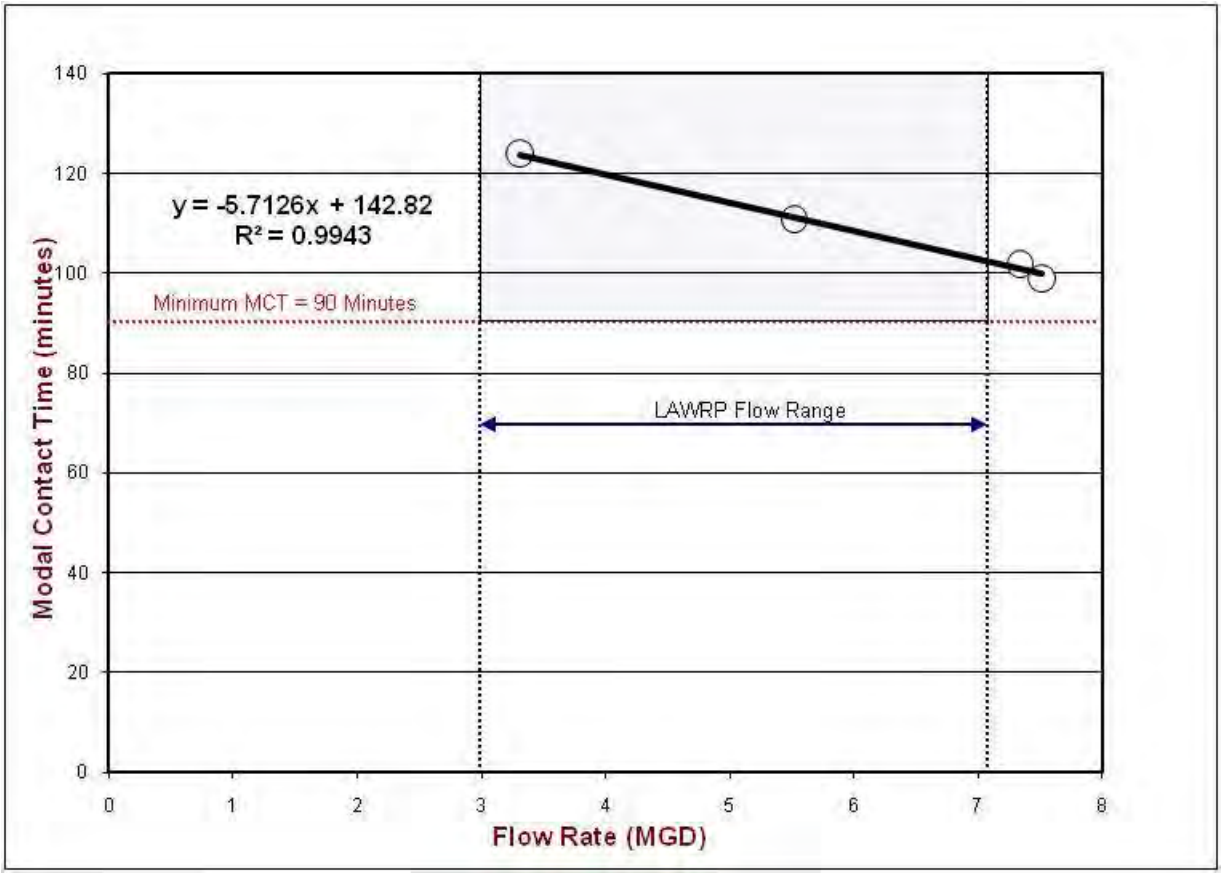


Figure 5: Flow Rate Versus Modal Contact Time at LAWRP

The MCT testing at MCWD provided the following conclusions:

- The testing indicated that all flow rates through the CCT within the expected flow range will experience at least 90 minutes of MCT.

- The MCT can be predicted according to the equation shown on Figure 6. The high R^2 value (0.99) indicates a strong exponential relationship between the independent (flow rate) and dependent (MCT) variables.

Appendix A

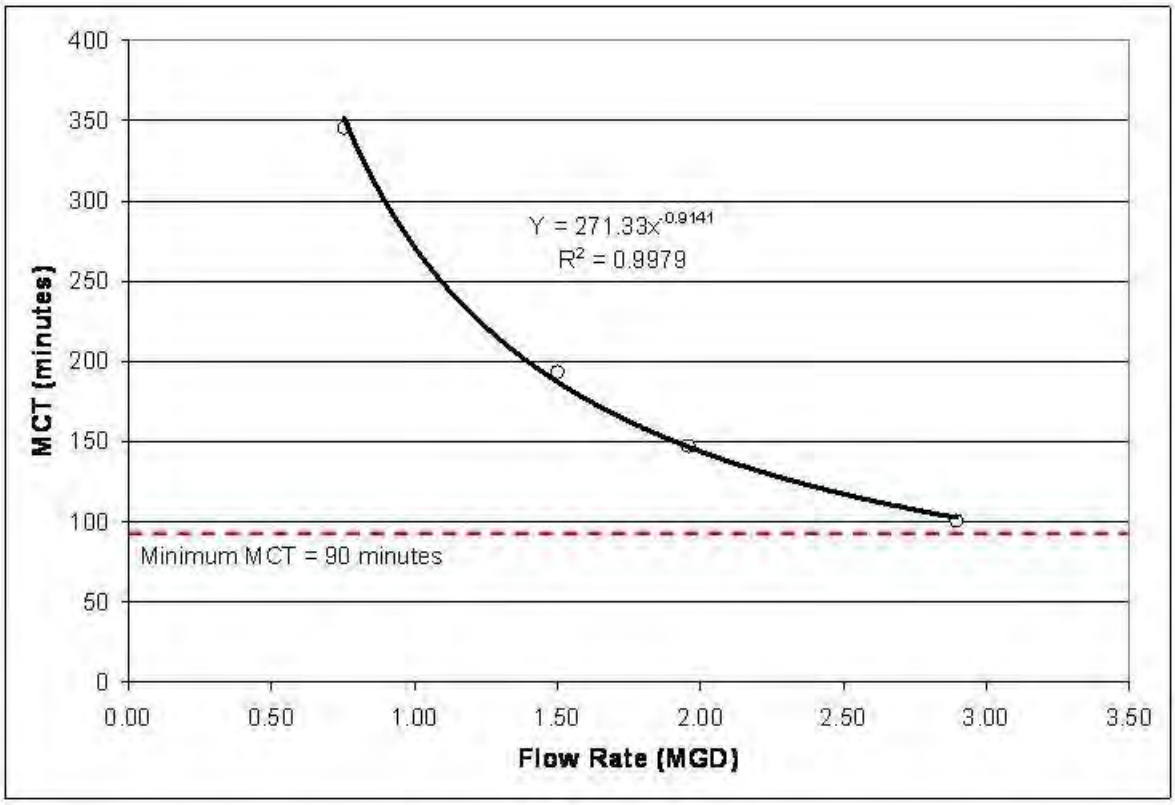


Figure 6: Flow Rate Versus Modal Contact Time at MCWD

Appendix A

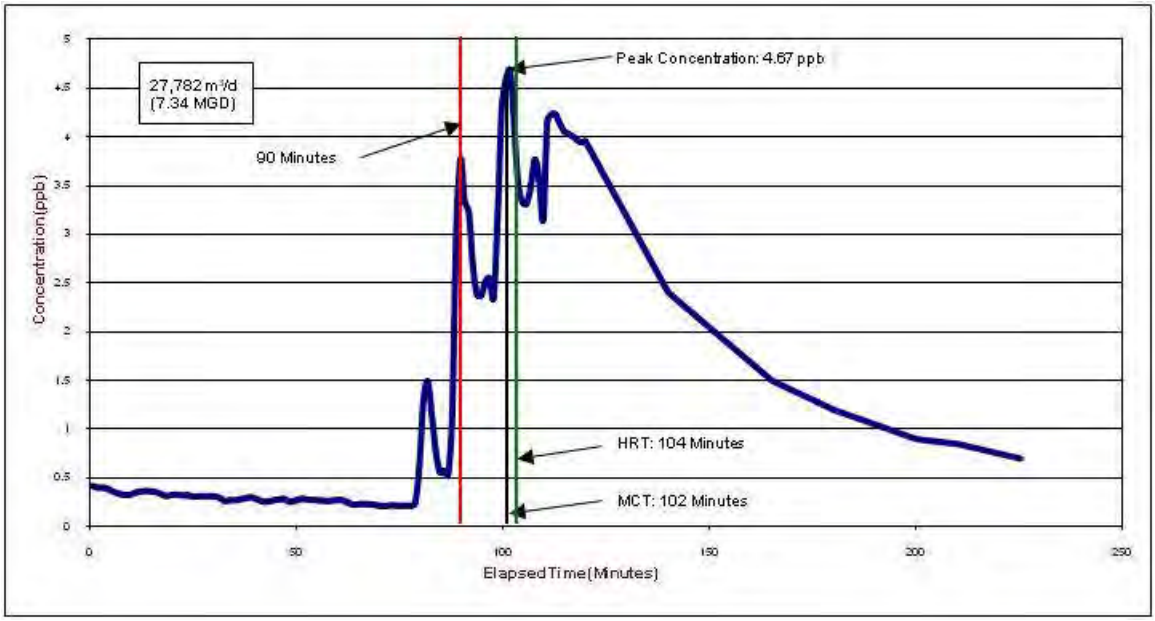


Figure 7 and

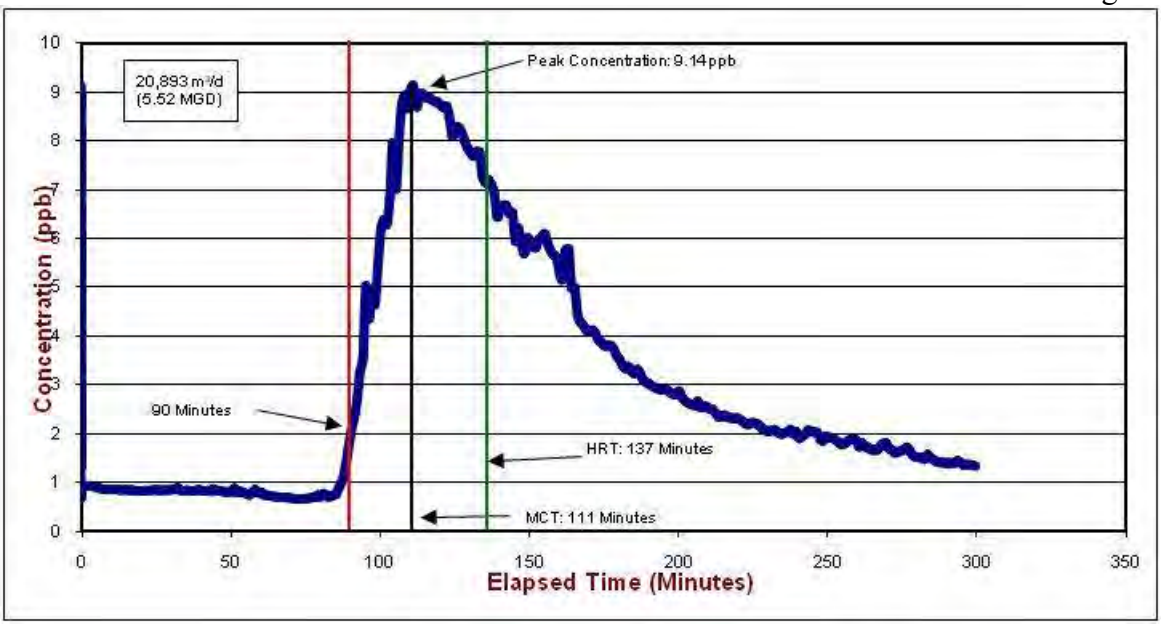


Figure 8 demonstrate the test results at both peak flow and average flow for the LAWRP CCT. These curves are characteristic of the test results for the MCWD CCT, as well. The red line indicates the 90-minute MCT minimum, the black line indicates the MCT, and the green line indicates the HRT. It can be observed that the HRTs for both scenarios greatly exceeded the 90-minute MCT minimum, and the MCT:HRT was much higher for the peak flow scenario at 0.98:1 compared to the average flow scenario at 0.81:1.

Appendix A

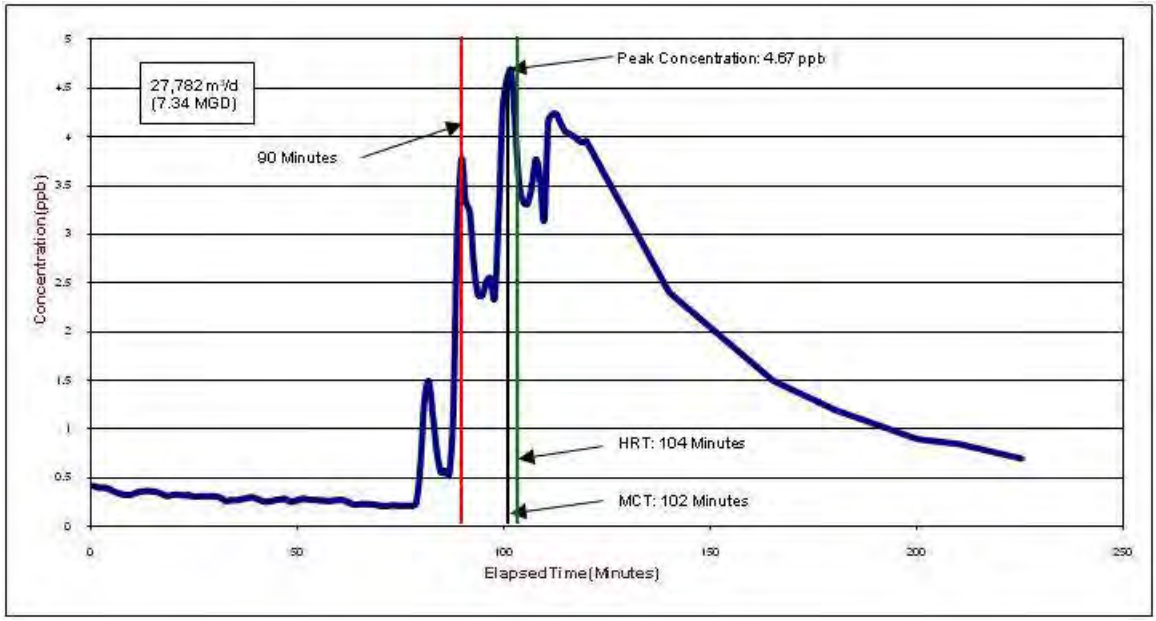


Figure 7: LAWRP Peak Flow Condition Test Results

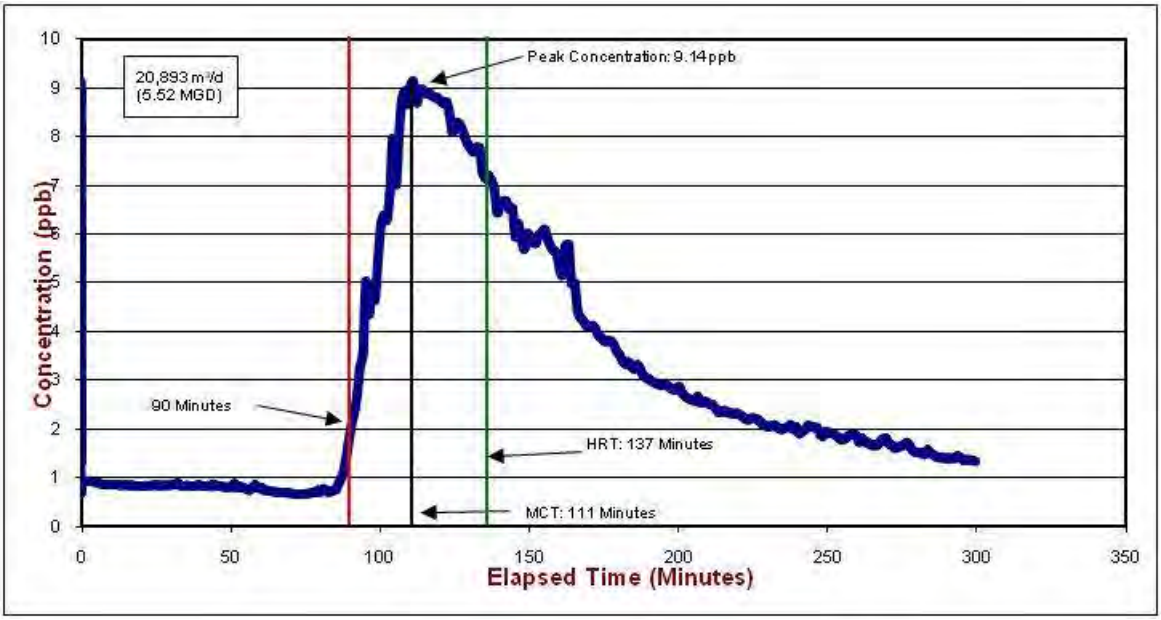


Figure 8: MCWD Peak Flow Condition Test Results

DISCUSSION AND CONCLUSIONS

Comparison of the two tests indicated that the relationship between flow rate and MCT was linear at the LAWRP CCT and exponentially related at MCWD. This relationship is only expected over the operating range of the tanks. Both CCTs exceeded the 0.75 MCT:HRT design ratio substantially; LAWRP's ratio was approximately 0.90, and MCWD's was approximately 0.92.

Appendix A

Appropriate length-to-width and depth-to-width ratios were established to ensure that adequate dispersion would be accomplished. It must be noted that the LAWRP CCT was a new construction, while the MCWD CCT involved retrofitting existing primary clarifiers. Thus, there were some size constraints posed by the dimensions of the existing primary clarifiers at MCWD.

The LAWRP CCT (Figure 9) was constructed with four passes of 33.53 meter (110 foot) by 1.45 meter (4.75 foot) channels. The LAWRP CCT had rounded corners and a 1.45 meter (4.75 foot) distance from the divider to the wall. The depth for the LAWRP CCT was established at 4.96 meters (16.265 feet). Given these dimensions, the flow length:width ratio was 92.6:1, the L/W ratio of each channel was 23.2:1, and the H/W ratio was 3.42:1.

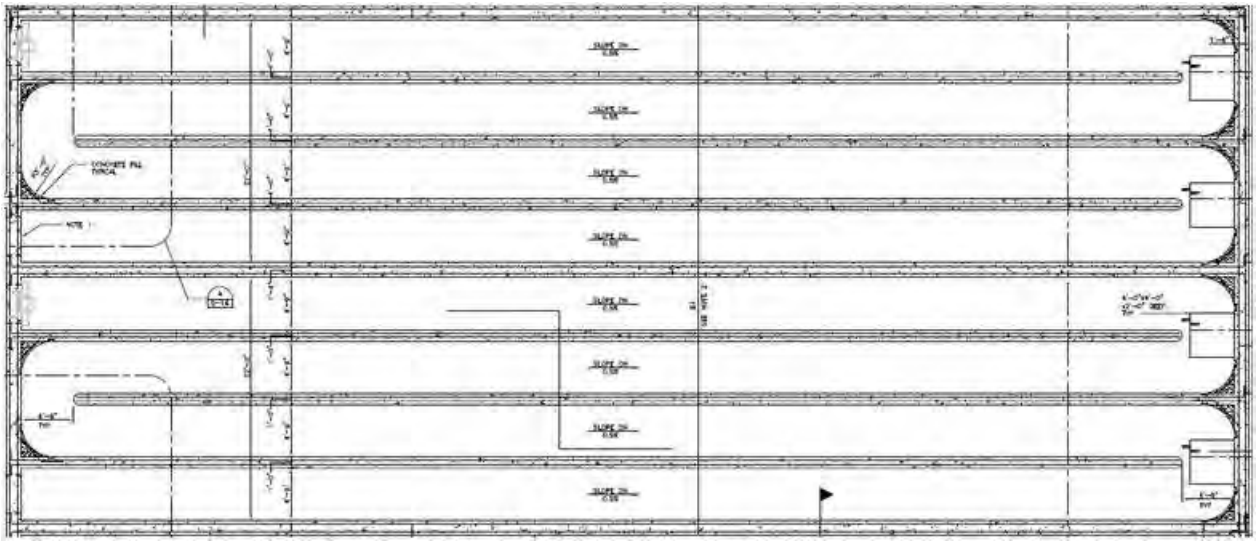


Figure 9: LAWRP CCT

The MCWD CCT (Figure 10), given the fact that it was a retrofit of existing primary clarifiers, was limited in dimension. Therefore, the MCWD CCT had four passes that were 18.29 meters (60 feet) long and 1.78 meters (5.83 feet) wide and four passes that were 18.29 meters (60 feet) long and 2.39 meters (7.83 feet) wide, creating a total of 8 shorter passes with two different widths. This CCT had square corners with a divider to wall distance of two feet. The depth for this CCT was established at 3.12 meters (10.25 feet). The flow length:width ratio for the MCWD CCT was 70.3:1, the L/W ratio was 10.3:1 for each wide channel and 7.7:1 for each narrow channel, and the H/W ratio was 1.31:1 for the wider channels and 1.76:1 for the narrower channels.

Appendix A

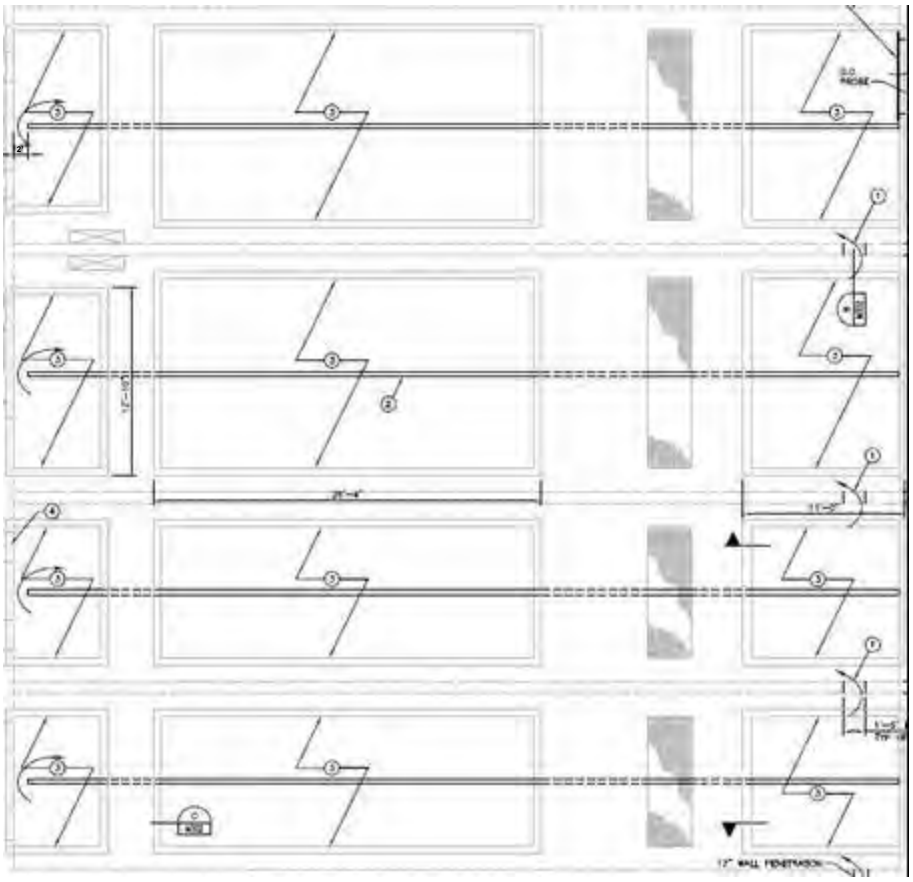


Figure 10: MCWD CCT

According to the *Handbook of Chlorination and Alternative Disinfectants,* the optimal H/W ratios should be 1.0 or less, and the best CCTs are composed of long, narrow channels and/or conduits (White 752). Although the MCWD CCT had shorter and wider channels with square corners, this design had narrower turns, which may have resulted in better dispersion of the tracer dye during the tracer test. In addition, flow through the MCWD CCT began at the narrower channels and after four passes expanded into four passes of the wider channels. On the other hand, the LAWRP CCT was a new construction with rounded corners and long, narrow channels with one consistent width. Due to site constraints and the requirement for two CCTs in parallel, however, the H/W ratio was dramatically affected by the increase in depth necessary to accommodate the flow given these constraints. This resulted in a H/W ratio of 3.42:1, which is significantly more than the recommended ratios of 1.0 or less. Ultimately, it can be hypothesized that all of these various factors played a role in affecting the MCT:HRT ratios for each CCT at the two facilities, however, additional investigation must be performed in order to determine the extent to which each factor affected the MCTs at the various flow rates.

REFERENCES

Malcom Pirnie, Inc.; HDR Engineering, Inc. (1991). *Guidance Manual for Compliance with the Filtration and Disinfection Requirements for Public Water Systems Using Surface Water Sources.* Denver: American Water Works Association.

Appendix A

Porter, B. T., Brown, A., & Josse, J. (2008). *Los Alisos Water Reclamation Plant: Chlorine Contact Tank Modal Contact Time Tracer Study.* Irvine: HDR Engineering, Inc.

Porter, B. T., Brown, A., & Josse, J. (2009). *Mammoth Community Water District: Recycled Water CCT Modal Contact Time Evaluation Tracer Test.* Irvine: HDR Engineering, Inc.

White, G. C. (1999). *Handbook of Chlorination and Alternative Disinfectants.* New York: John Wiley & Sons, Inc.

Appendix B

(2009 Ordinance Establishing the MCWD Recycled Water Program)

Appendix B

ORDINANCE NO. 10-15-09-11

AN ORDINANCE OF THE BOARD OF DIRECTORS OF THE MAMMOTH COMMUNITY WATER DISTRICT ESTABLISHING THE MAMMOTH COMMUNITY WATER DISTRICT RECYCLED WATER PROGRAM

WHEREAS, the Board of Directors (Board) of the Mammoth Community Water District (District), by Resolution No. 10-15-98-17, certified the Final Environmental Impact Report/ Environmental Assessment for the proposed Reclaimed Water Project, including upgrades to the District's wastewater treatment plant to treat wastewater effluent to meet Title 22 requirements for tertiary treated wastewater; and

WHEREAS, the Board, by Resolution 03-15-07-03, certified the Final Environmental Impact Report for the tertiary-treated water distribution system; and

WHEREAS, the tertiary wastewater treatment plant upgrades are completed and significant portions of the tertiary-treated water distribution systems are in place; and

WHEREAS, the California Regional Water Quality Control Board, Lahontan Region, has adopted Board Order No. R6V-2009-0035, "Master Water Recycling Requirements and Waste Discharge Requirements Mammoth Community Water District Disinfected Tertiary Recycled Water," approving the District's proposal to supply and distribute an average flow of 2.9 million gallons per day of disinfected, tertiary recycled water as defined in California Code of Regulations (Master Permit); and

WHEREAS, the Master Permit requires the District to establish and enforce requirements for recycled water users and other associated recycled water program features for the use of reclaimed water in the District service area.

BE IT ORDAINED by the Board of Directors of the Mammoth Community Water District as follows:

SECTION ONE:

Division XV of Chapter 11 of the District Code is hereby adopted as follows:

Section 15.01: Recycled Water Program Policy

It is the policy of the District that recycled water determined to be available pursuant to Water Code Section 13550 shall be used for nonpotable uses within the District's designated service area when its use is economically justified; its use is financially and technically feasible; and its use is consistent with legal requirements, preserves the public health, safety and welfare, and protects the environment (Policy).

Appendix B

Production, distribution and use of recycled water in the District designated service area are regulated by the Master Permit, provisions in Title 22 of the California Code of Regulations and the Water Code regarding recycled water, and this Ordinance, including all attachments and appendices made a part hereof.

Section 15.02: Designated Recycled Water Service Area

The District recycled water service area is identified in Attachment A, "Permit Area Map" (District Designated Service Area), and is hereby adopted.

Section 15.03: Recycled Water Use Rules and Regulations

Procedures, restrictions and other requirements for recycled water use, including the process for a user to obtain recycled water service, and controls to protect public health are set forth in Attachment B, "Requirements for Recycled Water Users" (Requirements), and are hereby adopted. The Requirements identify rules governing the design, construction, operation and maintenance of reclaimed water use facilities, construction specifications, inspections and monitoring of reclaimed water user facilities and sites, and compliance with the Requirements in the use of reclaimed water.

The Requirements' enforcement procedures and penalties for violations of the Requirements, as such may be amended from time to time, are hereby adopted.

Section 15.04: Operations and Maintenance Plan

The "Operations and Maintenance Plan for Recycled Water Users," attached as Attachment C, establishes the standard procedures, specifications, and limitations for the safe and orderly development and operation of off-site and on-site recycled water facilities and systems in the District's Designated Service Area, and is hereby adopted.

The Operation and Maintenance Plan's enforcement procedures and penalties for violations, as such may be amended from time to time, are hereby adopted.

Section 15.05: Monitoring and Reporting/ Compliance and Inspection Program

The Monitoring and Reporting / Compliance and Inspection Program identifies the District's plan for conducting routine compliance inspections and the process for responding to violations. The Monitoring and Reporting / Compliance and Inspection Program is attached as Attachment D, and is hereby adopted.

The Monitoring and Reporting / Compliance and Inspection Program's enforcement procedures and penalties for violations, as such may be amended from time to time, are hereby adopted.

Appendix B

Section 15.06: General Enforcement And Sanctions

A. General.

The District reserves the right to take any action necessary with respect to the operation of a user's recycled water system to safeguard the public's health. If existing or potential hazards are evidenced at any time during construction or operation of the recycled water system, the District may terminate recycled water service immediately, without notice. These hazards include but are not limited to cross-connections with the potable system, improper tagging, signing or marking, or unapproved/prohibited uses.

B. Public Nuisance.

Discharge of wastes or the use of recycled water in any manner in violation of this Division XV or of any agreement issued hereunder is hereby declared a public nuisance and shall be corrected or abated as directed by the District. Any person creating such a public nuisance is guilty of a misdemeanor.

C. Injunction.

Whenever a discharge of wastes or use of recycled water is in violation of this Division XV or otherwise causes or threatens to cause a condition of nuisance, the District may seek injunctive relief as may be appropriate to enjoin such discharge or use.

D. Agreement Revocation.

In addition to any other statute or rule authorizing termination of recycled water service, the District may revoke an agreement issued hereunder if a violation of any provision of this Division XV is found to exist or if a discharge of wastes or use of recycled water causes or threatens to cause a nuisance.

E. Penalty.

Any owner and/or operator who violates this Division XV shall, for each day of violation, or portion thereof, be subject to a fine not exceeding $1,000. In addition, recycled water service to the property may be discontinued.

SECTION TWO:

To the extent that the terms and provisions of this Ordinance may be inconsistent or in conflict with the terms or conditions of any prior District ordinances, resolutions, rules or regulations governing the same subject, the terms of this Ordinance shall prevail with respect to the subject matter thereof, and such inconsistent or conflicting provisions of prior ordinances, resolutions, rules or regulations are hereby repealed.

Appendix B

SECTION THREE:

If any provision of this Ordinance or the application thereof to any person or circumstance is held invalid, no other provision of this Ordinance shall be affected thereby.

SECTION FOUR:

This Ordinance shall take effect upon adoption and shall be published once in full in a newspaper of general circulation, printed, published and circulated in the District within ten (10) days after adoption.

SECTION FIVE:

Ordinance No. 09-17-09-10 adopted September 17, 2009, is hereby repealed and superseded by this Ordinance.

PASSED AND ADOPTED by the Board of Directors of the Mammoth Community Water District, County of Mono, State of California, this 15th day of October, 2009, at a regular meeting of the Board by the following vote:

AYES: Directors Alper, Cage, Domaille, Henderson and Smith

NOES: None

ABSENT: None

ABSTAIN: None

MAMMOTH COMMUNITY WATER DISTRICT

Thomas R. Smith, President
Board of Directors

ATTEST:

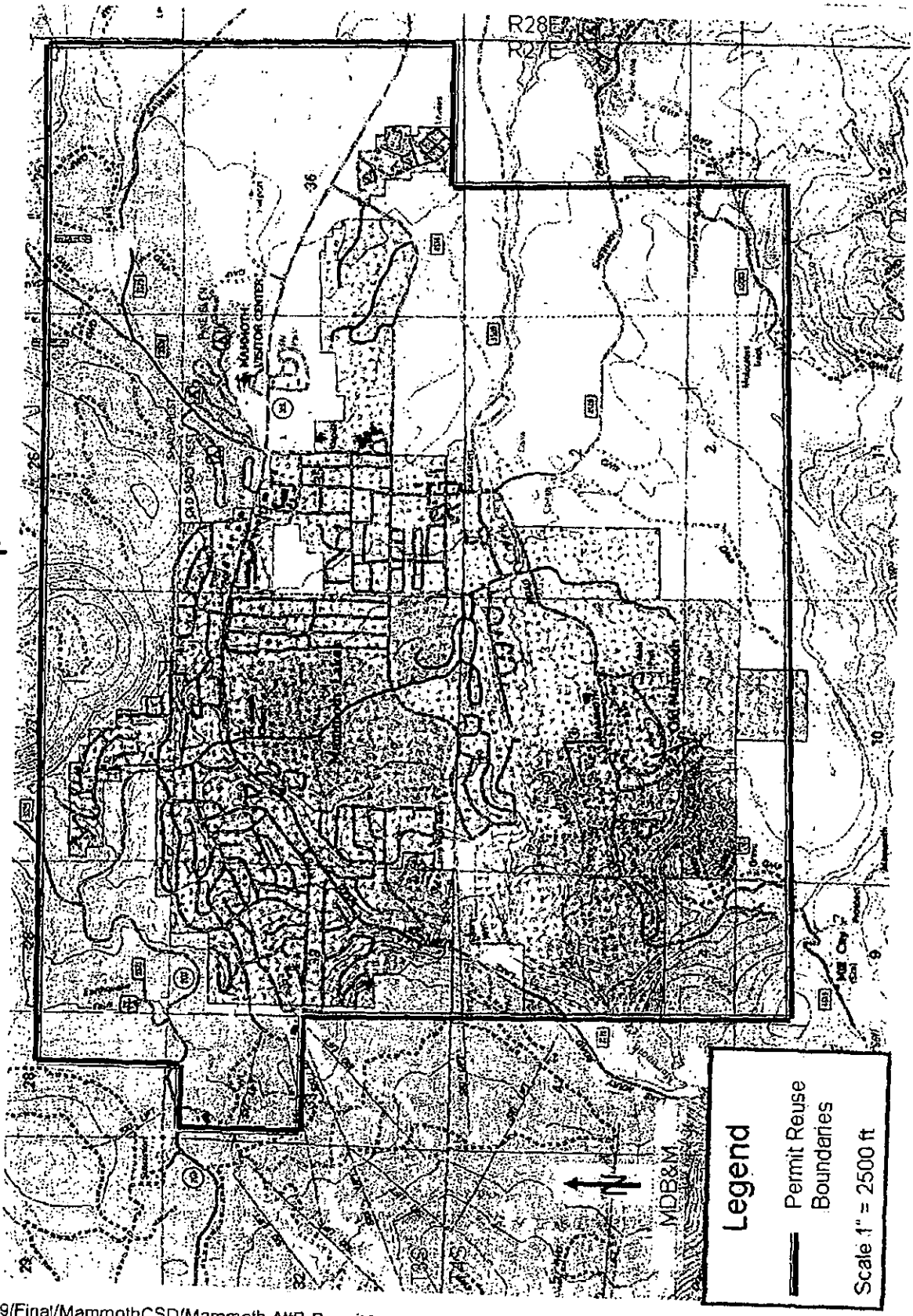
Gregory J. Norby, Secretary
Board of Directors

200/O090809sak

Appendix B

MCWD RECYCLED WATER SERVICE AREA

Permit Area Map



BO2009/Final/MammothCSD/Mammoth AttB-PermitArea.doc

ATTACHMENT A

Appendix B

ATTACHMENT B

Rules and Regulations for Recycled Water Users

I. Introduction

On June 10, 2009, the California Regional Water Quality Control Board, Lahontan Region, adopted Board Order No. R6V-2009-0035, "Master Water Recycling Requirements and Waste Discharge Requirements Mammoth Community Water District Disinfected Tertiary Recycled Water" (Master Permit).

California Water Code section 13523.1(b) sets forth the requirements for master permits issued by the Lahontan Regional Water Quality Control Board (LRWQCB), including a condition that permittees establish and enforce rules or regulations for recycled water users governing the design and construction of recycled water use facilities and the use of recycled water, in accordance with the uniform statewide reclamation criteria established pursuant to Water Code section 13521.

A. Document Scope and Applicability

This document contains the Mammoth Community Water District Recycling Program Rules and Regulations (Rules and Regulations) governing the design, construction, operation, maintenance and monitoring of recycled water use facilities and the use of recycled water in the Mammoth Community Water District recycled water service area.

The document covers requirements for existing sites and new developments and provides the recycled water user information necessary to meet all applicable regulations.

Unless otherwise stated, these Rules and Regulations shall apply to any and all users to whom the Mammoth Community Water District (District) distributes tertiary recycled water pursuant to the Master Permit.

B. Definitions that Apply to these Rules and Regulations

Authorized Recycled Water Use Site (Site) is a site authorized for use of recycled water; the uses of recycled water and the site location must comply with the Master Permit.

Incidental Runoff is any small amount of recycled water that leaves the Site as a result of over-spray or leakage from sprinklers, over watering, breaks in lines, or overflow of impoundments that contain recycled water during storms.

Master Permit means LRWQCB Order No. R6V-2009-0035 and contains requirements established by the LRWQCB for the District pursuant to Water Code section 13523.1.

Permit means any LRWQCB issued waste discharge requirements (WDRs), water recycling requirements (WRRs), or master permit.

Person is any individual, partnership, corporation, governmental subdivision or unit of a governmental subdivision, or public or private organization or entity of any character.

Recycled water is water produced by the District that is suitable for a beneficial use.

User is any person to whom the District distributes recycled water under the Master Permit. User does not include persons who have been independently issued Permits by the LRWQCB.

User Agreement is a contractual agreement between the User and the District that establishes the conditions for recycled water service and use. (Note: "User Agreement" is the term used to describe any agreement, contract, permit, ordinance, memorandum of understanding or other such document used by the District to set the terms and conditions for the use of recycled water by a User.) The District reserves the right to alter, on a case-by-case basis, the User Agreement.

Waste Discharge Requirements (WDRs) are requirements established for the District by the LRWQCB pursuant to Water Code section 13263.

Water Recycling Criteria are the criteria established by the California Department of Public Health (CDPH) generally dealing with the levels of constituents in recycled water and the means to protect the public health. The criteria are established pursuant to Water Code Section 13521, and are contained in the CCR, Title 22, Division 4, Chapter 3; also referred to as the "Uniform Statewide Reclamation Criteria."

Water Recycling Requirements (WRRs) are requirements established for the District by the LRWQCB pursuant to Water Code section 13523.

II. Requirements for Recycled Water Users

A. User Responsibility

The User is responsible for the operation and maintenance of the recycled water system downstream of the District's point of connection with the User, unless such responsibility is otherwise clearly outlined in the User Agreement.

The District shall not be liable for any water damage or other damage caused by the User due to defective or broken plumbing or faulty service, nor shall the District be liable for damage caused by the User's facilities. This includes changes in the recycled water quality that may occur from sitting in ornamental lakes, storage tanks, pipelines, etc.

B. Water Supply Contingency

If, at any time during construction or operation of the recycled water system, existing or potential hazards are found, the District has the right and the responsibility to immediately suspend, with or without notice, recycled water service in the interest of protecting the public health.

The District may supply water to the affected area either temporarily or permanently from the potable water system with appropriate backflow protection.

C. Procedures to Obtain Permission to Use Recycled Water

The procedures are slightly different depending on whether the service is for a new facility or for an existing facility.

Appendix B

Every Site must obtain a User Agreement from the District prior to receiving recycled water. User Agreements will be issued only after the Site has met all of the applicable Rules and Regulations . Typically, these requirements concern construction, inspection, cross-connection certification, Site-supervisor training, a schedule of the hours that recycled water will be utilized, and required irrigation management documentation. Following issuance of the User Agreement, a Site may receive recycled water in accordance with the requirements of the User Agreement, the Rules and Regulations, and the Master Permit.

Table 1. Process to Obtain Recycled Water for Direct Users

Process	Applicable Documents or Actions Required	Responsible Entity
Step 1 – Consult with District to determine recycled water availability and project feasibility; Review Rules and Regulations	Discussion with District General Manager and District Engineer; District's Rules and Regulations	User
Step 2 - Prepare draft plans and specifications	California Department of Public Health (CDPH) requirements in California Code of Regulations (CCR) Titles 17 and 22[1], District Rules and Regulations	User
Step 3 - Submit Application for recycled water use	District's User Application Form	User
Step 4 - Identify distribution issues, verify allowed uses, estimate quantity of water and delivery schedule	Verification of information provided in the Application Form. Send conditional approval in writing with caveat that project commencement is contingent upon User receiving all regulatory approvals.	District
Step 5 – Complete California Environmental Quality Act (CEQA) Process	Make sure there is proper CEQA documentation for the Site	User
Step 6 – Consult with health agencies *(recommended)*	Describe project and show draft plans to CDPH and LCRWQCB	District / User
Step 7 – Finalize and submit plans and specifications	Plans and specifications submitted to DPH; DPH Cross-Connection Plan Approval Application and fee.	User
Step 8 - Provide materials and/or training to User on proper operation of a recycled water system	District's Recycled Water Users Rules and Regulations to be provided by District; Site Supervisor training to be provided by District (or an other equivalent program can be	District / User

	substituted)	
Step 9 – Consult with LRWQCB *(recommended)*	Describe project and discuss Engineering Report needs	User / District

Step 10 – Final plans and specifications	Obtain approval of final plans and specifications from District	User
Step 11 – Prepare / amend Engineering Report	CDPH *Guidelines for Preparation of an Engineering Report for the Production, Distribution and Use of Recycled Water*[2]; District's information on water reclamation plants; User completes the Engineering Report; the District provides information related to treatment facilities; the report must be prepared and stamped by a professional engineer registered in California.	District /User
Step 12 – Submit Engineering Report to District, CDPH and LRWQCB	Completed Engineering Report	User
Step 13 – If applicable, submit revised Engineering Report to agencies	Revisions/additional information may be requested by District, CDPH and/or the LRWQCB	User
Step 14 – Authorization of project under existing or new LRWQCB permit	Letter or permit	District, LRWQCB; possibly CDPH
Step 15 – Notification of Final Regulatory Approvals	District sends copy of CDPH or LRWQCB letter or permit to User	District
Step 16 - Draft User Agreement or amendment (if Site is not covered under existing Agreement)	District's User Agreement	District / Direct User
Step 17 – Approve User Agreement or Amendment	Present User Agreement or amendment to District Board and User for approval	District / Direct User
Step 18 – Pre- and post-construction inspections	Contact District prior to construction to arrange for site inspections, initial cross-connection and backflow prevention device testing; District Rules and Regulations	User or Purveyor

Step 19 – Approval of final construction	By District	User or Purveyor
Step 20 – Begin project implementation	User	
Step 21 – Submit revised as-built drawings of recycled water distribution system if necessary	Must be provided to District if any modifications have been made to original drawings	User

D. General Requirements

Use of recycled water must comply with all applicable state laws, regulations, the Master Permit, and any amendments thereto, District Ordinances, and these Rules and Regulations.

If the on-site recycled water system is found to be in violation of the Rules and Regulations, the District will direct the User to mitigate for these violations. A site inspection will be scheduled after a reasonable period to ensure compliance. Failure to comply may result in termination of recycled water service.

E. General Prohibitions

Use of recycled water for any purposes other than those explicitly approved in the User Agreement is strictly prohibited.

The User shall insure that the storage, distribution or use of recycled water shall not create a nuisance as defined in Water Code section 13050(m).

The User shall not discharge recycled water from treatment facilities, irrigation holding tanks, storage ponds, or other containment, other than for permitted reuse, except in accordance with the MasterPermit, contingency plans authorized by the LRWQCB or for an approved discharge to a municipal sewage treatment system.

F. Process to Obtain Permission to Use Recycled Water

Except as provided by District Ordinances, any User who wishes to receive recycled water produced by the Districts must enter into a User Agreement with the District. The User Agreement shall include the District's terms and conditions for the use of recycled water.

Any User who intends to utilize recycled water produced by the District for an authorized use at a Site must file a User Application Form (Application) with the District and receive approval in writing from the District before the use of recycled water can begin for that use and Site.

The Application filed by the User shall include:

1. A detailed description of the proposed Site with:

   (a) A map showing the specific boundaries of the proposed Site;

(b) The person or persons responsible for operation and maintenance of the Site (O&M Staff), including the person designated as the Site Supervisor and contact information;

(c) Evidence that the O&M Staff and Site Supervisor have received appropriate training from the District or an equivalent training program or the date by which training will occur prior to delivery of recycled water such that the Site is operated and maintained in compliance with applicable laws and regulations, the District's Master Permit, and these Rules and Regulations; and

(d) The specific use to be made of the recycled water at each Site.

Design plans and a description of best management practices that show that the quality of waters of the State will be protected.

2. Plans and specifications describing:

(a) Proposed piping systems to be used;

(b) Pipe locations for both recycled and potable systems;

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

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

3. A recycled water system operations manual or the date by which a recycled water system operations manual will be submitted prior to the delivery of recycled water.

4. Emergency cross-connection response plan in accordance with the District's Operation and Maintenance Manual or the date by which the emergency cross-connection response plan will be submitted prior to delivery of recycled water.

Any User who wishes to receive recycled water produced by the District must follow the process presented in Table 1 that shows the various agencies involved in the process, documents that must be completed, how documents are routed, etc.

III. Design, Installation, and Inspection

A. Purpose

The purpose of this section is to provide designers of on-site irrigation systems with rules and guidelines for the design, installation and inspection of recycled water irrigation systems.

B. What you can expect to find in this section

- Requirements for design, installation and inspection of new recycled water irrigation systems.
- Requirements for design, installation and inspection of existing irrigation systems that are converting from a potable to a recycled water supply

C. Design Requirements at the Service Connection

1. Exceptions for Existing Irrigation Systems

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

2. Required wye strainer and pressure regulator

Unless otherwise directed by these Rules and Regulations, 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. Point of Connection Location

Designers must contact the District to verify the water meter location, the size of the lateral, and meter available to serve their facility.

4. Separation Requirements

All recycled water service laterals and meters must be at least ten feet (horizontal separation) from the nearest potable water facility, including pipelines, meters and hydrants.

Designers should check to see that laterals and meters that serve their Site meet these requirements. In the event that a horizontal separation less than ten feet has been provided, designers should bring this to the attention of the District before proceeding with on-site system design.

5. Backflow Prevention: Protection Of The Public Recycled System

Since recycled water is not used for drinking purposes, *backflow protection is not normally necessary on recycled water irrigation systems.* However, a backflow protection on the User's recycled water system will be required if it is determined that there is a backflow hazard on-site which threatens the integrity of the distribution system. Examples of Sites that may be required to install backflow protection devices are:

- irrigation Sites where direct chemical fertilizer injections systems are installed on the irrigation system,
- irrigation Sites where recycled water impoundment may cause a backflow hazard

In such cases, backflow prevention devices might be required at the recycled water service connection or at specific, on-site locations as appropriate to the situation. Backflow prevention assemblies must be shown on plans and a type approved by CDPH. It will be the responsibility of the User to provide test reports for on-site backflow prevention devices, whereas backflow devices at the service connection fall under the District test program.

Devices must be properly maintained, inspected quarterly and tested at least annually. Backflow prevention devices, when required on recycled water systems, must be conspicuously labeled. Test equipment must be dedicated for use with recycled water. Backflow testing equipment used for recycled water must not be reused on potable water systems.

D. Design Requirements for On-site Facilities

1. No Cross-Connections

No cross-connections are allowed between the recycled water system and any other water system.

2. Pipe Separation

a. Horizontal separation

A minimum horizontal separation of ten feet between parallel, buried recycled and potable water pipelines should be maintained. If a ten-foot horizontal separation is not practical, a separation of at least four feet may be allowed subject to special construction conditions. Designers should consult with the District for specific design requirements. In no case is horizontal separation of less than four feet or construction in the same trench as potable facilities allowed.

Horizontal Separation	
Pipe Separation	**Construction Requirements**
Less than 4'	Not allowed
4' - 10'	Must meet one of these requirements: • Solvent welded PVC pipe on recycled water system • Restrained PVC pipe for recycled or potable • Restrained joint ductile iron pipe on recycled water system • Soldered copper pipe on recycled water system • Sleeve potable pipe • Sleeve recycled pipe
10' or Greater	No special construction requirement

b. Vertical Separation at Crossings

Where a buried constant pressure recycled water pipeline crosses a buried potable water pipeline, it must be located a minimum of 12 inches below the potable water pipeline. Constant pressure recycled water pipelines are allowed over potable water pipelines with a minimum of 12 inches vertical separation if a full standard pipe length is centered over the

crossing, or the recycled water pipeline is installed in a pipe sleeve which extends a minimum of 10 feet on either side of the potable water piping. NOTE: Intermittently pressurized irrigation laterals may be located a minimum of 12 inches above potable water pipelines without sleeving.

Vertical Separation	
Pipe Separation	**Construction Requirements**
Less than 1' **below** potable	Not allowed
1' or greater **below** potable	No special construction required
Less than 1' **above** potable	Not allowed
1' or greater **above** potable	Depth of cover requirement has to be satisfied. A full standard pipe length must be centered over the crossing, or the recycled pipeline must be installed in a pipe sleeve which extends a minimum of 10 feet on either side of the potable water piping.

3. Pipe Class

Type of Recycled Water Piping	Size	Class
Constant pressure PVC	1.5" diameter and smaller 2.0" diameter and larger	Schedule 40 or greater Class 315 of greater
Intermittent pressure PVC lateral piping		Class 200 or greater
Copper piping		Type "K" or greater

4. Depth of cover and thrust blocking

All on-site recycled water piping must be buried to a minimum depth from finished grade to top of pipe (minimum cover) according to the following schedule:

Type of Recycled Water Piping	Minimum Cover
Intermittent Pressure (all sizes)	12 inches
Constant Pressure, 2.5 inch diameter and smaller	18 inches
Constant Pressure, 3-inch diameter and larger	24 inches

All recycled water piping other than PVC piping with solvent welded joints must be protected against movement with thrust blocks or restrained joints or other approved methods conforming to the UPC Section 609.1.4.

5. Prevent Overspray, Runoff and Ponding

Irrigation systems must be designed and operated to minimize overspray, runoff and ponding. Designers must specify appropriate irrigation devices to prevent overspray in narrow areas. In the event that, during the coverage test, noticeable overspray, runoff and/or ponding is observed, facilities will be adjusted or removed and relocated as needed. This requirement does not apply to landscape impoundments such as fountains, ponds or lakes.

6. Protection of Drinking Fountains and Outdoor Eating Areas

Drinking fountains, outdoor eating areas and other similar facilities (e.g. snack bars) located within the approved use area must be protected from overspray or contact with recycled water. Protection may be accomplished by relocating the irrigation system or relocating or modifying the protected facilities.

7. Protection of Aquifers

Irrigation systems must be designed to prevent irrigation of recycled water within 50 feet of any domestic water supply well. In addition, recycled water impoundments must be located at least 100 feet (horizontal separation) from any domestic water supply well.

8. Protection of Public Potable Water Systems – Backflow Prevention

Although not normally a part of on-site 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 practical to the downstream side of every potable water meter.

All RP devices must be inspected quarterly and tested at least annually. The User is responsible for the coordinating the testing. An AWWA-certified backflow prevention device tester must do the device testing. Test reports must be provided to the District. The User and District must maintain records for a minimum of three (3) years.

9. Hose Bibs

Hose bibs are not allowed on recycled water systems.

E. Design Approval

Before any new recycled water system is constructed or any existing recycled water system is modified, on-site recycled water system plans prepared by the User must be approved by the District. Approval will be contingent upon evidence that all applicable design requirements for a recycled water system are satisfied and that the system as designed can be operated in

accordance with the Rules and Regulations. While the District reviews plans, the User is responsible for meeting all applicable requirements.

F. Information Required On Plans

The following is a brief list of the information required on the plans for every on-site recycled water system. Note that compliance with every item on this list does not guarantee that the plans will be approved since regulations and policies may change and some Sites may require additional provisions.

- Indicate all **sources of water** on the plans.
- Show the location and size of all **water meters** on the piping plans.
- Show location and type of all **backflow prevention devices** for potable water systems (generally, backflow prevention devices are not used on recycled water systems).
- Show location and type of all **strainers, pressure regulating valves, and master valves**.
- Show location of all **water pipelines** (including potable and well lines) crossing the Site. If space does not permit this information to be placed on the irrigation plans, then a separate site or utility plan can be used to show this information. Exception for an existing irrigation system converting to recycled water: Although it may not be possible to show the location of all water pipelines at this Site, all locations where future recycled water piping must be separated from the potable water piping must be clearly indicated on the plans.
- Supply the following **information box** for each recycled water system with its own meter; place this information on the same sheet as the meter/point of connection it pertains to. Fill out the ten items as applicable, but do not delete any of them.

GENERAL SITE INFORMATION for RECYCLED WATER USE

1. LANDSCAPED RECYCLED WATER IRRIGATION USE AREA: *(square footage)*.
2. PUBLIC ACCESS TO SITE GROUNDS IS *(indicate: UNRESTRICTED or RESTRICTED)*.
3. OWNER: *(legal property owner's name)*.
4. PROPERTY MANAGER CONTACT: *(name, title, and telephone number)*.
5. TENANT (S): *[name(s) & phone number(s); if not applicable, state NOT APPLICABLE]*.
6. ON-SITE WELL LOCATIONS: *(for example, ONE; if none, state NONE)*.
7. WELLS ON ADJACENT SITES LOCATED WITHIN 50 FT. OF RECYCLED WATER APPROVED USE AREA OR WITHIN 100 FT. OF ANY RECYCLED WATER IMPOUNDMENT: *(for example, ONE; if none, state NONE)*.
8. OUTDOOR DRINKING FOUNTAINS IN/NEAR THE RECYCLED WATER APPROVED USE AREA: *(for example, ONE; if none, state NONE)*.
9. OUTDOOR EATING AREA(S) IN/NEAR THE RECYCLED WATER APPROVED USE AREA: *(for example, ONE; if none, state NONE)*.
10. WATER FEATURES ON SITE: *(examples below; if none, state NONE)*.

Appendix B

Number:	Type:	Water Source:
One	*fountain*	*recycled*
One	*pond*	*potable*

- Clearly identify all adjacent **streets**, and locations of all major improvements on the Site.
- Show the location of all drinking fountains, outdoor eating areas, and **other public facilities supplied with recycled or potable water** service. Public facilities include, but are not limited to, restrooms, snack bars, swimming pools, wading pools, decorative fountains and showers. Show the pipelines feeding all of these facilities.
- Show the location of any wells, lakes, ponds, reservoirs, or other **water impoundments** located on the Site or within 100 feet of the site, and indicate the type of water source.
- Indicate that the **separation between potable and recycled water lines** meets minimum requirements. ***(See Design Requirements in Section III.C.)*** Show sleeving where recycled water pipelines cross over potable water pipelines.
- When **potable water piping is not present** on the Site, state in a note that the cross-connection test required by the Rules and Regulations is waived for Sites where potable water piping is not present.
- **Show all details necessary** to properly construct the system, including the details conforming to the requirements of the District. The purpose of the details is to show the materials and methods necessary to clearly identify all water systems on the Site.
- Include an **irrigation equipment legend** specifying all materials of construction for the system, including:
  - A pipe schedule listing pipe sizes, materials of construction, and type of water conveyed by the piping.
  - A listing of valve types, including quick coupling valves.
  - All pertinent information for each type of sprinkler head and/or emitter.
  - Indication of purple-colored pipe with recycled water stenciling and quick coupling valves with purple covers where recycled water is used.
-
- All Sites using recycled water must post **clearly visible signs** conforming to the Master Permit. Show proposed sign locations on irrigation plans.
  - For many Sites, typical locations for signs are at the property line near crosswalks, at driveway entrances, and at outdoor eating areas.
  - For streetscapes (parkways, frontage or backup landscaping), place signs at street corners and entranceways as appropriate to notify passersby. In any case, signs must be placed no further than 1,000 feet apart.
  - For medians, a sign should be placed at the beginning and end of every median, and another approximately equidistant from the ends of the median for longer median areas.

- For decorative fountains, ponds, and other water features, a sign should be placed at the feature.

- Add a **signature line** for the the District to all irrigation plan sheets, detail sheets, and specification sheets that pertain to the recycled water irrigation system.

G. Installation and Construction Inspection

1. Pipe Identification

a. Installation criteria

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

b. Identification of Buried Recycled Water Lines

The use of purple colored pipe with continuous wording "RECYCLED WATER – DO NOT DRINK" printed on opposite sides of the pipe is the preferred method for identification of new buried recycled water piping (constant-pressure mainlines/intermittent-pressure laterals). Pipe must be laid with wording facing upwards.

An acceptable alternative: all new buried recycled water lines (constant-pressure mainlines/intermittent-pressure laterals) must be identified by continuous lettering on three inch (3") minimum width, purple marking tape with one inch black or white contrasting lettering bearing the continuous wording "RECYCLED WATER – DO NOT DRINK." This tape must run continuously on top of all piping (mainlines and laterals) and must be attached to piping with plastic tape banded around the marking tape and the pipe every five feet on center. Marking tape must extend to all valve boxes and/or vaults and exposed piping.

c. 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.

d. 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.

e. Identification of Recycled Water Lines Inside Structures

Exposed (not buried) constant pressure recycled water irrigation pipelines, such as copper or galvanized pipelines, that might be used in a structure such as a parking garage to route recycled water, must be identified per UPC Appendix J, with the exception that the labeling on the piping must read "CAUTION: RECYCLED WATER – DO NOT DRINK." Intermittent-pressure lines inside a structure must be identified by affixing decals to this piping at ten-foot intervals and wherever the piping changes directions. These decals must be purple in color and must be imprinted in nominal one-inch-high, black, uppercase letters, with the words "RECYCLED WATER – DO NOT DRINK," and must be adhesive, permanent, and resistant to environmental conditions.

2. Valve Boxes

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

Valve boxes must have an advisory label or "nameplate" permanently molded into or affixed onto the lid with rivets, bolts, etc. Labels must be constructed of a purple weatherproof material with the wording "RECYCLED WATER - DO NOT DRINK - NO TOMAR" permanently stamped or molded into the label.

3. Quick Coupling Valves

New quick coupling valves must be made specifically for recycled water use. New quick coupling valves must be 3/4-inch or one-inch nominal size and of brass construction with a maximum working pressure of 150 psi. The covers on all new quick coupling valves must be permanently attached and made of purple rubber or vinyl with the words "RECYCLED WATER" imprinted on the locking cover. To prevent unauthorized use, the valve must only be operated by a special coupler key for opening and closing the valve. New quick coupling valves must be installed approximately 12 inches from walks, curbs, header boards or paved areas. Quick coupling valves used in the recycled water system must be installed in a valve box, where applicable, and a recycled water identification tag must be permanently attached to the quick coupling valve or the inside of the box so that it is clearly visible when the box lid is removed.

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

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

4. Other Valves and Devices

a. 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.

b. Remote Control Valves

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

c. 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.

d. 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.

e. Recycled Water Backflow Prevention Devices

If applicable, these devices must be tagged with a recycled water identification tag.

f. 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 with potable water identification tags, or labels.

5. Identification Tags and Stickers

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.

6. Irrigation Controllers

New recycled water system controllers must be automatic with multiple start/stop times for any 24 hour period and installed according to the approved plans and local codes. All recycled water system controllers must be identified by affixing a sticker or "nameplate" to the outside of the controller cabinet, the inside of the controller cabinet, or the outside or inside of the controller cabinet enclosure. Stickers or nameplates must be weatherproof, and must contain wording in English and Spanish indicating that the controller is for a recycled water system.

7. Irrigation and Water Feature Advisory Signs

All Sites using recycled water must post clearly visible signs conforming to the Rules and Regulations and installed per the locations indicated on the approved plans.

Appendix B

a. Irrigation Systems at Fenced Facilities

Advisory signs indicating the use of recycled water must be installed at all entrances to the User's facility. The District may require additional signing on a case by case basis.

b. Irrigation Systems at Facilities Not Surrounded by Fences

Advisory signs must be placed where they can be easily seen. To the extent necessary to advise passerbys, signs must be posted at the property line near crosswalks, at driveway entrances, at outdoor eating areas, or as otherwise determined by the District. For streetscapes (parkways, frontage or backup landscaping), place signs at street corners as appropriate to notify passerby. Signs must be placed no further than 1,000 feet apart. For medians, a sign is usually placed at the beginning and end of every median, and another approximately equidistant from the ends of the median for longer median areas.

The signs must include the words "IRRIGATED WITH RECYCLED WATER - DO NOT DRINK – NO BEBER." The lettering on the signs must be a minimum of 1/2-inch in height and must be black or white on a purple colored background and include the District logo. Where required for aesthetic or corporate identity purposes, alternate color-coding schemes may be adopted subject to the approval of the District. Consult the District for final approval of signs using alternate color-coding.

c. Decorative Fountains, Ponds, and Other Water Features

Minimum requirements for water feature signs:

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

The District must be consulted for final approval of all signs, as well as the number of signs required per water feature and the placement of those signs.

H. Vehicle Requirements

Vehicles used for distributing recycled water for soil compaction and dust control or other uses shall have an adequate tank and plumbing systems to ensure that leaks and ruptures will not occur in the course of normal use.

Control valves shall be provided and configured such that recycled water can be applied in a controlled fashion on the Site and completely retained during transit.

Spray heads or nozzles shall be provided and configured such that recycled water is applied to prevent runoff, ponding, or windblown spray conditions.

Each tank shall be equipped with an approved air-gap separation between the filler tube and the tank to prevent back-siphonage.

Each tank used to store and/or transport recycled water must be flushed and disinfected prior to storage and/or transport of potable water or recycled water of better quality.

The vehicles shall be clearly labeled to indicate that recycled water is contained in the vehicle.

I. Required Temporary Connection to Potable Water Service

In order to prevent cross-connections, an irrigation system is usually not allowed to receive recycled water until its Site has passed a required cross-connection test. This means that this irrigation system must be supplied with water from a jumper (temporary connection) to an on-site potable water system up to and during the cross-connection test. After passing this test, the jumper must be removed and the system connected to the recycled water meter. Jumpers, providing water from the public recycled water system into the on-site recycled water system, are prohibited at all times. Irrigation systems not needing a temporary potable water source are usually systems where there is no potable water at the site, such as some streetscapes and medians.

J. Inspection

1. Construction Inspection

The LRWQCB requires that the District conduct on-site inspections during the construction phase to ensure that materials, installation and procedures are in accordance with the approved plans, specifications, and all applicable regulations. Accordingly, the User must notify the District of the schedule for all phases of planning, construction and start up so that inspections can be scheduled. The constant-pressure mainline piping portion of all systems must conform to the requirements of the UPC Sections 103.5.1 through 103.5.4.2.

2. Cross-Connection Test

The User must conduct a cross-connection test (and the User's Site must pass this test) before connecting the User's recycled water irrigation system to the District's recycled water system at any Site where both recycled and potable water are present in separate piping systems. This test is to ensure the absolute separation of the recycled and potable water systems. The User must notify the District at least 48 hours prior to the test so that members of the District may be present. The cross-connection test must be done under the supervision of the District's representatives and performed by an AWWA-certified cross-connection control specialist hired by the User. The Site Supervisor must be present at the test. The test must be done with potable water charging the irrigation system (**see *Required Temporary Connection to Potable Water Service in Section III.I.)*** A written report documenting the test results must be submitted by the certified cross-connection control specialist to the Site Supervisor and the District following test completion. Cross-connection test procedures are contained in ***Appendix E***.

3. Final Inspection and Approval to Receive Recycled Water

Before the recycled water irrigation system is connected to recycled water, the District (or its designated representatives) will perform a final inspection to ensure all requirements have been met. This inspection may be coordinated with the cross-connection test. The District's inspector will check to see that the proper equipment was used and that all required tags, labels, and signs are in place.

The District must grant final approval before recycled water can be supplied to the Site. Final approval will be granted when construction has been completed in accordance with approved plans and specifications, all cross-connection tests have been performed, a final on-site inspection has been conducted, and all requirements have been met satisfactorily. After the User Agreement is approved by the District, and all applicable fees have been paid, the District will authorize the installation of the recycled water meter. The CDPH will be forwarded a copy of all test and inspection reports as well as notification that recycled water service has started. During the lifetime of the recycled water system, the District will periodically inspect the recycled water system to ensure compliance with all applicable rules and regulations.

4. Coverage Test

The User is responsible for minimizing overspray, runoff, and ponding from their recycled water irrigation systems – new or converted to recycled water. To ensure that any overspray, runoff, or ponding is in accordance with the Rules and Regulations, the District will conduct an inspection of the on-site system. After the on-site system begins receiving recycled water, the User or User's representative must contact the District to schedule a coverage test walk through of the system. The User or User's representative must be in attendance and have persons in attendance capable of making system adjustments. If modifications to the system (other than minor adjustments) are required, the User will be notified in writing of the changes required. Any required modifications to the system must be made in a timely manner. All modifications to the system are the responsibility of the User, and the User must pay all costs associated with such modifications.

5. Record Drawings

The User – or User's contractor – must prepare record drawings to show the recycled water irrigation system as constructed. These drawings must include all changes in the work constituting departures from the original contract drawings including those involving both constant-pressure and intermittent-pressure lines and appurtenances. All conceptual or major design changes must be approved by the District before implementing the changes in the construction contract. The recycled water irrigation system record drawings must be submitted to the District within ninety (90) days of the Site receiving recycled water.

Appendix B
ATTACHMENT C

Operation and Maintenance Plan for Recycled Water Users

This Operations and Maintenance Plan for Recycled Water Users (Manual) identifies general requirements for the operation and maintenance of a recycled water system within the Mammoth Community Water District Recycled Water Service Area. The words capitalized herein shall have the same meaning as in the Rules and Regulations for Recycled Water Users.

I. User General Responsibilities

By accepting recycled water service, the User agrees to comply with the Rules and Regulations for recycled water use. It is the User's responsibility to provide surveillance and supervision of its on-site recycled water system in a way that assures compliance at all times with the Rules and Regulations and the Master Permit.

II. Recycled Water Use Area Site Supervisor

A. Site Supervisor Designation

The User must designate a representative to be the Site Supervisor of the Site. The Site Supervisor represents the owner, tenant, or property manager as a liaison to the District. The Site Supervisor must have the authority to carry out any requirements of the Rules and Regulationsand/or the District. It is recommended that the Site Supervisor be an employee who is permanently stationed at the Site. At a minimum, the Site Supervisor must make frequent visits to the Site.

B. Site Supervisor Training

The designated Site Supervisor must attend a Site Supervisor Certification Workshop, or District approved equivalent, no later than 15 days prior to receiving recycled water service. Failure to attend the Site Supervisor Certification Workshop may result in the termination of recycled water service.

C. Changing the Site Supervisor

The User must notify the District immediately of any change in personnel for the Site Supervisor position. Upon a change in personnel, the new Site Supervisor must attend a Site Supervisor Certification Workshop, or District approved equivalent, no later than 15 days prior to the position change. Failure to attend the Site Supervisor Certification Workshop may result in the termination of recycled water service.

D. Requirements of Site Supervisor Position

- Received training and be able to demonstrate knowledge of the application and maintenance of a recycled water system.
- Be available to the District at all times and have the authority to carry out any requirements of the District.
- Be responsible for the installation, operation and maintenance of the recycled and potable water systems, and for the prevention of potential hazards or potential violations regarding recycled water use.
- Ensure that notification signs at the Site are properly installed and maintained, and that all recycled and potable water facilities are properly labeled, tagged or otherwise identified.

- Be knowledgeable of the provisions contained in Titles 17 and 22 of the California Code of Regulations relating to the safe use of recycled water and maintain accurate records.
- Be aware of, and familiar with, this Manual.
- Ensure that all employees of the Site involved with the use of recycled water are instructed in the safe and responsible use and handling of the recycled water.
- Immediately inform the District of any failures, violations and emergencies that occur involving the recycled or potable water systems.
- Ensure that there are no cross-connections made between the potable and recycled water systems. Be familiar with the basic concepts of backflow and cross-connection prevention, system testing, and related emergency procedures, and participate in all cross-connection tests.
- Conduct an annual self-inspection of the Site and provide a written report to the District.

III. Personnel Training

It is the responsibility of the User to train all operations personnel so they are familiar with the use of recycled water. Supervisory personnel and the Site Supervisor shall ensure that employees are not using recycled water carelessly or improperly. Any training program should include, but not be limited to, the following:

- Operations personnel must be aware that recycled water, although highly treated, is non-potable. Recycled water may never be used for human consumption.
- Operations personnel must understand that working with recycled water is safe if common sense is used and appropriate regulations are followed.
- Operations personnel must understand that conditions such as ponding, runoff and windblown spray into unapproved areas are not allowed.
- Operations personnel must understand that there is never to be a direct connection between the recycled water system and the potable water system.
- Operations personnel must become familiar with the Rules and Regulations.
- Good personal hygiene must be followed (for example, washing hands after working with recycled water).

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

IV. General System Operations

A. System Responsibilities

The District is responsible for the operation and maintenance of the recycled water system upstream of and including the recycled water meter.

The User is responsible for maintaining and operating the on-site recycled water system downstream of the recycled water meter. This includes the following:

- Obtain all permits required for the operation and maintenance of the on-site recycled water system.
- Apply recycled water in accordance with the Rules and Regulations.
- Maintain the on-site recycled water system, including signs, markings, and tags in accordance with the Rules and Regulations.

- Ensure all materials used during the repair and maintenance of the system are approved or recommended for recycled water use.
- Obtain prior authorization from the District before making any modifications to the approved recycled water system.
- Report all violations and emergencies to the appropriate local authority.
- Submit annual self-inspection report to the District.

B. Site Operating Conditions

The User must comply with the following conditions.

1. Runoff Conditions

   The irrigation systems must be designed, constructed and operated to minimize to the fullest extent practical runoff outside the approved use area.

2. Ponding Conditions

   The irrigation systems must be designed, constructed and operated to minimize to the fullest extent practical ponding within or outside of the approved use area. This does not apply to aproved recycled water impoundments.

3. Windblown Spray Conditions

   The irrigation systems must be designed, constructed and operated to minimize to the fullest extent practical windblown spray from leaving the approved use area. The recycled water system must be operated to prevent overspray or windblown spray into unapproved areas.

4. Unapproved Uses

   Use of recycled water for any purposes other than those explicitly described in the Master Permit is strictly prohibited.

5. Use in Unapproved Areas

   The delivery and use of recycled water for any reason, including approved uses, in areas other than those explicitly approved in the User Agreement and without the prior approval of the District, is strictly prohibited.

6. Cross-Connections

   Cross-connections, as defined by the California Code of Regulations, 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.

   If any cross-connection is discovered, the User shall immediately turn off the system, notify the District and implement an emergency cross-connection response plan.

7. Hose Bibbs

   Hose bibbs or other appurtenances that might allow public access to the recycled water system for unapproved use or for cross-connection to the potable water system are strictly prohibited in all areas accessible to the general public. In these areas, only quick-couplers are allowed and must be of a different type than those that may be used on the Site's potable water system. Hose bibbs may be used on the recycled water system in areas that do not allow any public access but must be conspicuously labeled "RECYCLED WATER -- DO NOT DRINK" in both English and Spanish (or any other language determined by the District to be in common use in the area), along with a "Do Not Drink" symbol . Workers in these areas must be instructed not to drink from these hose bibbs.

8. Drinking Fountains and Eating Areas

Drinking fountains located within the approved use area must be protected from contact with recycled water by direct application through irrigation or other approved use. Lack of protection, whether by design, construction practice or system operation, is strictly prohibited.

9. Periods of Operation

Operation of the User's on-site recycled water system must adhere to the following requirements.

- Irrigation may only occur during periods of least use of the approved area by the general public. This is usually between the hours of 10 p.m. and 6 a.m.; however, areas where public access is generally prohibited or minimized, such as construction dust control, commercial nurseries and freeway landscaping, may be irrigated at such times specifically approved by the District.
- Consideration should be given to allow a reasonable dry-out time before the area is to be used by the public.
- Automatic control systems are to be used and programmed to prevent ponding and runoff of recycled water.
- The recycled water system must not be allowed to operate for periods longer than needed to satisfy the landscape water requirements. Recycled water must never be applied at a rate that is greater than the infiltration rate of the soil. Exceptions to this requirement for purposes such as leaching of soil must be specified in the User Agreement.
- Even though tertiary-treated recycled water is approved for full-body contact by the State Department of Public Health, irrigation of public areas during other times may be performed if the irrigation system is operated manually and is supervised to avoid inadvertently exposing any members of the general public. This provision must be strictly followed.
- Inadvertent public contact with recycled water irrigation spray must always be avoided.

V. General System Maintenance

A. Preventive Maintenance

The User must implement a preventive maintenance program that will ensure that the recycled water system always remains in compliance. A preventive maintenance program should include but not be limited to the following:

A maintenance program for backflow prevention assemblies that includes at least annual testing by a tester certified by the American Backflow Prevention Association (ABPA) or AWWA must be carried out. Records of annual tests, repairs and overhauls must be kept by the User with copies forwarded to the District and others as required by law.

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

- Perform regular inspections of the entire recycled water system including sprinkler heads, drip irrigation system emitters, spray patterns, piping and valves, pumps, storage facilities, lakes, controllers etc. Immediately repair all broken sprinkler heads, faulty

spray patterns, leaking pipes or valves, or any other noted condition that violates the recycled water use requirements.

- Check all recycled water identification signs, tags, stickers, and above grade pipe markings for their proper placement and legibility. Replace damaged, unreadable, or missing signs, tags, stickers, and pipe markings.
- Check spray patterns to eliminate ponding, runoff and wind blown spray conditions. If evidence of ponding or runoff is noted, affected areas should be indicated on a sketch and sprinkler heads should be adjusted to prevent further ponding or runoff. Evidence of mosquitoes breeding within ponding should be noted and immediately eliminated.
- Establish and maintain an accurate record keeping system of all inspections, modifications and repair work.

B. Equipment Cleaning

Any device, hose, pipe, meter, valve, tank, pump, truck, etc. which has been used with recycled water may not be used to convey potable water nor attached to the potable water system unless it is cleaned, disinfected and approved by the District per District requirements.

C. Irrigation System Modifications

The User must not make any modifications to its on-site recycled water system (or potable system, if it is in close proximity to the recycled system) without the prior approval of the District.

This includes modifications to the approved plans or to an operational system. Detailed plans of any modifications should be submitted to the District and the modifications inspected and approved by the District before their being placed in operation.

However, routine maintenance of the irrigation system, such as pipeline repairs, sprinkler replacement and other similar activities that don't result in a substantial change in either the recycled or potable water systems, or any agreed to operating plans, don not need prior approval by the District.

Emergency modifications or repairs that must be made by the User to its system in order to prevent contamination, damage or a public health hazard shall be covered under emergency procedures.

Additionally, converting any piping used for recycled water back to potable water, such as switching from a recycled water system to a backup potable water system, requires prior approval of the District.

VI. Emergency Procedures

A. Emergency

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

B. Contamination of Potable Water

If contamination of the potable water system is suspected or known, due to a cross-connection on the User's premises, the User must immediately notify the District. The User shall invoke immediately the ***Emergency Cross-Connection Response Plan*** described below. In case of contamination of the potable water system due to a cross-connection on the User's premises, the District and the County Health Department must be immediately notified by the User . The User shall immediately invoke the Emergency Cross-Connection Response Plan.

C. Emergency Modifications

Emergency modifications or repairs can be made by the User to the recycled water system without the prior approval of the District to prevent contamination, damage or a public health hazard. As soon as possible after the modification (but within three days), the User must notify the District of the emergency modifications and file a written report.

D. Emergency Cross Connection Procedures

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

1. The User must notify the District by telephone immediately. This notification must be followed by a written notice within 24 hours that includes an explanation of the nature of the cross-connection, date and time discovered, and the contact information of the person reporting the cross-connection.
2. The District will notify the Mono County Public Health - Environmental Health Division and State Department of Public Health (DPH) of the reported cross connection.
3. The User must immediately shut down the recycled water supply to the facility.
4. The User must keep the potable system pressurized and post "Do Not Drink" signs at all potable water fixtures and outlets.
5. The User must provide bottled water for employees until the potable water system is deemed safe to drink.
6. The User must follow the procedures outlined by the State DPH and the District.

After final approval has been obtained from the State DPH, the District will bring the recycled water system back into service and inform the User to remove the "Do Not Drink" signs from all potable water fixtures and outlets.

VII. Irrigation Management Plan

The User shall prepare and submit to the District an Irrigation Management Plan which shall include measures to ensure the use of recycled water occurs at an agronomic rate while employing practices to ensure irrigation efficiency necessary to minimize application of salinity constituents (by mass) to

Recycled Use Ares. The Irrigation Management Plan shall be for each Site served and shall account for the following:

i. Soil Characteristics;
ii. Recycled water characteristics (nutrients, including nitrogen and phosphorous content, specific ion toxicity, including chloride, boron, sodium, bicarbonate; and other parameter);
iii. Requirements of the plant species being irrigated (e.g., seasonal demand, climate, nutrient requirements);
iv. Climatic conditions; (e.g., precipitation, evapotranspiration rate, wind);
v. Other supplemental nutrient additions (e.g., chemical fertilizers) used in the operation of the Use Area; and,
vi. Management of impoundments used to store or collect recycled water.

Evaporation / Transpiration

The Irrigation Management Plan also shall include sub-irrigation management plans that insure the use of recycled water occurs at an agronomic rate while employing practices to ensure irrigation efficiency necessary to minimize application of salinity constituents (by mass).

VIII. Site inspections

A. Periodic Site Inspections

Periodic site inspections by the District of the User's recycled water irrigation system are mandated in Water Code Section 13523.1(b)(5). Such inspections include, at a minimum, the visual inspection of all back-flow prevention devices, pump rooms, exposed piping, valves, pressure reducing stations, points of connection, sprinklers, controllers, lakes, storage facilities, signs, labeling, tags, etc. The Site Supervisor's maintenance records also will be inspected. The District will conduct periodic inspections of the User's system and report all violations to the appropriate regulatory agency according to applicable procedures established by law.

The District reserves the right to make unannounced inspections of the Site's facilities, although at reasonable times.

Upon completion of the inspection, a Site inspection report form shall be signed and dated by both the Site Supervisor and the District. The original form should be kept by the District entity with copies going to the Site Supervisor and any required regulatory agency.

Should a cross-connection be discovered during the inspection, the Emergency Cross-Connection Response Plan shall be immediately implemented by the Site Supervisor.

B. Annual Self Inspection Report

The User shall conduct an inspection at least once per year while the recycled water system is in use. The results of this inspection must be documented and submitted in a written report. The District will mail the report form to the Site Supervisor once a year. The Site Supervisor must submit the results of the observations, along with a description of any corrective actions taken. Upon completion, the Site Supervisor must keep a copy of the report for the User's records and must return the original. The questions on the annual inspection report are as follows:

1. Is there evidence of recycled water runoff from the Site? Show affected area on a sketch and estimate volume.
2. Is there an odor of wastewater origin at the irrigation Site? If yes, indicate apparent source, characterization, direction of travel, and any public use areas or off-site facilities affected by the odors.
3. Is there evidence of recycled water ponding, and/or evidence of mosquitoes breeding within the irrigation area due to ponded water?
4. Are warning signs, tags, stickers, and above ground pipe markings properly posted to inform the public that irrigation water is recycled water, which is not suitable for drinking?
5. Is there evidence of leaks or breaks in the irrigation system piping, or tubing?
6. Is there evidence of broken or otherwise faulty drip irrigation system emitters or spray irrigation sprinklers?
7. Has your designated Site Supervisor changed in the past year?
8. What corrective actions are being taken to correct any problems noted above?

IX. Unauthorized Discharge

An unauthorized discharge is any amount of recycled water that leaves the Site. The Site Supervisor must report to the District any unauthorized discharge of recycled water, at which time the District will specify if a written report is required. In the event of an unauthorized discharge, the Site Supervisor should make every effort to contain the recycled water and prevent it from entering the storm drain. Contact the District for further directions and disposal instructions.

It is the responsibility of the User to report to the District all system failures that result in an unauthorized discharge of more than 50,000 gallons of tertiary treated recycled water. An immediate oral report followed by a written report is required.

X. Operating Problems

A. Notification

In the event of a break in the system, low pressure, low flow or poor water quality, the User should notify the District.

It is the responsibility of the Site Supervisor to immediately notify the District of any failure or cross-connection in his/her recycled or potable water system, whether or not he/she believes a violation has occurred. It also is the responsibility of the Site Supervisor to immediately notify the District of any violation he/she believes might imminently occur because of any action the User's personnel might take during the operation of the recycled or potable water systems.

If there are any doubts whether a violation has occurred, it is the responsibility of the Site Supervisor to report each occurrence to the District so a decision can be made. It is then the District's responsibility to notify the LRWQCB and local governing agencies of any violations.

B. Violations

Violations of the User Agreement and Rules and Regulations may include but not be limited to non-compliance with any of the following prohibitions: runoff conditions, ponding conditions, windblown spray conditions, leaks or spills resulting from broken or damaged pipelines or appurtenances, unapproved uses, disposal in unapproved areas, cross-connections, unprotected

drinking fountains and unauthorized or prohibited use of hose bibbs, whether willful or by accident. Any willful or accidental act of noncompliance with any existing federal, state or local ordinance, code, law or statute regulating the use of recycled water constitutes a violation.

C. Corrective Action

If the District's investigation reveals that a violation has occurred on the Site, the District must immediately notify the User of the violation and what corrective actions must be taken. It is the responsibility of the User to immediately initiate corrective action to eliminate the violation. If the District believes the violation constitutes a hazard to the public health, the District must immediately stop recycled water service to the User. It will be at the discretion of the District to decide if a violation has been adequately corrected. The District may impose a startup fee upon resumption of service to a User whose service has been terminated, depending on the provisions of the User Agreement.

D. Causes for Termination of Service

The District reserves the right to revoke a User's Agreement if any or all of the service conditions are not satisfied at all times. Service to a User may be terminated any time if:

- The District's distribution system is not capable of supplying recycled water.
- The quality of the recycled water does not comply with the requirements of the Master Permit or the LRWQCB.
- The User's operation does not conform to all applicable regulations, permit requirements and/or the terms of the User's agreement.
- There is nonpayment of service fees and charges by the User.

Appendix B
ATTACHMENT D

Monitoring and Reporting/Compliance and Inspection Program

This Monitoring and Reporting/Compliance and Inspection Program (Program) is prepared to satisfy the requirements of the Master Permit. The capitalized terms herein shall have the same meaning as set forth in the Rules and Regulations for Recycled Water Users.

I. MONITORING

A. Flow Monitoring

The District shall record the total volume, in million gallons, and the average flow rate, in million gallons per day (mgd), of recycled water provided by the District to each User. This information must be recorded and reported for each calendar month.

B. Agronomic Application Rate Monitoring for Fertilizers and Recycled Water

1. For each calendar month, the District shall record and provide a tabular comparison of the:
    a. volume of water required for plant growth in each irrigated area;
    b. volume of recycled water (and supplemental water) applied to each irrigated area; and
    c. number of acres for each irrigated area.
2. For each calendar month, the District shall record, and provide a tabular comparison of, the:
    a. amount of nitrogen (N) needed for plant growth in each landscape and agricultural area;
    b. total amount of N applied to each area, including the amount of N in the recycled water and the amount of N in any fertilizer applied; and
    c. number of acres for each area.

C. Recycled Water Quality Monitoring

Samples of the recycled water following tertiary treatment and leaving the District Wastewater Treatment Plant for reuse by Users must be collected and analyzed to determine the magnitude of the following parameters:

Parameter	Units	Type	Minimum Frequency		
Turbidity[1]	NTU	Recorder	Continuous		
Total chlorine residual	mg/L	Recorder	Continuous		
Modal contact time[2]	minutes	Calculated	Daily		
CT value[3]	mq-minutes/L	Calculated	Daily		
Total Coliform	MPN/100mL	Grab	Daily		
Kieldhahl Nitrogen	mq/L	Composite	Weekly		
Ammonia Nitroqen	mq/L	Composite	Weekly		
Nitrate Nitroqen	mq/L	Composite	Weekly		
Total Dissolved Solids	mg/L	Composite	Monthly		
Sulfate	mq/L	Composite	Monthly		
Chloride	mg/L	Composite	Monthly		
Total Trihalomethane	u/L	Grab	Quarterly		
n-nitrosodimethylamine	u/L	Grab	Quarterly		
Priority Pollutants, excluding asbestos	as specified	Grab	Semi Annually		

(Appendix A to 40CFR part 423)					

[1]For each 24-hour period, record and report the following: average turoidity, amount of time (minutes) the turbidity exceeded five (5) NTUs (if any), and the maximum turbidity.

[2]The modal contact time at the highest and lowest flows must be recorded and reported for each 24-hour period where there is production of disinfected tertiary recycled water. The "modal contact time" is the amount of time elapsed between the time that a tracer, such as salt or dye, is injected into the influent at the entrance to a chamber and the time that the highest concentration of the tracer is ooserved in the effluent from the chamber. For the purpose of this determination, modal contact time shall be derived from a predetermined plot correlating modal contact times to varying flow conditions. (CCR, title 22, sec 60301.600)

[3]the lowest CT value must be calculated for each 24-hour period. CT (mg-minutes per liter) = chlorine residual (mg/L) x m.odal contact time (minutes). To calculate the lowest value, first record the following data for the 24-hour period:

a. Modal contact time under highest flow and corresponding total chlorine residual at that time.

b. Lowest total chlorine residual and corresponding modal contact time.

c. Highest total chlorine residual and corresponding modal contact time.

d. Modal contact time under lowest flow and corresponding total chlorine residual at that time. Next, calculate CT values for each of the four conditions, above. The lowest of the four calculated CT values is the lowest CT for the period.

D. Drinking Water Supply Monitoring

For each semi-annual period (January -June; July -December), a report must be submitted to the LRWQCB providing the results of California Department of Public Health-specified drinking water supply monitoring for municipal supply wells located within a half-mile of any authorized recycled water use site having received recycled water within the previous six months. Groundwater elevations at the time of sampling must also be provided for each well. The reports must be included with the quarterly monitoring reports providing results from the second and fourth quarterly monitoring periods, as specified by Requirement No. II.B of this Monitoring and Reporting Program.

E. Quarterly Recycled Water Use Monitoring

The District must record the following information each quarter (quarters defined in requirement No. 11.8, below) in accordance with Water Code section 13523.1 (b)(4):

1. The total number of Sites that received recycled water during the quarter.
2. A list of all recycled water use Sites. For each Site, the list must include:
    a. Site name
    b. Site location
    c. Name of underlying hydrologic area
    d. User name
    e. Type of use
    f. Site area (acres)
    g. Date of District recycled water use approval

3. A map of suitable scale showing the boundary of the District's recycled water service area defined in Finding No.9 of the Master Permit and showing the approved recycled water use Site locations.

F. **Inspections and Enforcement Monitoring**

1. The District must provide in its annual report (see Requirement No. II.C, below) an inspection schedule for all recycled water use facilities. The inspection schedule shall document the date of each facility's prior inspection and its respective compliance status. Any facility with a reported incidence of

noncompliance in its most recent inspection report must be re-inspected no later than one year from its prior inspection. Any facility that was in compliance during its most recent inspection must be scheduled for a re-inspection no later than three years from its prior inspection.
2. The District must record and report on a quarterly basis all recycled water use Sites inspected pursuant to Requirement No. I.B.4 of the Master Permit during each respective quarter (See Requirement No. II.B., below). The list of Sites inspected must include the following information for each recycled water use Site:

a. Date of inspection, name of recycled water use Site, user name, and type of use.
b. A description of all noted violations (including compliance with Requirement Nos. I.C.1 through I.C.14 of the Master Permit.
c. The date compliance was achieved and the respective corrective action taken, if applicable.
d. A description of enforcement action taken (if any), including any schedule for achieving compliance.
e. Date of prior compliance inspection.

3. The District must inspect every month all signage that informs the public that recycled water is currently being used for irrigation purposes at each irrigation recycled water use facility. Maintenance of this signage is required. The results of this inspection must be reported by the District in its quarterly report (see Requirement No. II.B, below).
4. The District must inspect every month all Best Management Practices (BMPs) in place to prevent contamination of potable water supplies (including groundwater). The results of this inspection and measures taken to maintain and repair these BMPs must be reported by the District in its quarterly report (see Requirement No. II.B, below).
5. The District must inspect the recycled water distribution system annually for cross connections with the potable water supply.
6. The District must annually pressure test the recycled water distribution system for leaks or drops in pressure.

G. Operation and Maintenance Monitoring

The District must record and maintain records of all actions and analytical results necessary to demonstrate compliance with California Department of Public Health conditions identified in the Master Permit Requirement No. II.B., and to document any operational problems and maintenance activities with the recycled water treatment facilities, distribution system, and User Sites. The District must submit a brief summary of its findings to the LRWQCB with each quarterly monitoring report. This summary must discuss the elements listed below.

1. All modifications or additions to the recycled water treatment facilities, distribution systems, and User Sites.
2. Test results of all backflow prevention devices at each recycled water use Site.
3. The results of cross connection inspections at each authorized recycled water use Site.
4. Test results of the District's recycled water distribution system pressure testing.
5. Any non-routine maintenance conducted on the recycled water treatment facilities, distribution system, and user systems.
6. Any major problems occurring to the recycled water treatment facilities, distribution system, and User systems.
7. Calibration results of any recycled water flow measuring devices.

II. REPORTING

Appendix B
ATTACHMENT D

A. General Provisions

1. The District must comply with the "General Provisions for Monitoring and Reporting," dated September 1, 1994, which is attached to and made part of this Monitoring and Reporting Program (Attachment I).
2. Pursuant to General Provision No. 1d. of the General Provisions for Monitoring and Reporting, the District must submit to the LRWQCB by **September 8, 2009** a Sampling and Analysis Plan (SAP) for consideration of approval. The SAP must include a detailed description of procedures and techniques for:

a. Sample collection, including purging techniques, sampling equipment, and decontamination of sampling equipment;
b. Sample preservation and shipment;
c. Analytical procedures;
d. Chain of custody control; and
e. Quality assurance/quality control (QAlQe).

B. Quarterly Reports

Beginning on **September 1, 2009**, quarterly monitoring reports including the preceding information must be submitted to LRWQCB by the first day of the third month following each quarterly monitoring period. (Water Code, Section 13523.1, subd. (b)(4).)

Quarterly monitoring periods are defined as follows:

First Quarter January 1 -March 31
Second Quarter April 1 -June 30
Third Quarter July 1 -September 30
Fourth Quarter October 1 -December 31

C. Annual Report

Beginning on April 1, 2010 and continuing thereafter, the District must submit an annual report to the LRWQCB with the information listed:

1. Documentation of the District's compliance with the Master Permit, including progress made towards developing the salt/nutrient management plan that is required by the Master Permit, Requirement No. III.A;
2. The compliance record and the corrective actions taken or planned, which are necessary to bring the District into full compliance with the Master Permit; and
3. The District's time schedule for completing corrective actions needed to achieve compliance.

Appendix B
ATTACHMENT D

Attachment: A General Provisions for Monitoring and Reporting Program

ATTACHMENT A

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION

GENERAL PROVISIONS

FOR MONITORING AND REPORTING

1. SAMPLING AND ANALYSIS

a. All analyses shall be performed in accordance with the current edition(s) of the following documents:
    i. Standard Methods for the Examination of Water and Wastewater
    ii. Methods for Chemical Analysis of Water and Wastes, EPA
b. All analyses shall be performed in a laboratory certified to perform such analyses by the California State Department of Health Services or a laboratory approved by the Regional Board Executive Officer. Specific methods of analysis must be identified on each laboratory report.
c. Any modifications to the above methods to eliminate known interferences shall be reported with the sample results. The methods used shall also be reported. If methods other than EPA-approved methods or Standard Methods are used, the exact methodology must be submitted for review and must be approved by the Regional Board prior to use.
d. The Discharger shall establish chain-of-custody procedures to insure that specific individuals are responsible for sample integrity from commencement of sample collection through delivery to an approved laboratory. Sample collection, storage, and analysis shall be conducted in accordance with an approved Sampling and Analysis Plan (SAP). The most recent version of the approved SAP shall be kept at the facility.
e. The Discharger shall calibrate and perform maintenance procedures on all monitoring instruments and equipment to ensure accuracy of measurements, or shall insure that both activities will be conducted. The calibration of any wastewater flow measuring device shall be recorded and maintained in the permanent log book described in 2.b, below.
f. A grab sample is defined as an individual sample collected in fewer than 15 minutes.
g. A composite sample is defined as a combination of no fewer than eight individual samples obtained over the specified sampling period at equal intervals. The volume of each individual sample shall be proportional to the discharge flow rate at the time of sampling. The sampling period shall equal the discharge period, or 24 hours, whichever period is shorter.

2. OPERATIONAL REQUIREMENTS

a. Sample Results

Pursuant to California Water Code Section 13267(b), the Discharger shall maintain all sampling and analytical results including: strip charts; date, exact place, and time of sampling; date analyses were performed; sample collector's name; analyst's name; analytical techniques used; and results of all analyses. Such records shall be retained for a minimum of three years.

This period of retention shall be extended during the course of any unresolved litigation regarding this discharge, or when requested by the Regional Board.
b. Operational Log

Pursuant to California Water Code Section 13267(b), an operation and maintenance log shall be maintained at the facility. All monitoring and reporting data shall be recorded in a permanent log book.

3. REPORTING

a. For every item where the requirements are not met, the Discharger shall submit a statement of the actions undertaken or proposed which will bring the discharge into full compliance with requirements at the earliest time, and shall submit a timetable for correction.
b. Pursuant to California Water Code Section 13267(b), all sampling and analytical results shall be made available to the Regional Board upon request. Results shall be retained for a minimum of three years. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge, or when requested by the Regional Board.
c. The Discharger shall provide a brief summary of any operational problems and maintenance activities to the Board with each monitoring report. Any modifications or additions to, or any major maintenance conducted on, or any major problems occurring to the wastewater conveyance system, treatment facilities, or disposal facilities shall be included in this summary.
d. Monitoring reports shall be signed by:

I. In the case of a corporation, by a principal executive officer at least of the level of vice-president or his duly authorized representative, if such representative is responsible for the overall operation of the facility from which the discharge originates;

ii. In the case of a partnership, by a general partner;

iii. In the case of a sole proprietorship, by the proprietor; or

iv. In the case of a municipal, state or other public facility, by either a principal executive officer, ranking elected official, or other dUly authorized employee.

e. Monitoring reports are to include the following:
i. Name and telephone number of individual who can answer questions about the report.
ii. The Monitoring and Reporting Program Number.
iii. WOID Number. .

f. Modifications

This Monitoring and Reporting Program may be modified at the discretion of the Regional Board Executive Officer.

4. NONCOMPLIANCE

Under Section 13268 of the Water Code, any person failing or refusing to furnish technical or monitoring reports, or falsifying any information provided therein, is guilty of a misdemeanor and may be liable civilly in an amount of up to one thousand dollars ($1,000) for each day of violation under Section 13268 of the Water Code.

Appendix B
ATTACHMENT D

Annual Self Inspection Report

The RWQCB requires that recycled water customers conduct an inspection at least once per year while the recycled water system is in use. The results of this inspection must be documented and submitted in a written report. The Water Retailer will mail the report form to the Site Supervisor once a year. The Site Supervisor must submit the results of the observations, along with a description of any corrective actions taken ***(see Appendix F - Sample Forms)***. Upon completion, the Site Supervisor must keep a copy of the report for their records and must return the original. The questions on the annual inspection report are as follows:

1. Is there evidence of recycled water runoff from the site? Show affected area on a sketch and estimate volume.
2. Is there an odor of wastewater origin at the irrigation site? If yes, indicate apparent source, characterization, direction of travel, and any public use areas or off-site facilities affected by the odors.
3. Is there evidence of recycled water ponding, and/or evidence of mosquitoes breeding within the irrigation area due to ponded water?
4. Are warning signs, tags, stickers, and above ground pipe markings properly posted to inform the public that irrigation water is recycled water, which is not suitable for drinking?
5. Is there evidence of leaks or breaks in the irrigation system piping, or tubing?
6. Is there evidence of broken or otherwise faulty drip irrigation system emitters or spray irrigation sprinklers?
7. Has your designated Site Supervisor changed in the past year?
8. What corrective actions are being taken to correct any problems noted above?

Appendix C

(Recycled Water Program Rules and Regulations)

Appendix C

Mammoth Community Water District

P.O. Box 597
1315 Meridian Boulevard
Mammoth Lakes, CA 93546
Phone: 760-934-2596

RECYCLED WATER PROGRAM

RULES AND REGULATIONS

May 2021

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Introduction

In 2009 the California Regional Water Quality Control Board, Lahontan Region, adopted Board Order No. R6V-2009-0035 "Master Water Recycling Requirements and Waste Discharge Requirements Mammoth Community Water District Disinfected Tertiary Recycled Water" and shortly after, the MCWD Board of Directors approved Ordinance No. 10-15-09-11 establishing the MCWD recycled water program.

Since then, MCWD has been providing recycled water to the Sierra Star Golf Course, Snowcreek Golf Course, the Trucked Recycled Water Program, and supply for Laurel Pond, a Restricted Recreational Impoundment. The primary objective of MCWD's recycled water program is to conserve groundwater, one of the key potable water sources in the region, through beneficial reuse of treated wastewater. The recycled supply is used mainly for landscape irrigation, which represents a major demand during the spring and summer seasons.

MCWD desires to continue to provide recycled water under a new General Use Permit of recycled water (ORDER WQ 2016-0068-DDW) and make minor changes to the trucked recycled water program. These Recycled Water Program Rules and Regulations have been updated for this purpose.

Document Scope and Applicability

This document contains Mammoth Community Water District Recycling Program Rules and Regulations (Rules and Regulations) governing the design, construction, operation, maintenance and monitoring of recycled water use facilities and the use of recycled water in the Mammoth Community Water District recycled water service area. The Mammoth Community Water District Recycled Water Service Area is presented as Attachment A.

The document covers requirements for existing sites and new developments and should give the recycled water user information necessary to meet all applicable regulations.

Unless otherwise stated, these Requirements shall apply to any and all Users to whom the Mammoth Community Water District (District or MCWD) distributes tertiary recycled water pursuant to the General Permit.

Definitions that Apply to these Requirements

Air Gap Separation – A physical break between a water line and a receiving tank or reservoir which is at least double the diameter of the pipeline vertically above the rim of the tank or reservoir, and in no case less than one-inch.

Applicant – An Owner or authorized representative of a potential reuse site who applies for recycled water service under terms of the appropriate 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 (in / hr).

Approved Backflow Prevention Assembly – A device installed to protect the potable water supply from contamination by nonpotable water and is approved by the State of California.

Approved Use – An application of recycled water in a manner, and for a purpose, designed in a user agreement issued by the District and in compliance with all applicable District requirements.

Approved Use Area – A site with well-defined boundaries, designated in a user agreement or user permit issued by the District to receive recycled water for an approved use and acknowledged by all applicable Regulatory Agencies.

Authorized Recycled Water Use Site (Site) – is a site authorized for use of recycled water; the uses of recycled water and the site location must comply with the General Permit.

Automatic System – An electronic, electrical or mechanical system, which includes automatic controllers, valves, and associated equipment required for the programming of effective water application rates when using recycled water.

Construction Use – An approved use of recycled water to support approved construction activities, such as soil compaction and dust control during grading.

Cross-Connection – Any physical connection between any part of a water system used or intended to supply water for drinking purposes and any source or system containing water or substance that is not or cannot be approved as safe, wholesome and potable for human consumption.

Cross-Connection Specialist – A person certified by California-Nevada Section of AWWA or approved equivalent who coordinates and monitors a cross-connection inspection and control program to prevent contamination of the potable system used to supply water for drinking purpose by any source containing unapproved water or a substance that is not or cannot be approved as safe and potable.

Direct User – is any person to whom the District directly distributes recycled water under Permits issued by the District.

District – The Mammoth Community Water District, California

General Permit – General Use Permit of recycled water (ORDER WQ 2016-0068-DDW)

Graywater – Untreated domestic wastewater from bathtubs, showers, bathroom wash basins, clothes washing machines, and laundry tubs, but excluding toilets, kitchen sinks, dishwashers, photo development sinks and laundry water from soiled diapers. This is not the same as treated recycled water.

Incidental Runoff – is any small amount of recycled water that leaves the Site as a result of over-spray or leakage from sprinklers, over watering, breaks in lines, or overflow of impoundments that contain recycled water during storms.

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 District or the local health agencies to perform inspections on or off the Users site before construction, during construction, after construction and during operation.

Irrigation Period – The time, from start of water flow to end, which a specific area receives recycled water by direct irrigation application, no matter how often the specific area is irrigated - that is length of the duty cycle.

Irrigation Use – An approved use of recycled water for landscape irrigation as defined for recycled water under Title 22, Chapter 3 of the California Code of Regulations.

Landscape Impoundment – An open body of recycled water on a use site that is utilized for aesthetic enjoyment or which otherwise serves a function not intended to include public contact.

Local City or County Health Department – This agency is the local health protection agency for the municipality in question.

Nonpotable Water – The water that has not been treated for human consumption in conformance with the latest edition of the United States Environmental Protection Agency's Drinking Water Standards, the California Safe Drinking Water Act, or any other applicable standards. This also refers to irrigation or industrial process water derived from a potable water system through an approved backflow prevention device that may be subject to contamination (e.g., through back-siphonage).

Off-site – Designates or relates to recycled water facilities that are owned and operated by the District up to the point of User connection and including the water meter.

On-site – Designates or relates to facilities owned and operated by a User.

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 on-site facilities using recycled water.

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

Permit – means any LWRQCB issued Waste Discharge Requirements (WDRs), Water Recycling Requirements (WRRs), or general permit.

Person – is any individual, partnership, corporation, governmental subdivision or unit of a governmental subdivision, or public or private organization or entity of any character.

Point of Connection – This is the point where the User's system ties to the District's system, usually at the water meter.

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

Potable Water – That water that 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.

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

Rate and Fee Schedule – The schedule of all rates, charges, fees and assessments to be made concerning the use of recycled water served by the District as approved or as amended by the District.

Record Drawings – Approved drawings that correctly show the completed onsite facilities and / or offsite facilities as constructed or modified. These drawings shall show all potable water, recycled water and sewer lines, and other utility lines.

Recreational Impoundment – An open body of recycled water located on a use site that may be used for unrestricted body contact (e.g., swimming, wading) or restricted non-body contact (e.g., boating, fishing) recreation.

Recycled Water – Nonpotable water that is highly treated to the California Code of Regulations, Title 22, Chapter 3 and used for approved purposes other than drinking water, e.g. suitable for beneficial use.

Regulatory Agencies – Those public agencies legally constituted to protect the public health and water quality, such as the State Department of Public Health, the California Regional Water Quality Control Board and the local city or county Health Department.

Runoff – When recycled water is intentionally or unintentionally allowed to drain outside the approved recycled water irrigation area.

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

Site Supervisor – A qualified person designated by the User to provide liaison with the District. This person should be available to the District at all times, should have the knowledge and authority to carry out any requirements of the District, and should be responsible for the installation, operation and maintenance of the reclaimed and potable water systems and also prevention of potential hazards.

User – is any person, persons or organization (including, but not limited to, any private company or corporation, public utility, municipality or other public body or institution) to whom the District distributes recycled water under the General Permit. User does not include persons who have been independently issued Permits by the LRWQCB.

User Agreement – is a contractual agreement between the User and the District that establishes the conditions for recycled water service and use. (Note: “User Agreement” is the term used to describe any agreement, contract, permit, ordinance, memorandum of understanding or other such document used by the District to set the terms and conditions for the use of recycled water by a User.) The District reserves the right to alter, on a case-by-case basis, the User Agreement.

User Permit – A permit issued by the District to a recycled water service Applicant after the satisfactory completion of the service application procedures. The User Permit forms a service agreement between the User and the District that legally binds the User to all conditions stated in the Agreement and all applicable Regulatory Agency requirements.

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

Violation – Noncompliance with any condition or conditions of the User Agreement or User Permit, water recycling requirements issued the Regional Water Quality Control Board and/or Title 22, Chapter 3 of the California Code of Regulations by any person, action or occurrence, whether willfully or by accident.

Waste Discharge Requirements (WDRs) – are requirements established for the District by the LRWQCB pursuant to Water Code section 13263.

Water Recycling Criteria – are the criteria established by the CDPH generally dealing with the levels of constituents in recycled water and the means to protect public health. The criteria are established pursuant to Water Code Section 13521, and are contained in the CCR, Title 22, Division 4, Chapter 3; also referred to as the "Uniform Statewide Reclamation Criteria."

Water Recycling Requirements (WRRs) – are requirements established for the District by the LRWQCB pursuant to Water Code section 13523.

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

Section I - General Requirements for Metered Recycled Water Users

Use of recycled water must comply with all applicable state laws, regulations, the General Permit, and any amendments thereto, District Ordinances, and these Rules and Regulations.

If an on-site recycled water system is found to be in violation of these Rules and Regulations, or any other applicable standard or regulation, the District will direct the User to mitigate for these violations. A site inspection will be scheduled after a reasonable mitigation period to ensure compliance. Failure to comply will result in termination of recycled water service.

A copy of the *Rules and Regulations for Recycled Water Use,* the Cross-Connection Emergency Response Plan, design plans for the recycled water system and potable water system, the Recycled Water System Operations Manual, and the Recycled Water System Irrigation Manual for the recycled water system shall be maintained at the recycled water use area. These documents must be available to operating personnel at all times.

Liability

The User is responsible for the operation and maintenance of the recycled water system downstream of the District's point of connection with the User—typically the recycled water meter--unless such responsibility is clearly outlined in the User Agreement or User Permit.

The District shall not be liable for any water damage or other damage caused by the User due to defective or broken plumbing or faulty service, nor shall the District be liable for damage caused by the User's facilities. This includes changes in the recycled water quality that may occur from sitting in ornamental lakes, storage tanks, pipelines, etc.

The District is responsible for operation and maintenance of the recycled water system upstream of the point of connection to the recycled water User, including the recycled water meter.

Water Supply Contingency

If, at any time during construction or operation of the recycled water system, existing or potential hazards are found, the District has the right and the responsibility to immediately suspend, with or without notice, recycled water service in the interest of protecting the public health.

The District may supply water to the affected area either temporarily or permanently from the potable water system, or other raw groundwater system, with appropriate backflow protection.

General Prohibitions

Use of recycled water for any purposes other than those explicitly approved in the effective User Agreement / User Authorization is strictly prohibited.

The User shall insure that the treatment, storage, distribution or use of recycled water shall not create a nuisance as defined in Water Code Section 13050(m).

The User shall not discharge recycled water from treatment facilities, irrigation holding tanks, storage ponds, or other containments, other than for permitted reuse, except in accordance

with the General Permit, other LRWQCB issued Permits, contingency plans authorized by the LRWQCB or for an approved discharge to a municipal sewage treatment system.

Procedures to Obtain Permission to Use Recycled Water

Every site must obtain final recycled water User Authorization from the District prior to receiving recycled water. The procedures are slightly different depending on whether the service is for a new facility or for an existing facility.

User Authorization is issued after the site has met all of the applicable rules and regulations. Typically, these requirements include approval of all required documentation, including an engineering report as appropriate, a recycled water use application form, an operation and maintenance plan, an irrigation management plan, an emergency response plan, and any other documents required by the District or the LRWQCB, site-supervisor training, construction, inspections and cross-connection certification.

Applications for Construction Use shall include a recycled water use application form, a user site map and a schedule of the hours that recycled water will be utilized. For further information on Recycled Water Construction Use please refer to Section VI.

Following issuance of the User Authorization, a Site may receive recycled water in accordance with the requirements of the Use Agreement, the Rules and Regulations and the General Permit.

Table 1 on page 8 presents the general process to obtain recycled water produced by the District, the various agencies involved in the process, documents that must be completed, how documents are routed, etc.

Documents Required for Recycled Water Use Application Package

Except as provided by Ordinance, any User who wishes to receive recycled water produced by the District must file the following documents with the District for District approval:

Engineering Report

1. Copy of Engineering Report prepared by a California Registered Engineer per the California Department of Public Health (CDPH) “Guidelines for Preparation of an Engineering Report for the Production, Distribution and Use of Recycled Water.”

Plans and Specifications

Plans and specifications may be included as part of the engineering report and must contain the information below as a minimum. Please refer to Section III, Design, Installation and Inspection as well as CDPH requirements for additional information which may be required on plans.

1. Proposed piping systems to be used;
2. Pipe locations for both recycled and potable systems;
3. Type and location of the outlets and plumbing fixtures that will be accessible to the public;
4. The methods and devices to be used to prevent backflow of recycled water into the public water system; and,
5. A description and drawing of best management practices (BMPs) showing that the public health and the quality of waters of the State will be protected. The drawing

will include at a minimum, location of all backflow devices, locations and descriptions of all public information signage, marking and tagging, locations/descriptions of surface water flow / overspray prevention practices.

Recycled Water System Operations and Maintenance Plan

At a minimum, the Operations and Management Plan shall describe the following:

1. Site Supervisor
   a. Method to designate / replace / assign temporary / etc
2. Methods to provide personnel training;
   a. Training schedule & scope
   b. Permanent / temporary employees
3. Procedures to update existing facilities as they are repaired / replaced;
   a. Specifications for Pipe, Valves, Appurtenances
   b. Specifications for Tags, Markers, Signage;
   c. Installation may be per MCWD Rules and Regulations
4. Methods for detection of leaks (for example broken sprinkler heads) and correction within 72 hours or prior to a release of 1,000 gallons, whichever occurs first;
5. Description of how appropriate irrigation amounts and rates will be applied including, but not limited to installing smart controllers;
6. Proper design and aim of sprinkler heads;
7. Methods to prevent incidental runoff;
8. Procedure to prevent recycled water application during precipitation events;
9. Procedure to provide adequate protection of all facilities used to transport and store recycled water against overflow, structural damage, or a significant reduction in efficiency resulting from a 25-year, 24-hour storm or flood;
10. Inspection Forms and Schedule of Inspections(Site Inspection Report); and,
11. Reporting Forms and Schedule of Reporting (Cross Connection Test Report)

Table 1. Process to Obtain Recycled Water

Process	Applicable Documents or Actions Required	Responsible Entity
Step 1 – Consult with District to determine recycled water availability and project feasibility; Review Rules and Regulations for Recycled Water Use	Discussion with District General Manager and District Engineer; District's Rules and Regulations for Recycled Water Use	User
Step 2 - Identify distribution issues, verify allowed uses, estimate quantity of water and delivery schedule	Continue preliminary discussion with General Manager, District Engineer, Present detailed calculations.	User / District
Step 3 - Prepare draft plans and specifications	California Department of Public Health (CDPH) requirements in California Code of Regulations (CCR) Title 17 and 22, MCWD Rules and Regulations for Recycled Water Use	User
Step 4 – Consult with health agencies *(recommended)*	Describe project and show draft plans to CDPH and LRWQCB	District / User
Step 5 – Complete California Environmental Quality Act (CEQA) Process	Make sure there is proper CEQA documentation for the site	User / District
Step 6 - Draft User Agreement or amendment (if site is not covered under existing agreement)	District's User Agreement. Send conditional approval in writing with caveat that project commencement is contingent upon User receiving all regulatory approvals and District Authorization Permit.	District / User
Step 7 – Consult with Lahontan Regional Water Quality Control Board (LRWQCB) *(recommended)*	Describe project and discuss Engineering Report needs	User / District
Step 8 – Prepare / amend Engineering Report *(if required)*	CDPH *Guidelines for Preparation of an Engineering Report for the Production, Distribution and Use of Recycled Water*; District's information on water reclamation plans; Direct User completes the Engineering Report; the District provides information related to treatment facilities; the report must be prepared and stamped by a Professional Engineer registered in California.	District / Direct User

Table 1. Process to Obtain Recycled Water (cont.)

Process	Applicable Documents or Actions Required	Responsible Entity
Step 9 – Finalize and submit plans and specifications	Plans and specifications submitted to MCWD and DPH; DPH Cross- Connection Plan Approval Application and fee	User
Step 10 - Approve User Agreement or Amendment	Present Agreement or Amendment to MCWD District Board and governing body of User for approval	District / User
Step 11 – Final plans and specifications	Obtain approval of final plans and specifications from District	User
Step 12 – Submit Engineering Report to District, CDPH and LRWQCB	Completed Engineering Report	User
Step 13 – If applicable, submit revised Engineering Report to agencies	Revisions/additional information may be requested by District, CDPH and/or the LRWQCB	User
Step 14 – Authorization of project under existing or new LRWQCB permit	Letter or permit from LRWQCB and DPH	District, LRWQCB; possibly CDPH
Step 15 – Notification of Final Regulatory Approvals	District sends copy of CDPH or LRWQCB letter or permit to User	District
Step 16 - Submit Application for recycled water use authorization	District's User Authorization Form	User
Step 17 - Provide materials and/or training to User on proper operation of a recycled water system	District's Recycled Water Users Rules and Regulations to be provided by District; Site Supervisor training to be provided by District (or another equivalent program can be substituted upon District approval)	District / User
Step 18 – Pre- and post-construction inspections	Contact District prior to construction to arrange for site inspections, initial cross-connection and backflow prevention device testing; District Rules and Regulations	User / District
Step 19 – Approval of final construction ; Issue User Authorization	District inspects and approves construction and all required documents	User / District
Step 20 – Begin project implementation	User / District	User /District
Step 21 – Submit revised as-built drawings of recycled water distribution system if necessary	Must be provided to District if any modifications have been made to original drawings	User

Recycled Water Use Irrigation Management Plan

The Irrigation Management Plan shall include measures to ensure the use of recycled water occurs at an agronomic rate while employing practices to ensure irrigation efficiency necessary to minimize application of salinity constituents (by mass) to Recycled Use Areas. The Irrigation Management Plan shall be for each Recycled Water Use Area served and shall account for the following:

1. A general description of Site characteristics including:
   a. Soil Characteristics;
   b. Recycled water characteristics (nutrients, including nitrogen and phosphorous content, specific ion toxicity; including chloride, boron, sodium, bicarbonate; and other parameters);
   c. Requirements of the plant species being irrigated (e.g., seasonal demand, climate, nutrient requirements);
   d. Climatic conditions (e.g., precipitation, evaporation / transpiration rate; wind);
   e. Other supplemental nutrient additions (e.g., chemical fertilizers) used in the operation of the Use Area; and,
   f. Management of impoundments used to store or collect recycled water.
2. A description of control measures for applying irrigation within agronomic rates to reduce the potential for runoff and increased nutrients into the groundwater;
   a. To demonstrate whether irrigation is at agronomic rates, the User must provide information to the District including a tabular comparison of the volume of water required for plant growth in the landscape area to the volume of recycled water (and supplemental water) applied to the area.
3. A description of how recycled water used to irrigate landscape areas will not be applied at a rate or amount that exceeds the irrigation and nutrient needs of the vegetation. The District must communicate to recycled water users the nutrient levels in the recycled water at least monthly so that the recycled water users can appropriately evaluate nutrient needs prior to application of fertilizers.
   a. To demonstrate whether fertilizer application is at agronomic rates, the User must provide information to the District including a tabular comparison of the amount of fertilizer needed for plant growth in the landscape area to amount applied to the area. The Site Supervisor must only apply nitrogen fertilizer if levels of nitrogen in the recycled water are not sufficient for plant growth. If levels are not sufficient, the Site Supervisor must calculate how much fertilizer needs to be applied by subtracting the level in recycled water from the level needed for plant growth.
4. Schedule of irrigation operation;
   a. Method to prevent irrigation during / before precipitation events; and,
   b. Method to prevent recycled water delivery during / before storm events
5. Description of computerized irrigation control system; and,
6. Reporting Forms and Schedule of Reporting (Monthly Water Usage / Nutrients Report)

User Site Best Management Practices

The User must submit design plans and a description of best management practices (BMPs) showing that public health and quality of waters of the State will be protected.

1. The plans and description must provide information to ensure the Site using recycled water is designed and operated using appropriate BMPs to comply with the following:
    a. Application of recycled water at agronomic rates so irrigation does not promote downward migration of pollutants, which could adversely impact the quality of groundwater (refer to sections above);
    b. Adequate erosion control so that soil is not released into stormwater runoff and surface waters; and,
    c. Fertilizer application does not adversely impact waters of the State (refer to sections above).
2. Measures to prevent recycled water spray, mist, or surface flow from either leaving the Site or reaching:
    a. Any surface waters located on or adjacent to the Site
    b. Areas where the public has access (e.g., dwellings, designated outdoor eating areas, or food handling facilities.); or
    c. Drinking fountains.
    d. Discontinuation of application of Recycled Water during precipitation events, which are of sufficient magnitude to generate surface flow within the Site.
    e. Use of buffer zones;
3. Measures to prevent public contact with recycled water:
    a. Irrigation with recycled water during periods of minimal human use of the irrigated area and timing of irrigation to allow an adequate dry-out time before the irrigated area will be used by the public; Use of timed irrigation typically during the hours of 10 pm to 6 am only.
    b. Discontinuation of application of Recycled Water during precipitation events, which are of sufficient magnitude to generate surface flow within the Site.
    c. An approved Signage Plan showing types and locations of public notification signage and tagging.

Emergency Cross-Connection Response Plan

Please refer to the Example MCWD Emergency Response Plan presented as Attachment B. This plan should be modified as it applies to each user and approved by the District. A copy of the Emergency Response Plan should be posted at appropriate locations within the facility and should be available to all User employees.

Recycled Water User Authorization Form (Application)

Except as provided by Ordinance or User Agreement, any User who wishes to receive recycled water produced by the District must submit a User Authorization application form with the District and receive final approval from the District before the use of recycled water can begin for that use and Site. District approval may include the District's terms and conditions for the use of recycled water.

The Recycled Water Use Authorization Form shall contain information demonstrating the User will comply with the Uniform Statewide Reclamation Criteria and the District's Requirements for Recycled Water Users. The authorization form must include:

1. A detailed description of the proposed recycled water use Site, including:
   a. A map showing the specific boundaries of the proposed Site and the specific use to be made of the recycled water at each Site.
2. The person or persons responsible for operation and maintenance of the Site (O&M Staff), including the person designated as the Site Supervisor as defined in Section III of this document;
3. Evidence that the O&M Staff and Site Supervisor have received sufficient training to comply with Section III of these Rules and Regulations; or the date by which training will occur prior to delivery of recycled water; and
4. As Built plan set of Site irrigation / potable water system

A Recycled Water Use Authorization Form is presented as Attachment C.

Section II - Design, Installation, and Construction Inspection of Recycled Water Systems

Design Requirements at the Service Connection

Exceptions for Existing Irrigation Systems

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

Required Wye Strainer and Pressure Regulator

Unless otherwise directed by the District, 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.

Point of Connection Location

Designers must contact the District to verify the water meter location, the size of the lateral, and meter available to serve their facility.

Swivel Ell Connections

In the event that recycled water is not available, or a planned temporary use of potable water supply is required, a Swivel Ell connection may be used. The Swivel Ell connection prevents the interconnection of potable water and recycled water supplies.

CDPH Policy Memo 2003-03, dated May 7, 2003, describes the requirements for swivel ell connections. The design, maintenance, and operation of swivel ell connections shall be in compliance with the Policy Memo 95-004. A copy of the swivel ell connection shall be submitted to the CDPH for review and approval. The District and CDPH must approve the swivel elbow before use. Otherwise, the potable water supply line shall be protected by an air-gap configuration to physically separate the potable and recycled plumbing lines.

Connections using the swivel ell must be witnessed by a District Cross-Connection Control Specialist. Swivel ell connections are illustrated in Standard Detail RW-123, *Swivel Ell for Recycled and Potable Water Supply*. In an emergency, the swivel ell is switched from the normal recycled water connection to the potable connection. This procedure is reversed once the recycled water supply is restored. In addition, the potable water supply must be protected by an approved reduced-pressure-principle backflow prevention device upstream of the swivel ell.

Separation Requirements

All recycled water service laterals and meters must be at least ten feet (horizontal separation) from the nearest potable water facility, including pipelines, meters and hydrants.

Designers should check to see that laterals and meters that serve their site meet these requirements. In the event that a horizontal separation less than ten feet has been provided, designers should bring this to the attention of the developer or the District before proceeding with on-site system design.

Conditions of Pressure and Service

Pressure and service shall be provided on an "as available" basis, at the User's point of connection. The District shall state the available pressure of the system at the point of connection location. All Users shall hold the District harmless from any and all damages and liabilities caused in whole or in part by pressure conditions, water quality variations, or interruptions in service. It shall be the Customer's responsibility to install booster pumps or pressure regulating valves to adjust pressure, if necessary.

Service pressure requirements shall be determined by the District. The User shall design the onsite system to accommodate available pressure.

When a reasonable service pressure would not be available to onsite facilities, the User shall be responsible for correcting the situation. If available service pressure is too high, the Customer shall utilize pressure regulators downstream of the meter to obtain the correct pressure. If available pressure is too low, the Customer shall provide booster pumps to increase the pressure.

Whenever possible, the District will operate the recycled water system at a lower pressure than the potable water system.

Backflow Prevention: Protection of the Public Recycled System

Since recycled water is not used for drinking purposes, backflow protection is not normally necessary on recycled water irrigation systems. However, the Program must ensure that customers do not compromise the quality of the recycled water in the distribution system. Therefore, the District will require backflow protection on the customer's recycled water system if it is determined that there is a backflow hazard on-site which threatens the integrity of the recycled water distribution system. Examples of sites that may be required to install backflow protection devices are:

- irrigation sites where direct chemical fertilizer injections systems are installed on the irrigation system,
- irrigation sites where recycled water impoundment may cause a backflow hazard

In such cases, backflow prevention devices might be required at the recycled water service connection or at specific, on-site locations as appropriate to the situation. Backflow prevention assemblies must be shown on plans and must be of a type approved by state DPH. It will be the responsibility of the customer to provide test reports for on-site backflow prevention devices, whereas backflow devices at the service connection fall under the District test program.

Devices must be properly maintained, inspected quarterly and tested at least annually. Backflow prevention devices, when required on recycled water systems, must be conspicuously labeled. Test equipment must be dedicated for use with recycled water. Backflow testing equipment used for recycled water must not be reused on potable water systems.

Design Requirements for On-site Facilities

No Cross-Connections

No cross-connections are allowed between the recycled water system and any other water system.

Horizontal Pipe Separation

A minimum horizontal separation of ten feet between parallel, buried recycled and potable water pipelines should be maintained. If a ten-foot horizontal separation is not practical, a separation of at least four feet may be allowed subject to special construction conditions. If, for short pipe alignment sections, a four-foot separation is not possible, the approval for special construction requirements must be obtained from the District. In no case is construction in the same trench as potable facilities allowed.

Table 2: Horizontal Pipe Separation

Horizontal Separation	
Pipe Separation	**Construction Requirements**
Less than 4'	Not allowed or per special design approval from the District
4' - 10'	Must meet one of these requirements: • Solvent welded PVC pipe on recycled water system • Restrained PVC pipe for recycled or potable • Restrained joint ductile iron pipe on recycled water system • Soldered copper pipe on recycled water system • Sleeve potable pipe • Sleeve recycled pipe
10’ or Greater	No special construction requirement

Vertical Separation at Crossings

Where a buried constant pressure recycled water pipeline crosses a buried potable water pipeline, it should be located a minimum of 12 inches below the potable water pipeline unless otherwise approved by the District. Constant pressure recycled water pipelines are allowed

Table 3: Vertical Pipe Separation

Vertical Separation	
Pipe Separation	**Construction Requirements**
Less than 1' **below** potable	Not allowed or per special design approval from the District
1’ or greater **below** potable	No special construction required
Less than 1' **above** potable	Not allowed or per special design approval from the District
1’ or greater **above** potable	Depth of cover requirement has to be satisfied. A full standard pipe length must be centered over the crossing, or the recycled pipeline must be installed in a pipe sleeve which extends a minimum of 10 feet on either side of the potable water piping.

over potable water pipelines with a minimum of 12 inches vertical separation if a full standard pipe length is centered over the crossing, or the recycled water pipeline is installed in a pipe sleeve which extends a minimum of 10 feet on either side of the potable water piping. If a 12 inch vertical separation is not practical, a lesser separation may be allowed subject to special construction conditions approved by the District. Designers should consult the District for specific design requirements.

Irrigation Laterals

On irrigation systems where intermittently pressurized recycled water lines (laterals) serve sprinkler heads, the potable water line(s) may be placed under the recycled water laterals. No special construction requirements are necessary provided that one-foot vertical separation is maintained.

On sites using pressurized irrigation laterals with valve-in-head sprinklers, the potable water line(s) may be placed under the recycled water laterals if additional protection is provided for the potable line. Common practices include sleeving or automatic flow control/shut off devices installed and functioning properly on each lateral that crosses a potable line.

No additional special construction requirements are necessary provided that at least one foot vertical separation is maintained.

Pipe Class

Table 4: Type of Recycled Water Piping

Type of Recycled Water Piping	Size	Class
Constant pressure PVC	1.5” diameter and smaller 2.0” diameter and larger	Schedule 40 or greater Class 315 of greater
Intermittent pressure PVC lateral piping		Class 200 or greater
Copper piping		Type “K” or greater

Depth of Cover and Thrust Blocking

All on-site recycled water piping must be buried to a minimum depth from finished grade to top of pipe (minimum cover) according to the following schedule:

Table 5: Depth of Cover Recycled Water Piping

Type of Recycled Water Piping	Minimum Cover
Intermittent Pressure (all sizes)	12 inches
Constant Pressure, 2.5 inch diameter and smaller	18 inches
Constant Pressure, 3-inch diameter and larger	24 inches

All recycled water piping other than PVC piping with solvent welded joints must be protected against movement with thrust blocks or restrained joints or other approved methods conforming to the UPC Section 609.1.4.

Hose Bibs

Hose Bibs are not allowed on recycled water systems regardless of style, construction or identification.

Quick Coupling Valves

The use of quick couplers is at the District's sole discretion and requires a separate plan review by the District. Only quick couplers with approved color and identification will be allowed.

Prevent Overspray, Runoff and Ponding

Irrigation systems must be designed and operated to minimize overspray, runoff and ponding. Designers must specify appropriate irrigation devices to prevent overspray in narrow areas. In the event that, during the coverage test, noticeable overspray, runoff and/or ponding is observed, facilities will be adjusted or removed and relocated as needed. This requirement does not apply to landscape impoundments such as fountains, ponds or lakes.

Protection of Drinking Fountains and Outdoor Eating Areas

Drinking fountains, outdoor eating areas and other similar facilities (e.g. snack bars) located within the approved use area must be protected from overspray or contact with recycled water. Protection may be accomplished by relocating the irrigation system or relocating or modifying the protected facilities.

Protection of Aquifers

Unless otherwise approved by the CDPH, irrigation systems must be designed to prevent irrigation of recycled water within 50 feet of any domestic water supply well. In addition, unless otherwise approved by the CDPH, recycled water impoundments must be located at least 100 feet (horizontal separation) from any domestic water supply well.

Backflow Prevention -- Protection of Public Potable Water Systems

Although not normally a part of on-site 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 practical to the downstream side of every potable water meter.

All RP devices must be inspected quarterly and tested at least annually. The user is responsible for the coordinating the testing. An AWWA-certified backflow prevention device tester must do the device testing. Test reports must be provided to the District. The recycled water user and the District must maintain records for a minimum of three (3) years.

Design Approval

Before any new recycled water system is constructed or any existing recycled water system is modified, on-site recycled water system plans prepared by the User must be approved by the District and the State DPH. Approval will be contingent upon evidence that all applicable design requirements for a recycled water system are satisfied and that the system as designed can be operated in accordance with the District Rules and Regulations. While the District and the State DPH review plans, the recycled water User is responsible for meeting all requirements, even those requirements not shown on the approved plans.

Information Required On Plans

The following is a brief list of the information required on the plans for every on-site recycled water system. Note that compliance with every item on this list does not guarantee that the plans will be approved since regulations and policies may change and some sites may require additional provisions. A checklist format of this list is provided as Attachment X.

- Indicate all **sources of water** on the plans.
- Show the location and size of all **water meters** on the piping plans.
- Show location and type of all **backflow prevention devices** for potable water systems (generally, backflow prevention devices are not used on recycled water systems).
- Show location and type and sizes of all **strainers, pressure regulating valves, master valves and other valves, including quick coupling valves**.
- Type and location of the outlets and plumbing fixtures that will be accessible to the public;
- Show location of all **water pipelines** (including non-potable, potable and raw water well lines) crossing the site. If space does not permit this information to be placed on the irrigation plans, then a separate site or utility plan can be used to show this information. Exception for an existing irrigation system converting to recycled water: Although it may not be possible to show the location of all water pipelines at this type of site, all locations where future recycled water piping must be separated from the potable water piping must be clearly indicated on the plans.
- Supply the following **information box** for each recycled water system with its own meter; place this information on the same sheet as the meter/point of connection it pertains to. Fill out the ten items as applicable, but do not delete any of them.

Table 6: General Site Information Box

GENERAL SITE INFORMATION for RECYCLED WATER USE

1. LANDSCAPED RECYCLED WATER IRRIGATION USE AREA: *(square footage*).
2. PUBLIC ACCESS TO SITE GROUNDS IS *(indicate: UNRESTRICTED or RESTRICTED)*.
3. OWNER: *(legal property owner's name).*
4. PROPERTY MANAGER CONTACT: *(name, title, and telephone number).*
5. TENANT (S): *[name(s) & phone number(s); if not applicable, state NOT APPLICABLE].*
6. ON-SITE WELL LOCATIONS: *(for example, ONE; if none, state NONE)*.
7. WELLS ON ADJACENT SITES LOCATED WITHIN 50 FT. OF RECYCLED WATER APPROVED USE AREA OR WITHIN 100 FT. OF ANY RECYCLED WATER IMPOUNDMENT: (*for example, ONE; if none, state NONE).*
8. OUTDOOR DRINKING FOUNTAINS IN/NEAR THE RECYCLED WATER APPROVED USE AREA: (*for example, ONE; if none, state NONE).*
9. OUTDOOR EATING AREA(S) IN/NEAR THE RECYCLED WATER APPROVED USE AREA: (*for example, ONE; if none, state NONE).*
10. WATER FEATURES ON SITE: *(examples below; if none, state NONE).*

Number:	Type:	Water Source:
One	*fountain*	*recycled*
One	*pond*	*potable*

- Clearly identify all adjacent **streets**, and locations of all major improvements on the site.
- Show the location of all drinking fountains, outdoor eating areas, and **other public facilities supplied with recycled or potable water** service. Public facilities include, but are not limited to, restrooms, snack bars, swimming pools, wading pools, decorative fountains and showers. Show the pipelines feeding all of these facilities.
- Show the location of any wells, lakes, ponds, reservoirs, or other **water impoundments** located on the site or within 100 feet of the site, and indicate the type of water source.
- Indicate that the **separation between potable and recycled water lines** meets minimum requirements. Show any necessary sleeving or special design considerations where recycled water pipelines cross over potable water pipelines.
- When **potable water piping is not present** on the site, state in a note that the cross-connection test required by the District is waived for sites where potable water piping is not present.
- **Show all details necessary** to properly construct the system, including any details conforming to the requirements of the District. The purpose of the details is to show the materials and methods necessary to clearly identify all water systems on the site.
- Include an **irrigation equipment legend** specifying all materials of construction for the system, including:
    - A pipe schedule listing pipe sizes, materials of construction, and type of water conveyed by the piping.
    - A listing of valve types, including quick coupling valves.
    - All pertinent information for each type of sprinkler head and/or emitter including:
        - Sprinkler radius (feet).
        - Operating pressure (psi).
        - Flow (gpm or gph).
        - Sprinkler pattern.
        - Manufacturer and model number
    - Indication of purple-colored pipe with recycled water stenciling and quick coupling valves with purple covers where recycled water is used.
    - Drip irrigation information and all other pertinent equipment.
    - Estimates of application rate, acres to be irrigated, and information on pressure requirement, hourly delivery rate, and the wetting pattern of sprinklers.
- Include any **Standard Notes** specified by the District.
- All sites using recycled water must post **clearly visible signs** conforming to Title 22 requirements. Show proposed sign locations on irrigation or signage plans.
    - For many sites, typical locations for signs are at the property line near crosswalks, at driveway entrances, and at outdoor eating areas.
    - For streetscapes (parkways, frontage or backup landscaping), place signs at street corners and entranceways as appropriate to notify passersby. In any case, signs must be placed no further than 1,000 feet apart.

  - For medians, a sign should be placed at the beginning and end of every median, and another approximately equidistant from the ends of the median for longer median areas.
  - For decorative fountains, ponds, and other water features, ***see the Decorative Fountains, Ponds and Other Water Features*** section on page 22 for more information.

- Add **signature lines** for the Department of Health Services and the District to all irrigation plan sheets, detail sheets, and specification sheets that pertain to the recycled water irrigation system.

Use Site Specifications

The User must submit the following documents for approval:

1. Recycled Water System Operations Manual or the date by which a Recycled Water System Operations Manual will be submitted prior to the delivery of recycled water.
2. Emergency Cross-Connection Response Plan in accordance with the guidelines established by CDPH or the date by which the Emergency Cross-Connection Response Plan will be submitted prior to delivery of recycled water.
3. Irrigation Efficiency Plan
4. Best Management Plan

Installation and Identification

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

Identification Tags, Markings, Stickers

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.

Identification of Buried Recycled Water Lines

The use of purple colored pipe with continuous wording "RECYCLED WATER – DO NOT DRINK" printed on opposite sides of the pipe is the preferred method for identification of new buried recycled water piping (constant-pressure mainlines/intermittent-pressure laterals). Pipe must be laid with wording facing upwards.

An acceptable alternative: all new buried recycled water lines (constant-pressure mainlines/intermittent-pressure laterals) must be identified by continuous lettering on three inch (3") minimum width, purple marking tape with one inch black or white contrasting lettering bearing the continuous wording "RECYCLED WATER – DO NOT DRINK." This tape must run continuously on top of all piping (mainlines and laterals) and must be attached to piping with plastic tape banded around the marking tape and the pipe every five feet on center. Marking tape must extend to all valve boxes and/or vaults and exposed piping.

Identification of Existing Buried Recycled Water Lines

Existing buried piping 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.

Identification of Recycled Water Lines Inside Structures

Exposed (not buried) constant pressure recycled water irrigation pipelines, such as copper or galvanized pipelines, that might be used in a structure such as a parking garage to route recycled water, must be identified per UPC Appendix J, with the exception that the labeling on the piping must read “CAUTION: RECYCLED WATER – DO NOT DRINK.” Intermittent-pressure lines inside a structure must be identified by affixing decals to this piping at ten-foot intervals and wherever the piping changes directions. These decals must be purple in color and must be imprinted in nominal one-inch-high, black, uppercase letters, with the words “RECYCLED WATER – DO NOT DRINK,” and must be adhesive, permanent, and resistant to environmental conditions.

Identification of Water Valves

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

Valve boxes must have an advisory label or “nameplate” permanently molded into or affixed onto the lid with rivets, bolts, etc. Labels must be constructed of a purple weatherproof material with the wording "RECYCLED WATER - DO NOT DRINK - NO TOMAR" permanently stamped or molded into the label.

Figure 1: Marked Cover and Tag

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.

Figure 2: Example Cover Mark

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

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.

Figure 3: Typical Tag Example

All valve covers on offsite recycled water transmission mains shall not be interchangeable with potable water covers and shall contain a recognizable inscription cast on the top surface.

Identification of Quick Coupling Valves

New quick coupling valves must be made specifically for recycled water use. New quick coupling valves must be 3/4-inch or one-inch nominal size and of brass construction with a maximum working pressure of 150 psi. The covers on all new quick coupling valves must be permanently attached and made of purple rubber or vinyl with the words "RECYCLED WATER" imprinted on the locking cover. To prevent unauthorized use, the valve must only be operated by a special coupler key for opening and closing the valve. New quick coupling valves must be installed approximately 12 inches from walks, curbs, header boards or paved areas. Quick coupling valves used in the recycled water system must be installed in a valve box, where applicable, and a recycled water identification tag must be permanently attached to the quick coupling valve or the inside of the box so that it is clearly visible when the box lid is removed.

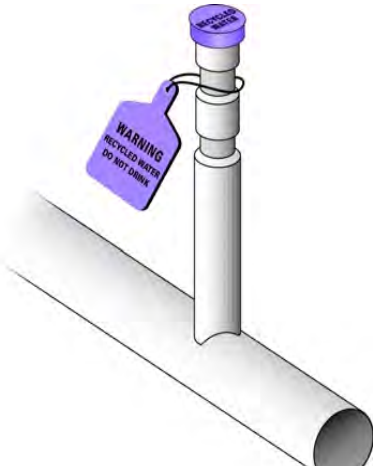


Figure 4:
Quick Coupler Marking

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

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

Identification of 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.

Identification of Recycled Water Backflow Prevention Devices

If applicable, these devices must be tagged with a recycled water identification tag.

Figure 5: Sprinkler Head Ring

Identification of Sprinkler Heads

Recycled water sprinkler heads shall be marked with a purple ring or other approved method.

Irrigation Controllers

All recycled water system controllers must be identified by affixing a sticker or "nameplate" to the outside of the controller cabinet, the inside of the controller cabinet, or the outside or inside of the controller cabinet enclosure. Stickers or nameplates must be weatherproof, and must contain wording in English and Spanish indicating that the controller is for a recycled water system. New recycled water system controllers must be automatic with multiple start/stop times for any 24 hour period and installed according to the approved plans and local codes.

Identification of 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 with potable water identification tags, or labels.

Advisory Signage

All sites using recycled water must post clearly visible signs conforming to District approval and installed per the locations indicated on the approved plans. Recycled water identification signage must be a minimum of 4" x 8", however of a reasonable size to be readable to the public.

Irrigation Systems at Fenced Facilities

Advisory signs indicating the use of recycled water must be installed at all entrances to the customer's facility. The District may require additional signing on a case by case basis.

Irrigation Systems at Facilities Not Surrounded by Fences

Advisory signs must be placed where they can be easily seen. To the extent necessary to advise passerby, signs must be posted at the property line near crosswalks, at driveway entrances, at outdoor eating areas, or as otherwise determined by the District. For streetscapes (parkways, frontage or backup landscaping), place signs at street corners as appropriate to notify passerby. Signs must be placed no further than 1,000 feet apart. For medians, a sign is usually placed at the beginning and end of every median, and another approximately equidistant from the ends of the median for longer median areas.

The signs must include the words "IRRIGATED WITH RECYCLED WATER - DO NOT DRINK – NO BEBER." The lettering on the signs must be a minimum of 1/2-inch in height and must be black or white on a purple colored background. Where required for aesthetic or corporate identity purposes, alternate color-coding schemes may be adopted subject to the approval of the District. Consult the District for final approval of signs using alternate color-coding.

Decorative Fountains, Ponds, and Other Water Features

Minimum requirements for water feature signs:

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

The District must be consulted for final approval of all signs, as well as the number of signs required per water feature and the placement of those signs.

Construction Inspection

The RWQCB requires that the District or a designated representative conduct on-site inspections during the construction phase to ensure that materials, installation and procedures are in accordance with the approved plans, specifications, and all applicable regulations. Accordingly, the recycled water User must notify the District of the schedule for all phases of planning, construction and start up so that inspections can be scheduled. The constant-pressure mainline piping portion of all systems must conform to the requirements of the UPC Sections 103.5.1 through 103.5.4.2.

Required Temporary Connection to Potable Water Service

In order to prevent cross-connections, an irrigation system is usually not allowed to receive recycled water until its site has passed a required cross-connection test. This means that an irrigation system might be supplied with water from a jumper (temporary connection) to an on-site potable water system, or non-treated groundwater system, up to and during the cross-connection test. After passing this test, the jumper must be removed and the system connected to the recycled water meter. Jumpers, providing water from the public recycled water system into the on-site recycled water system, are prohibited at all times. Irrigation systems not needing a temporary potable water source are usually systems where there is no potable water at the site, such as some streetscapes and medians.

Cross-Connection Test

The User must conduct a cross-connection test (and the User's site must pass this test) before connecting the User's recycled water irrigation system to the District's recycled water system at any use-site where both recycled and potable water are present in separate piping systems. This test is to ensure the absolute separation of the recycled and potable water systems. The User must notify the District at least 48 hours prior to the test so that members of the District may be present. The cross-connection test must be done under the supervision of the District's representatives and performed by an AWWA-certified cross-connection control specialist hired by the User. The Site Supervisor must be present at the test. The test must be done with potable water, or non-treated ground water, charging the irrigation system. A written report documenting the test results must be submitted by the certified cross-connection control specialist to the Site Supervisor and the agency responsible for inspection following test completion. Cross-connection test procedures are contained in Appendix E.

Coverage Test

The User is responsible for minimizing overspray, runoff, and ponding from their recycled water irrigation systems – new or converted to recycled water. To ensure that any overspray, runoff, or ponding is in accordance with District rules and regulations, the District will conduct an inspection of the on-site system. After the on-site system begins receiving recycled water, the User or User's representative must contact the District to schedule a coverage test walk through of the system. The User or User's representative must be in attendance and have persons in attendance capable of making system adjustments. If modifications to the system (other than minor adjustments) are required, the User will be notified in writing of the changes

required. Any required modifications to the system must be made in a timely manner. All modifications to the system are the responsibility of the user, and the user must pay all costs associated with such modifications.

Record Drawings

The recycled water User – or the User's contractor – must prepare record drawings to show the recycled water irrigation system as constructed. These drawings must include all changes in the work constituting departures from the original contract drawings including those involving both constant-pressure and intermittent-pressure lines and appurtenances. All conceptual or major design changes must be approved by the District before implementing the changes in the construction contract. The recycled water irrigation system record drawings must be submitted to the District within ninety (90) days of the site receiving recycled water.

Final Inspection and Authorization to Receive Recycled Water

Before the recycled water irrigation system is connected to recycled water, the District (or its designated representatives) will perform a final inspection to ensure all requirements have been met. This inspection may be coordinated with the cross-connection test. The District's inspector will check to see that the proper equipment was used, all documentation is in order and that all required tags, labels, and signs are in place.

The District must grant final authorization before recycled water can be supplied to the site. Final authorization will be granted when construction has been completed in accordance with approved plans and specifications, all cross-connection tests have been performed, a final on-site inspection has been conducted, and all requirements--including documentation submittals--have been met satisfactorily. After the Recycled Water Use Authorization is finalized by the District, the Water Service Agreement is approved by the District (if applicable), and all applicable fees have been paid, the District will begin recycled water service.

The State DPH will be forwarded a copy of all test and inspection reports as well as notification that recycled water service has started. During the lifetime of the recycled water system, the District will periodically inspect the recycled water system to ensure compliance with all applicable Rules and Regulations.

Section III - Operation & Maintenance

General Customer Responsibilities

By accepting recycled water service, the customer agrees to comply with and enforce the District Rules and Regulations for recycled water use. It is the User's responsibility to provide surveillance and supervision of its on-site recycled water system in a way that assures compliance at all times with current regulations and the recycled water permit requirements.

Site Supervisor Designation

The User must designate a representative to be the Site Supervisor of the recycled water use site. The Site Supervisor represents the owner, tenant, or property manager as a liaison to the District. The Site Supervisor must have the authority to carry out any requirements of the District.

Site Supervisor Training

The designated Site Supervisor must attend a Site Supervisor Certification Workshop, or District approved equivalent, no later than 15 days prior to receiving recycled water service. Failure to attend the Site Supervisor Certification Workshop may result in the termination of recycled water service.

Changing the Site Supervisor

The User must notify the District immediately of any change in personnel for the Site Supervisor position. Upon a change in personnel, the new Site Supervisor must attend a Site Supervisor Certification Workshop, or District approved equivalent, no later than 15 days prior to the position change. Failure to attend the Site Supervisor Certification Workshop may result in the termination of recycled water service.

Requirements of Site Supervisor Position

- Received training and be able to demonstrate knowledge of the application and maintenance of a recycled water system.
- Be available to the District at all times and have the authority to carry out any requirements of the District.
- Be responsible for the installation, operation and maintenance of the recycled and potable water systems, and for the prevention of potential hazards or potential violations regarding recycled water use.
- Ensure that notification signs at the use site are properly installed and maintained, and that all recycled and potable water facilities are properly labeled, tagged or otherwise identified.
- Be knowledgeable of the provisions contained in Titles 17 and 22 of the California Code of Regulations relating to the safe use of recycled water and maintain accurate records.
- Be aware of, and familiar with, these Rules and Requirements.
- Ensure that all employees of the use site involved with the use of recycled water are instructed in the safe and responsible use and handling of the recycled water.
- Immediately inform the District of any failures, violations and emergencies that occur involving the recycled or potable water systems.

- Ensure that there are no cross-connections made between the potable and recycled water systems. Be familiar with the basic concepts of backflow and cross-connection prevention, system testing, and related emergency procedures, and participate in all cross-connection tests.
- Conduct an annual self-inspection of the use site and provide a written report to the District; and.
- Submit all required Operating Documents.

Personnel Training

It is the responsibility of the User to train all operations personnel so they are familiar with the use of recycled water. Supervisory personnel and the Site Supervisor shall ensure that employees are not using recycled water carelessly or improperly. Any training program should include, but not be limited to, the following:

- Operations personnel must be aware that recycled water, although highly treated, is non-potable. Recycled water may never be used for human consumption.
- Operations personnel must understand that working with recycled water is safe if common sense is used and appropriate regulations are followed.
- Operations personnel must understand that conditions such as ponding, runoff and windblown spray into unapproved areas are not allowed.
- Operations personnel must understand that there is never to be a direct connection between the recycled water system and the potable water system.
- Operations personnel should be familiar with these Rules and Regulations.
- Good personal hygiene must be followed (for example, washing hands after working with recycled water).

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

General System Operations

System Responsibilities

The District is responsible for the operation and maintenance of the recycled water system upstream of the point of connection, including the recycled water meter. Attachment H and Attachment I provide a checklist for distribution system start up and shut down procedures.

The Customer is responsible for maintaining and operating the on-site recycled water system downstream of the recycled water point of connection. This includes the following:

- Obtain all Permits required for the operation and maintenance of the on-site recycled water system.
- Apply recycled water in accordance with the Rules and Regulations.
- Maintain the on-site recycled water system, including signs, markings, and tags in accordance with all District Rules and Regulations.
- Ensure all materials used during the repair and maintenance of the system are approved or recommended for recycled water use.

- Obtain prior authorization from the District before making any modifications to the approved recycled water system.
- Report all violations and emergencies to the appropriate local authority.
- Submit Annual Self-Inspection Report and other required documents.

Site Operating Conditions

The User must comply with the following conditions:

Runoff Conditions

The irrigation systems must be designed, constructed and operated to minimize to the fullest extent practical runoff outside the approved use area.

Ponding Conditions

The irrigation systems must be designed, constructed and operated to minimize to the fullest extent practical ponding within or outside of the approved use area. This does not apply to approved recycled water impoundments.

Windblown Spray Conditions

The irrigation systems must be designed, constructed and operated to minimize to the fullest extent practical windblown spray from leaving the approved use area. The recycled water system must be operated to prevent overspray or windblown spray into unapproved areas.

Unapproved Uses

Use of recycled water for any purposes other than those explicitly described in the District's water recycling permit is strictly prohibited.

Use in Unapproved Areas

The delivery and use of recycled water for any reason, including approved uses, in areas other than those explicitly approved in the current effective user permit and without the prior approval of the District, is strictly prohibited.

Cross-Connections

Cross-connections, as defined by the California Code of Regulations, 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.

If any cross-connection is discovered, the User shall immediately turn off the system, notify the District and Implement the Emergency Cross-Connection Response Plan, Attachment B.

Hose Bibs

Hose bibs or other appurtenances that might allow public access to the recycled water system for unapproved use or for cross-connection to the potable water system are strictly prohibited in all areas accessible to the general public. In these areas, only quick-couplers are allowed and must be of a different type than those that may be used on the use site's potable water system.

Hose bibs may be used on the recycled water system in areas that do not allow any public access but must be conspicuously labeled "RECYCLED WATER -- DO NOT DRINK" in both English and Spanish (or any other language determined by the Water Recycling Agency to be in common use in the area), along with the "Do Not Drink" symbol. Workers in these areas must be instructed not to drink from these hose bibbs.

Drinking Fountains and Eating Areas

Drinking fountains located within the approved use area must be protected from contact with recycled water by direct application through irrigation or other approved use. Lack of protection, whether by design, construction practice or system operation, is strictly prohibited.

Periods of Operation

Operation of the User's on-site recycled water system must adhere to the following requirements.

- Irrigation may only occur during periods of least use of the approved area by the general public. This is usually between the hours of 10 p.m. and 6 a.m.; however, areas where public access is generally prohibited or minimized, such as construction dust control, commercial nurseries and freeway landscaping, may be irrigated at such times specifically approved by the District.
- Even though tertiary-treated recycled water is approved for full-body contact by the State Department of Public Health, irrigation of public areas—for example, landscaping "hot-spots" --during times other than 10 pm to 6 am may be performed if the irrigation system is operated manually and is supervised to avoid inadvertently exposing any members of the general public. This provision must be strictly followed.
- Consideration should be given to allow a reasonable dry-out time before the area is to be used by the public.
- Automatic control systems are to be used and programmed to prevent ponding and runoff of recycled water.
- The recycled water system must not be allowed to operate for periods longer than needed to satisfy the landscape water requirements. Recycled water must never be applied at a rate that is greater than the infiltration rate of the soil. Exceptions to this requirement for purposes such as leaching of soil must be specified in the User Agreement.
- Inadvertent public contact with recycled water irrigation spray must always be avoided.

General System Maintenance

Preventive Maintenance

The User must implement a preventive maintenance program that will ensure that the recycled water system always remains in compliance with the Rules and Regulations of the District. As part of a preventive maintenance program, the Site Supervisor should:

- Perform regular inspections of the entire recycled water system including sprinkler heads, drip irrigation system emitters, spray patterns, piping and valves, pumps, storage facilities, lakes, controllers etc. Immediately repair all broken sprinkler heads, faulty spray patterns, leaking pipes or valves, or any other noted condition that violates the recycled water use requirements.
- Check all recycled water identification signs, tags, stickers, and above grade pipe markings for their proper placement and legibility. Replace damaged, unreadable, or missing signs, tags, stickers, and pipe markings.
- Check spray patterns to eliminate ponding, runoff and windblown spray conditions. If evidence of ponding or runoff is noted, affected areas should be indicated on a sketch and sprinkler heads should be adjusted to prevent further ponding or runoff. County Health

regulations require that evidence of mosquitoes breeding within ponding should be noted and immediately eliminated.

- Establish and maintain an accurate record keeping system of all inspections, modifications and repair work.
- Provide for at least annual testing of backflow prevention assemblies by a tester certified by the American Backflow Prevention Association (ABPA) or AWWA. Records of annual tests, repairs and overhauls must be kept by the user with copies forwarded to the District and the County Health Department.

User Site Best Management Practices

The User must submit design plans and a description of Best Management Practices (BMPs) that show that public health and quality of waters of the State will be protected.

1. The plans and description must provide information to ensure the Site using recycled water is designed and operated using appropriate BMPs to comply with the following:
    a. Application of recycled water at agronomic rates so irrigation does not promote downward migration of pollutants, which could adversely impact the quality of groundwater;
    b. Fertilizer application is at agronomic rates does not adversely impact waters of the State; and,
    c. Adequate erosion control so that soil is not released into stormwater runoff and surface waters.

    To demonstrate whether irrigation is at agronomic rates, the User must provide information to the District including a tabular comparison of the volume of water required for plant growth in the landscape area to the volume of recycled water (and supplemental water) applied to the area.

    To demonstrate whether fertilizer application is at agronomic rates, the User must provide information to the District including a tabular comparison of the amount of fertilizer needed for plant growth in the landscape area to the amount applied to the area. The Site Supervisor must only apply nitrogen fertilizer if levels of nitrogen in the recycled water are not sufficient for plant growth. If levels are not sufficient, the Site Supervisor must calculate how much fertilizer needs to be applied by subtracting the level in recycled water from the level needed for plant growth.
2. Sites using recycled water must be designed and operated using BMPs with the objectives of preventing recycled water spray, mist, or surface flow (except for runoff that is "incidental in nature), from either leaving the Site or reaching:
    a. Any surface waters located on or adjacent to the Site;
    b. Areas where the public has access (e.g., dwellings, designated outdoor eating areas, or food handling facilities.); or
    c. Drinking fountains.
3. Sites must also be designed and operated using BMPs with the objectives of preventing public contact with recycled Water. BMPs used to obtain these objectives must include:

a. Irrigation with recycled water during periods of minimal human use of the irrigated area and timing of irrigation to allow an adequate dry-out time before the irrigated area will be used by the public
b. A BMP Design Plan must be submitted and approved showing locations of public notification signage and tagging.

4. BMPs used to achieve the objectives described above must include:
    a. Use of buffer zones;
    b. Use of devices that protect drinking water fountains against contact with recycled water spray, mist, or surface flow; and,
    c. Discontinuation of application of Recycled Water during precipitation events, which are of sufficient magnitude to generate surface flow within the Site.

Irrigation System Modifications

The User must not make any modifications to its on-site recycled water system (or potable system, if it is in close proximity to the recycled system) without the prior approval of the District.

This includes modifications to the approved plans or to an operational system. Detailed plans of any modifications should be submitted to the District and the modifications inspected and approved by the District before their being placed in operation.

However, routine maintenance of the irrigation system, such as pipeline repairs, sprinkler replacement and other similar activities that don't result in a substantial change in either the recycled or potable water systems, or any agreed to operating plans, do not need prior approval by the District.

Converting any piping used for recycled water back to potable water, such as switching from a recycled water system to a backup potable water system, requires prior approval of the District.

Emergency modifications or repairs that must be made by the User to its system in order to prevent contamination, damage or a public health hazard are covered under Operating Problems, below.

Equipment Cleaning

Any device, hose, pipe, meter, valve, tank, pump, truck, etc. which has been used with recycled water may not be used to convey potable water nor attached to the potable water system unless it is cleaned, disinfected and approved by the District per District requirements.

Operating Problems

Emergency Procedures

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

Emergency Modifications

Emergency modifications or repairs can be made by the User to the recycled water system without the prior approval of the District to prevent contamination, damage or a public health hazard. As soon as possible after the modification (but within three days), the customer must notify the District of the emergency modifications and file a written report.

Emergency Cross Connection Response Plan

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

1. Immediately shut down the reclaimed water supply to the facility at the meter.
2. Immediately notify the District by phone. This notification is to be followed by written notice within 24 hours. The written notice should include an explanation of the nature of the cross-connection, date and time discovered, and the steps taken to mitigate the cross-connection(s).
3. Keep the potable water system pressurized and post "DO NOT DRINK—NO TOMAR" signs at all potable water fixtures and outlets.
4. The District will notify the Mono County Public Health - Environmental Health Division and State Department of Public Health (DPH) of the reported cross connection.
5. Provide bottled water for employees until the potable water system is deemed safe to drink.
6. Collect water samples from the potable water system and perform a 24-hour bacteriological analysis (as instructed by the District). Water samples should be collected from the closest possible point to the cross-connection.
7. Identify the cause and location(s) of backflow and eliminate the cross-connection(s).
8. Conduct a cross-connection test in coordination with the District and the appropriate health department to verify that all cross-connection(s) have been eliminated.
9. Obtain approval from the District and the appropriate health department before returning the reclaimed water system to service.
10. If the bacteriological analysis conducted in Step 6 is positive, flush the potable water system and disinfect by maintaining a chlorine residual of at least 50 mg/L for 24 hours. Otherwise, proceed to Step 13.
11. Flush the potable water system after the 24 hour disinfection period of Step 10 and perform standard low chlorine test and bacteriological analysis.
12. If the results from Step 11 are acceptable, proceed to Step 13. Otherwise, repeat Step 10 and 11.
13. Obtain final approval from the District and the state and/or local city or county health department before removing signs.

This Emergency Response Plan is Attachment B.

Notification

General Notification Requirements

The Site Supervisor must provide *immediate verbal notificatio*n followed by written notification within 10 business days to the District, Lahontan Water Board, State Department of Health Services and Mono County Public Health Department if any of the following events occur:

- a complaint (or other source of information) concerning recycled water use that may involve illness;
- a system failure that results in an unauthorized discharge of more than 50,000 gallons of tertiary treated recycled water (or 1,000 gallons for any lesser quality recycled water);
- contamination of the potable water system due to a cross-connection;
- a break in the system, low pressure, low flow or poor water quality;
- any failure or cross-connection in his/her recycled or potable water system, whether or not the site supervisor believes a violation has occurred; or
- any violation he/she believes might imminently occur because of any action the User's personnel might take during the operation of the recycled or potable water systems.

If there are any doubts whether a violation has occurred, it is the responsibility of the Site Supervisor to report each occurrence to the District so a decision can be made. It is then the District's responsibility to notify appropriate local governing agencies of any violations.

Contamination of Potable Water

If contamination of the potable water system is suspected or known due to a cross-connection on the user's premises, the user must immediately notify the District. The user is to invoke immediately the **Emergency Cross-Connection Response Plan** described above. In case of contamination of the District potable water system due to a cross-connection on the User's premises, the User must immediately notify the District and the County Health Department.

Unauthorized Discharge

An unauthorized discharge is any amount of recycled water that leaves the designated use site. The Site Supervisor must report to the District any unauthorized discharge of recycled water, at which time the District will specify if a written report is required. In the event of an unauthorized discharge, the Site Supervisor should make every effort to contain the recycled water and prevent it from entering the storm drain. Contact the District for further directions and disposal instructions.

Violations

The District reserves the right to decide if a violation of the conditions under which the User Authorization was issued has occurred. Violations may include non-compliance of any of the following prohibitions: runoff conditions, ponding conditions, windblown spray conditions, leaks or spills resulting from broken or damaged pipelines or appurtenances, unapproved uses, disposal in unapproved areas, cross-connections, unprotected drinking fountains and unauthorized or prohibited use of hose bibbs, whether willful or by accident. Any willful or accidental act of noncompliance with any existing Federal, state or local ordinance, code, law or statute regulating the use of recycled water constitutes a violation.

Corrective Action

If the District's investigation reveals that a violation has occurred on the reuse site, the District must immediately notify the User of the violation and what corrective actions must be taken. It is the responsibility of the User to immediately initiate corrective action to eliminate the violation. If the District believes the violation constitutes a hazard to the public health, the District must immediately stop recycled water service to the User. It will be at the discretion of the District to decide if a violation has been adequately corrected. The District may impose a startup fee upon resumption of service to a User whose service has been terminated, depending on the provisions of the User Agreement.

Enforcement

The District shall enforce all existing regulations concerning the use of recycled water and/or recycled water systems. Regulations concerning the use of any recycled water or recycled water system shall be applied with equal force and effect to any person, persons, or firm, public or private. There will be no deviations from these regulations except upon written authorization of the District, acting within applicable regulations. An appeal procedure may be provided for in the User Agreement or in the District's rules and regulations, and the action of the District will be final.

Causes for Termination of Service

The District reserves the right to revoke a User's Authorization if any or all of the service conditions are not satisfied at all times. Service to a User may be terminated any time if:

- The District's distribution system is not capable of supplying recycled water.
- The quality of the recycled water does not comply with the requirements of the Regulatory Agencies.
- The User's operation does not conform to all applicable regulations, permit requirements and/or the terms of the User's agreement.
- There is nonpayment of service fees and charges by the User.

Section IV -- Compliance Inspection and Enforcement Program

Periodic Site Inspections

Periodic site inspections of the User's recycled water irrigation system are mandated in the Water Code (Section 13523.1(b)(5)). Such inspections include, at a minimum, the visual inspection of all back-flow prevention devices, pump rooms, exposed piping, valves, pressure reducing stations, points of connection, sprinklers, controllers, lakes, storage facilities, signs, labeling, tags, etc. The Site Supervisor's maintenance records should also be inspected.

The District will provide the Site Supervisor with reports of periodic inspections of the User's system and report all violations to the appropriate Regulatory Agency according to applicable procedures established by law, code, permit or practice.

Periodic inspections are the responsibility of District (the entity holding the general water recycling permit issued by the Regional Board). The District may perform this inspection, or it may be delegated to a third party. The District will also determine the frequency of these inspections, based on local conditions. The District also reserves the right to make unannounced inspections of the use site's facilities, although at reasonable times.

Upon completion of the inspection, a Site Compliance Inspection Report should be signed and dated by both the Site Supervisor and the entity performing the inspection. A Site Compliance Report is presented as Attachment F. The original form should be kept by the inspecting entity with copies going to the Site Supervisor, the District and any required regulatory agency.

Should a cross-connection be discovered during the inspection, the Emergency Cross-Connection Response Plan should be immediately invoked by the Site Supervisor.

Annual Self Inspection Report

The RWQCB requires that the recycled water User conduct an inspection at least once per year while the recycled water system is in use. The results of this inspection must be documented and submitted in a written report. A Site Inspection Report is presented as Attachment G. The Site Supervisor must submit the results of the inspection, along with a description of any corrective actions taken or scheduled. Upon completion, the Site Supervisor must keep a copy of the report for their records and must return the original. Questions on the annual inspection report include the following:

1. Is there evidence of recycled water runoff from the site? Show affected area on a sketch and estimate volume.
2. Is there an odor of wastewater origin at the irrigation site? If yes, indicate apparent source, characterization, direction of travel, and any public use areas or off-site facilities affected by the odors.
3. Is there evidence of recycled water ponding, and/or evidence of mosquitoes breeding within the irrigation area due to ponded water?
4. Are warning signs, tags, stickers, and above ground pipe markings properly posted to inform the public that irrigation water is recycled water, which is not suitable for drinking?
5. Is there evidence of leaks or breaks in the irrigation system piping, or tubing?

6. Is there evidence of broken or otherwise faulty drip irrigation system emitters or spray irrigation sprinklers?
7. Has your designated Site Supervisor changed in the past year?
8. What corrective actions are being taken to correct any problems noted above?

Compliance and Enforcement Report

A. The General Permit requires the District to establish and implement a *Compliance Inspection and Enforcement Program.* The *Compliance Inspection and Enforcement Program* must include but not be limited to a description of the District's:

1. Plan for conducting routine compliance inspections of the Authorized Recycled Water Use Sites, including the name(s) of any parties that will assist the District in conducting the inspections.

2. Process for responding to violations, including ordering corrective action and initiating enforcement action.

B. At a minimum, the Compliance Inspection and Enforcement Program must be consistent with Water Code section 13523.1.

At a minimum, the District's *Compliance Inspection and Enforcement Program* must include the following requirements:

1. Inspections include review of the Site Supervisor's maintenance records and visual inspection of all back-flow prevention devices, pump rooms, exposed piping, valves, pressure reducing stations, points of connection, sprinklers, controllers, surface waters, storage facilities, signs, labeling, tags, etc.;

2. A Site compliance inspection report must be prepared for each inspection. The inspection report must be signed and dated by both the Site Supervisor and the inspector. At a minimum, copies of the reports must be maintained on file by the Site Supervisor, District, and inspecting entity if different from the District;

3. The inspector must immediately notify the Site Supervisor of violation(s) identified during inspections and what corrective actions must be taken;

4. Describe enforcement actions that will be employed for Users that fail to immediately initiate corrective action to eliminate violation(s). Such enforcement actions may include, but not be limited to:

- Immediately stopping recycled water service to a use Site where a violation has been identified and the violation is believed to constitute a hazard to the public health or threat to water quality.
- Termination of service to a User who uses, transports, or stores such water in violation of the District's *Requirements for Recycled Water Users.*

The Compliance and Enforcement Reports are bound as Attachment F to these Rules and Regulations.

Section V -- Monitoring and Reporting Program

This document is prepared to satisfy the requirements of the General Permit, General Water Recycling Requirements and Waste Discharge Requirements Mammoth Community Water District Disinfected Tertiary Treated Water, Monitoring and Reporting Program**.**

Monitoring

Drinking Water Supply Monitoring

For each semi-annual period (January -June; July -December), the District shall submit a report to the Lahontan Water Board providing the results of California Department of Public Health-specified drinking water supply monitoring for municipal supply wells located within a half-mile of any authorized recycled water use site having received recycled water within the previous six months. Groundwater elevations at the time of sampling shall be provided for each well. The reports shall be included with the quarterly monitoring reports providing results from the second and fourth quarterly monitoring periods, as specified in Quarterly Reports, below.

Recycled Water Flow Monitoring

Mammoth Community Water District (District) shall record the total volume, in million gallons, and the average flow rate, in million gallons per day (mgd), of recycled water provided by the District to each Authorized Water Use site. This information shall be recorded and reported for each calendar month.

Agronomic Application Rate Monitoring

1. For each calendar month, the District shall record and provide a tabular comparison of the:
   a. volume of water required for plant growth in each irrigated area;
   b. volume of recycled water (and supplemental water) applied to each irrigated area; and
   c. number of acres for each irrigated area.
2. For each calendar month, the District shall record, and provide a tabular comparison of the:
   a. amount of nitrogen (N) needed for plant growth in each landscape and agricultural area;
   b. total amount of N applied to each area, including the amount of N in the recycled water and the amount of N in any fertilizer applied; and
   c. number of acres for each area.

Recycled Water Quality Monitoring

Samples of the recycled water following tertiary treatment and leaving the Treatment Plant for reuse by permitted users shall be collected and analyzed to determine the magnitude of the constituents and parameters listed in Table 7.

Table 7: Monitoring Constituents and Parameters

Parameter	Units	Type	Minimum Frequency
Turbidity[1]	NTU	Recorder	Continuous
Total chlorine residual	mg/L	Recorder	Continuous
Modal contact time[2]	minutes	Calculated	Daily
CT value[3]	mq-minutes/L	Calculated	Daily
Total Coliform	MPN/100mL	Grab	Daily
Kieldhahl Nitrogen	mq/L	Composite	Weekly
Ammonia Nitroqen	mq/L	Composite	Weekly
Nitrate Nitroqen	mq/L	Composite	Weekly
Total Dissolved Solids	mg/L	Composite	Monthly
Sulfate	mq/L	Composite	Monthly
Chloride	mg/L	Composite	Monthly
Total Trihalomethane	u/L	Grab	Quarterly
n-nitrosodimethylamine	u/L	Grab	Quarterly
Priority Pollutants, excluding asbestos (Appendix A to 40CFR part 423)	As Specified	Grab	Semi Annually

[1] For each 24-hour period, record and report the following: average turbidity, amount of time (minutes) the turbidity exceeded five (5) NTUs (if any), and the maximum turbidity.

[2] The modal contact time at the highest and lowest flows must be recorded and reported for each 24-hour period w**here** there is production of disinfected tertiary recycled water. The "modal contact time" is the amount of time elapsed between the time that a tracer, such as salt or dye, is injected into the influent at the entrance to a chamber and the time that the highest concentration of the tracer is observed in the effluent from the chamber. For the purpose of this determination, modal contact time shall be derived from a predetermined plot correlating modal contact times to varying flow conditions. (CCR, title 22, sec 60301.600)

[3] The lowest CT value must be calculated for each 24-hour period. CT (mg-minutes per liter) = chlorine residual (mg/L) x modal contact time (minutes). To calculate the lowest value, first record the following data for the 24-hour period:

a. Modal contact time under highest flow and corresponding total chlorine residual at that time.
b. Lowest total chlorine residual and corresponding modal contact time.
c. Highest total chlorine residual and corresponding modal contact time.
d. Modal contact time under lowest flow and corresponding total chlorine residual at that time. Next, calculate CT values for each of the four conditions, above. The lowest of the four calculated CT values is the lowest CT for the period.

Quarterly Recycled Water Use Monitoring

The District shall record the following information each quarter in accordance with Water Code Section 13523.1 (b) (4):

1. The total number of sites that received recycled water during the quarter.
2. A list of all recycled water use sites. For each site, the list must include:
   a. site name
   b. site location
   c. name of underlying hydrologic area
   d. user name
   e. type of use
   f. site area (acres)
   g. date of District recycled water use approval
3. A map of suitable scale showing the boundary of the Permit Area and showing the approved recycled water use site locations.

Inspections and Enforcement Monitoring

1. The District shall provide in its annual report (see Reporting, below) an inspection schedule for all recycled water use facilities. The inspection schedule shall document the date of each facility's prior inspection and its respective compliance status. Any facility with a reported incidence of noncompliance in its most recent inspection report shall be re-inspected no later than one year from its prior inspection. Any facility that was in compliance during its most recent inspection shall be scheduled for a re-inspection no later than three years from its prior inspection.
2. The District shall record and report on a quarterly basis all recycled water use sites inspected during each respective quarter. The list of sites inspected must include the following information for each recycled water use site:
   a. Date of inspection, name of recycled water use site, user name, and type of use.
   b. A description of all noted violations.
   c. The date compliance was achieved and the respective corrective action taken, if applicable.
   d. A description of enforcement action taken (if any), including any schedule for achieving compliance.
   e. Date of prior compliance inspection.
3. The District shall inspect every month all signage that informs the public that recycled water is currently being used for irrigation purposes at each irrigation recycled water use facility. Maintenance of this signage is required. The results of this inspection must be reported by the District in its quarterly report.
4. The District shall inspect every month all Best Management Practices (BMPs) in place to prevent contamination of potable water supplies (including groundwater). The results of this inspection and measures taken to maintain and repair these BMPs must be reported by the District in its quarterly report.

5. The District shall inspect the recycled water distribution system annually for cross connections with the potable water supply.
6. The District shall annually pressure test the recycled water distribution system for leaks or drops in pressure.

Operation and Maintenance Monitoring

The District shall record and maintain records of all actions and analytical results necessary to demonstrate compliance with California Department of Public Health conditions identified in the General Permit, and to document any operational problems and maintenance activities with the recycled water treatment facilities, distribution system, and user sites. The District shall submit a brief summary of its findings to the Lahontan Water Board with each quarterly monitoring report. This summary shall discuss the elements listed below.

1. All modifications or additions to the recycled water treatment facilities, distribution systems, and user sites.
2. Test results of all backflow prevention devices at each recycled water use site.
3. The results of cross connection inspections at each authorized recycled water use site.
4. Test results of the District's recycled water distribution system pressure testing.
5. Any non-routine maintenance conducted on the recycled water treatment facilities, distribution system, and user systems.
6. Any major problems occurring to the recycled water treatment facilities, distribution system, and user systems.
7. Calibration results of any recycled water flow measuring devices.

Reporting

General Provisions

1. The District shall comply with the General Permit Monitoring and Reporting Program.
2. The District has submitted to the Water Board a Sampling and Analysis Plan (SAP). The SAP includes a detailed description of procedures and techniques for:
   a. Sample collection, including purging techniques, sampling equipment, and decontamination of sampling equipment;
   b. Sample preservation and shipment;
   c. Analytical procedures;
   d. Chain of custody control; and
   e. Quality assurance/quality control (QAlQC).

Quarterly Reports

Quarterly monitoring reports including the preceding information shall be submitted to Water Board by the first day of the third month following each quarterly monitoring period. (Water Code, Section 13523.1, subd. (b)(4).)

Quarterly monitoring periods are defined as follows:

First Quarter January 1 -March 31

Second Quarter April 1 -June 30
Third Quarter July 1 -September 30
Fourth Quarter October 1 -December 31

Annual Report

The District shall submit an annual report to the Lahontan Water Board with the information listed:

1. Documentation of the District's compliance with the General Permit;
2. The compliance record and the corrective actions taken or planned, which are necessary to bring the District into full compliance with the General Water Recycling Requirements; and
3. The District's time schedule for completing corrective actions needed to achieve compliance.

General Provisions for Monitoring and Reporting

Sampling and Analysis

1. All analyses shall be performed in accordance with the current edition(s) of the following documents:
    a. Standard Methods for the Examination of Water and Wastewater
    b. Methods for Chemical Analysis of Water and Wastes, EPA
2. All analyses shall be performed in a laboratory certified to perform such analyses by the California State Department of Health Services or a laboratory approved by the Regional Board Executive Officer. Specific methods of analysis must be identified on each laboratory report.
3. Any modifications to the above methods to eliminate known interferences shall be reported with the sample results. The methods used shall also be reported. If methods other than EPA-approved methods or Standard Methods are used, the exact methodology must be submitted for review and must be approved by the Regional Board prior to use.
4. The District shall establish chain-of-custody procedures to insure that specific individuals are responsible for sample integrity from commencement of sample collection through delivery to an approved laboratory. Sample collection, storage, and analysis shall be conducted in accordance with an approved Sampling and Analysis Plan (SAP). The most recent version of the approved SAP shall be kept at the facility.
5. The District shall calibrate and perform maintenance procedures on all monitoring instruments and equipment to ensure accuracy of measurements, or shall insure that both activities will be conducted. The calibration of any wastewater flow measuring device shall be recorded and maintained in the operational log book described below.
6. A sample is defined as an individual sample collected in fewer than 15 minutes.
7. A composite sample is defined as a combination of no fewer than eight individual samples obtained over the specified sampling period at equal intervals. The volume of each individual sample shall be proportional to the discharge flow rate at the time of

sampling. The sampling period shall equal the discharge period, or 24 hours, whichever period is shorter.

Operational Requirements

Sample Results

Pursuant to California Water Code Section 13267(b), the District shall maintain all sampling and analytical results including: strip charts; date, exact place, and time of sampling; date analyses were performed; sample collector's name; analyst's name; analytical techniques used; and results of all analyses. Such records shall be retained for a minimum of three years.

This period of retention shall be extended during the course of any unresolved litigation regarding this discharge, or when requested by the Regional Board.

Operational Log

Pursuant to California Water Code Section 13267(b), an operation and maintenance log shall be maintained at the Waste Water Treatment Plant facility. All monitoring and reporting data shall be recorded in a permanent log book.

Reporting

1. For every item where the requirements are not met, the District shall submit a statement of the actions undertaken or proposed which will bring the discharge into full compliance with requirements at the earliest time, and shall submit a timetable for correction.
2. Pursuant to California Water Code Section 13267(b), all sampling and analytical results shall be made available to the Regional Board upon request. Results shall be retained for a minimum of three years. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge, or when requested by the Regional Board.
3. The District shall provide a brief summary of any operational problems and maintenance activities to the Board with each monitoring report. Any modifications or additions to, or any major maintenance conducted on, or any major problems occurring to the wastewater conveyance system, treatment facilities, or disposal facilities shall be included in this summary.
4. Monitoring reports shall be signed by either a principal executive officer, ranking elected official, or other duly authorized employee.
5. Monitoring reports shall also include the following:
    a. Name and telephone number of individual who can answer questions about the report.
    b. The Monitoring and Reporting Program Number.
    c. WDlD Number

Noncompliance

Under Section 13268 of the Water Code, any person failing or refusing to furnish technical or monitoring reports, or falsifying any information provided therein, is guilty of a misdemeanor and may be liable civilly in an amount of up to one thousand dollars ($1,000) for each day of violation under Section 13268 of the Water Code.

Appendix C

Section VI – Trucked Recycled Water Use

Disinfected secondary 2.2 recycled water (or tertiary recycled water) may be used via permitted truck users for the following uses:

- Backfill consolidation around non-potable piping,
- Soil compaction,
- Mixing concrete,
- Dust control on roads and streets,
- Cleaning roads, sidewalks and outdoor work areas, and
- Restricted access (Freeway) landscape irrigation (no food crops, parks & playgrounds, school yards, residential landscaping, etc.)

The trucked recycled water program rules and requirements are covered by a separate document entitled “MCWD Trucked Recycled Water Program Requirements”.

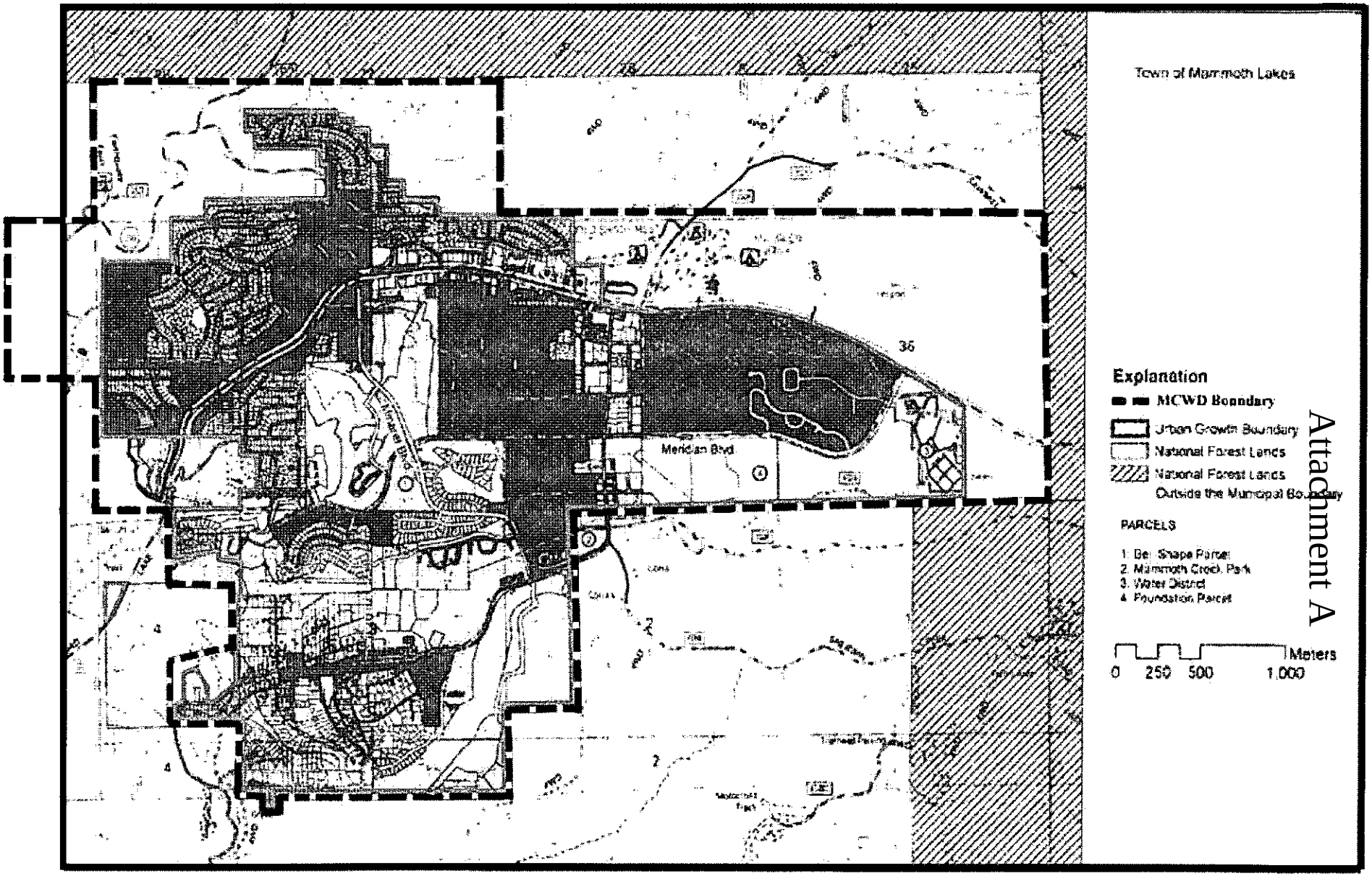


EXHIBIT 2-2

MCWD Service Area

Source: MCWD & Town of Mammoth Lakes Updated Plan, 2005

MCWD PROPOSED RECYCLED WATER PROJECT

MCWD Recycled Water Distribution System
Cross Connection Emergency Response Plan
Mammoth Community Water District Recycled Water Program

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

1. Immediately shut down the reclaimed water supply to the facility.

2. Immediately notify the District by phone. This notification is to be followed by written notice within 24 hours. The written notice should include an explanation of the nature of the cross-connection, date and time discovered, and the steps taken to mitigate the cross-connection(s).

   Mammoth Community Water District 760-934-2596
   P.O. Box 597
   Mammoth Lakes, CA 93546

3. Keep the potable water system pressurized and post "DO NOT DRINK—NO TOMAR" signs at all potable water fixtures and outlets.
4. The District will notify the Mono County Public Health - Environmental Health Division and State Department of Public Health (DPH) of the reported cross connection.
5. Provide bottled water for employees until the potable water system is deemed safe to drink.
6. Collect water samples from the potable water system and perform a 24-hour bacteriological analysis (as instructed by the District). Water samples should be collected from the closest possible point to the cross-connection.
7. Identify the cause and location(s) of backflow and eliminate the cross-connection(s).
8. Conduct a cross-connection test in coordination with the District and the appropriate health department to verify that all cross-connection(s) have been eliminated.
9. Obtain approval from the District and the appropriate health department before returning the reclaimed water system to service.
10. If the bacteriological analysis conducted in Step 6 is positive, flush the potable water system and disinfect by maintaining a chlorine residual of at least 50 mg/L for 24 hours. Otherwise, proceed to Step 13.
11. Flush the potable water system after the 24 hour disinfection period of Step 10 and perform standard low chlorine test and bacteriological analysis.
12. If the results from Step 11 are acceptable, proceed to Step 13. Otherwise, repeat Step 10 and 11.
13. Obtain final approval from the District and the state and/or local city or county health department before removing signs.

Appendix C

Attachment C

MCWD-RWP SERVICE NUMBER

Application For Recycled Water Service

Mammoth Community Water District Recycled Water Program

USE CLASSIFICATION

IRRIGATION ☐ CONSTRUCTION ☐

Property Information

SITE NAME

SITE ADDRESS | CITY | ZIP

SITE FACILITIES MANAGER

Site Owner

NAME | CITY | ZIP

CONTACT NAME | TITLE

ADDRESS | CITY | ZIP

PHONE | FAX | EMAIL

Design Contact

DESIGNER

CONTACT NAME | TITLE

PHONE | FAX | EMAIL

Site Supervisor

☐ ☐

NAME

ORGANIZATION | ADDRESS

CITY | ZIP

PHONE | CELL PHONE | FAX | EMAIL

Application Checklist

DOCUMENTS:	SUBMITTED	APPROVED
ENGINEERING REPORT	☐	☐
OPERATIONS AND MAINTENANCE PLAN	☐	☐
IRRIGATION MANAGEMENT PLAN	☐	☐
O&M STAFF TRAINING VERIFICATION	☐	☐
SITE SIGNAGE PLAN	☐	☐
MONITORING & INSPECTION PLAN	☐	☐
EMERGENCY CROSS-CONNECTION PLAN	☐	☐

DATE SITE SUPERVISOR TRAINING COMPLETED _____

	YES	NO
RETROFIT	☐	☐
NEW DEVELOPMENT	☐	☐
OUTDOOR EATING AREAS / PICNIC TABLES	☐	☐
DRINKING FOUNTAINS	☐	☐
COVERAGE TEST APPROVED	☐	☐
BACKFLOW TEST APPROVED	☐	☐
FINAL SITE INSPECTION APPROVED	☐	☐

NO. OF WELLS WITHIN 100 FEET OF SITE _____

COMMENTS:

By submitting this Application for Recycled Water Use, the applicant agrees to comply with Uniform Statewide Reclamation Criteria and the District's Requirements for Recycled Water Use.

SITE SUPERVISOR SIGNATURE | DATE | PERMIT SERVICE NUMBER ISSUED BY | DATE

Appendix C

Attachment G

MCWD-RWP SERVICE NUMBER

Site Compliance Inspection Report

Mammoth Community Water District Recycled Water Program

INSPECTION TYPE: ☐ INITIAL ☐ ANNUAL ☐ PERIODIC

State Water Resources Control Board Order WQ 2016-0068-DDW requires the Mammoth Community Water District to conduct routine compliance inspections of all Authorized Recycled Water User Sites. The Inspector must immediately notify the Site Inspector of violation(s) identified during inspections and what corrective actions must be taken. Copies of the reports must be maintained on file by the Site Supervisor and the District. If you have questions regarding this mandatory report, please contact the District at (760) 934-2596.

YES	NO	
☐	☐	Are Site Supervisor's maintenance records available and adequate? Are required documents, including Program Rules and Regulations, Irrigation Management Plan, Operations and Maintenance Plan, Cross-Connection Test Reports and Emergency Cross-Connection Response Plan on-site and available to O & M personnel?
☐	☐	Does the Site Supervisor maintain evidence that all O&M staff have received sufficient training in accordance to Section III of the Program Rules and Regulations?
☐	☐	Are advisory signs, labeling and tags in good condition and posted consistent with Department of Public Health (DPH) approved plans to inform public that water is recycled?
☐	☐	Are Best Management Practices in effect at all back-flow prevention devices, pump rooms, exposed piping, valves, hose bibs, pressure reducing stations, points of connections, sprinklers, controllers, surface waters, storage facilities, outdoor eating areas, drinking fountains, etc.
☐	☐	Is there evidence of ponding of recycled water, and/or evidence of mosquitoes breeding within the irrigation area due to ponded water?
☐	☐	Is there evidence of recycled water runoff from the site? If yes, please estimate the volume, and sketch affected area on the back of this sheet.
☐	☐	Is there evidence of recycled water over spay to areas accessible to the public?
☐	☐	Is there an odor of wastewater origin within the irrigation site? If yes, describe apparent source, characterization, direction of travel, and any public use areas or off-site facilities affected by the odor.
☐	☐	Is there evidence of leaks or breaks in the irrigation system pipelines, valves or tubing?
☐	☐	Is the evidence of plugged, broken or otherwise faulty drip irrigation system emitters or spray irrigation sprinklers on the site?
☐	☐	In the past year or since the last site inspection report, have there been any modifications of the piping for the recycled water system? If so, describe modifications below.
☐	☐	Has the designated site Supervisor changed? If so, provide name and training verification of new Site Supervisor below.

What corrective actions are being taken to correct any problems or violations noted above?

Users that fail to initiate corrective action to eliminate violation(s) in a timely manner may be subject to termination of recycled water service. If a violation is believed to constitute a hazard to the public health or threat to water quality, recycled water service may be terminated immediately.

SITE SUPERVISOR SIGNATURE DATE

DISTRICT INSPECTOR SIGNITURE DATE

Appendix C

Attachment H

_____
MCWD-RWP SERVICE NUMBER

Site Inspection Report

Mammoth Community Water District Recycled Water Program

INSPECTION TYPE: ☐ INITIAL ☐ ANNUAL

Mammoth Community Water District Recycled Water Program requires a certified Site Supervisor to complete and submit a Site Inspection Repot annually. Site Supervisors are trained and certified by MCWD. If you have questions regarding training or this mandatory report, please contact the District at (760) 934-2596. Please complete and return this report each year prior to recycled water delivery.

YES	NO	
☐	☐	Are there advisory signs and tags in good condition and posted consistent with Department of Public Health (DPH) approved plans to inform public that water is recycled? If, not describe actions taken to correct:
☐	☐	Is there evidence of recycled water runoff from the site? If yes, please estimate the volume, and sketch affected area on the back of this sheet. Also, describe actions taken to correct:
☐	☐	Is there an odor of wastewater origin within the irrigation site? If yes, describe apparent source, characterization, direction of travel, and any public use areas or off-site facilities affected by the odor. Describe actions taken to correct:
☐	☐	Is there evidence of ponding of recycled water, and/or evidence of mosquitoes breeding within the irrigation area due to ponded water? If yes, describe actions taken to correct:
☐	☐	Is there evidence of leaks or breaks in the irrigation system pipelines, valves or tubing? If yes, describe actions taken to correct:
☐	☐	Is there evidence of plugged, broken or otherwise faulty drip irrigation system emitters or spray irrigation sprinklers on the site? Describe actions taken to correct:
☐	☐	Is there evidence of overspray into areas accessible to the public? If yes, describe actions taken to correct:
☐	☐	In the past year or since the last annual site inspection report, have there been any modifications of the piping for the recycled water system? Describe modifications:

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

SITE SUPERVISOR SIGNATURE _____ DATE OF INSPECTION _____

MAILING ADDRESS _____ CITY STATE _____ ZIP _____

OFFICE PHONE _____ CELL PHONE _____ EMAIL _____

CURRENT OWNER:

CONTACT NAME _____ TITLE _____

COMPANY NAME _____

MAILING ADDRESS _____

CITY _____ STATE _____ ZIP _____

OFFICE PHONE _____ CELL PHONE _____ EMAIL _____

CURRENT FACILITIES / PROPERTY MANAGER:

CONTACT NAME _____ TITLE _____

COMPANY NAME _____

MAILING ADDRESS _____

CITY _____ STATE _____ ZIP _____

OFFICE PHONE _____ CELL PHONE _____ EMAIL _____

Mail or fax forms to Mammoth Community w\Water District, PO Box 597 Mammoth Lakes, CA 93546; Fax 760-934-2143

Appendix C

Reporting Schedule

Attachment K

Mammoth Community Water District Recycled Water Program
P.O. Box 597, 1315 Meridian Boulevard, Mammoth Lakes, CA
Board Order No. R6V-2009-0035; WDID No. 6B260903003

Monitoring and Reporting Program No. R6V-2009-0035 requires the Mammoth Community Water District to submit quarterly, semi-annual and annual reports to the Lahontan Water Board. Quarterly reports shall be submitted on the first day of the third month following each quarterly monitoring period and shall include semi-annual and annual reports as follows:

First Quarter	January 1-March 31	Submittal Due:	June 1
Second Quarter	April 1 – June 30		**September 1 (include semi-annual report)**
Third Quarter	July 1 – September 30		December 1
Fourth Quarter	October 1 – December 31		**March 1 (include semi-annual and annual reports)**

Quarterly Reports shall include:

☐ Daily Report Data:
- Turbidity — NTU
- Total Chlorine Residual — mg/L
- Modal Contact Time — minutes
- CT value — mg-minutes/L
- Total Coliform — MPN/100m

☐ Weekly Report Data:
- Kjeldhahl Nitrogen — mg/L
- Ammonia Nitrogen — mg/L
- Nitrate Nitrogen — mg/L

☐ Monthly Report Data:
- Total Dissolved Solids — mg/L
- Sulfate — mg/L
- Chloride — mg/L
- ☐ Flow Monitoring
- ☐ Agronomic Rate Water Volume
- ☐ Nitrogen Demand / Supply

☐ Quarterly Report Data:
- Total Trihalomethane — ug/L
- n-nitrosodimethylamine — ug/L

☐ Recycled Water Use Monitoring including:
- Total number of sites that received recycled water during the quarter
- List of recycled water use sites, including:
  - Site name
  - Location
  - Name of underlying hydrologic area
  - User name
  - Type of use
  - Site area
  - Date of recycled water use approval
  - Map showing permit area and recycled water use locations

☐ Recycled Water Use Site Inspection Record including:
- Date of Inspection
- Name of Recycled Water Use Site, User Name, Type of Use
- Description of all noted violations
- Date of Compliance
- Description of enforcement action taken, schedule of achieving compliance
- Date of prior compliance inspection

☐ Monthly Signage inspection Reports (for each user)
☐ Monthly Best Management Reports (for each user)
☐ Operation and Maintenance Report including:
- All modifications, additions to the recycled water treatment facilities, distribution systems, and user sites
- Test results of all backflow prevention devices at each recycled water use site
- Results of cross connection inspections at each authorized recycled water use site
- Test results of District's recycled water distribution system pressure testing
- Non-routine maintenance conducted on the recycled water treatment facilities, distribution system and user systems
- Major problems occurring to the recycled water treatment facilities, distribution system and user systems
- Calibration results of any recycled water flow measuring devices

☐ Semi-Annual Report Data
- ☐ Priority Pollutants (excluding asbestos)
- ☐ For municipal supply wells within half-mile of recycled water user site:
  - CDPH water supply monitoring results
  - Groundwater elevations

☐ Annual Report Data
- ☐ Documentation of District's compliance with Board Order
- ☐ Compliance record and corrective actions schedule to bring District in full compliance with Master Permit
- ☐ District's time schedule for completing corrective action
- ☐ Inspection Schedule for all recycled water use facilities

REPORT SUBMITTAL

☐ QUARTERLY
☐ SEMI-ANNUAL
☐ ANNUAL

REPORTING MONTHS: _____

SUBMITTAL DUE DATE: _____

SUBMITTED BY: _____

_____
(PRINT NAME)

SUBMITTAL DATE: _____

REPORT COMMENTS:

Appendix D

(Trucked Recycled Water Program Requirements)

Appendix D

MCWD Trucked Recycled Water Program Requirements

Mammoth Community Water District (MCWD) produces and distributes Title 22 disinfected secondary 2.2 treated recycled water under the authority of the State Water Quality Resources Control Board Order WQ 2016-0068-DDW (General Use Permit).

The General Use Permit authorizes trucked recycled water use for Users who agree to comply with state requirements for recycled water use and who have obtained a Trucked Recycled Water Use Permit from MCWD.

Owners and operators of tanker trucks and truck trailers are eligible to apply for a Trucked Recycled Water Use Permit. A truck owner or truck operator with a valid Trucked Recycled Water Use Permit is a recycled water "User."

The process for obtaining a permit for trucked recycled water use is outlined in Table 1 on Page 4 of these Requirements. A Trucked Recycled Water Use Permit does not entitle a User to a specific quantity of recycled water. Supply of trucked recycled water from the Wastewater Treatment Plant (WWTP) is subject to availability as determined by MCWD.

General Program Requirements

1. **MCWD's recycled water may be used only within MCWD's recycled water service area.** A map of MCWD's recycled water service area is shown on Page 5 of these Guidelines.
2. Recycled water may be transported only by tank trucks or truck trailers in compliance with requirements of California Code of Regulations Title 17 and 22.
3. Individual owners of tanker trucks and truck trailers must obtain a "Trucked Recycled Water Use Permit" to be authorized as a recycled water User. A User with a valid permit may access the recycled water truck fill station at 1315 Meridian Boulevard during regular business hours.
4. Each truck driver is required to carry a copy of a valid "Trucked Recycled Water Use Permit" and make the permit available for inspection upon request.
5. Trucked Recycled Water Use Permit applications may be obtained from the MCWD Operations Superintendent by calling 760-934-2596 ext. 230. Trucked Recycled Water Use Permits expire on December 31 of each year and must be renewed annually.
6. Information required on the Trucked Recycled Water Use Permit application includes:
    - Name of trucking company or operator;
    - Application method (tank hose or spray);
    - Type of use (soil compaction, dust suppression, landscape irrigation); and,
    - Identification of an emergency contact person (Recycled Water Supervisor*).

    **The emergency contact person is the designated Recycled Water Supervisor for the User. This person will be contacted by MCWD when questions arise pertaining to adherence to the recycled water use regulations. The Recycled Water Supervisor must have knowledge of all truck activities and the specific uses of recycled water by each truck. This person must also be available to respond to emergencies or calls for assistance from MCWD.*
7. Trucked Recycled Water Users must transport and distribute recycled water according to the conditions specified by the MCWD Trucked Recycled Water Use Permit and Program Guidelines.
8. The Trucked Recycled Water User is responsible for compliance with all requirements and restrictions specified by the California Department of Public Health, California Code of Regulations Titles 17 and 22. Truck storage tanks for the storage and transport of recycled water must comply with all federal, state of California and local requirements for the storage and transport of water that is to be reused.

9. All trucks that transport recycled water must have a minimum of three (3) purple signs no less than 18 inches wide and 12 inches tall. These signs must be attached to each side of the truck tank as well as to the back. The signs must say "Reclaimed Water – Do Not Drink" in both English and Spanish. Each sign must display an international symbol for "Do Not Drink."

10. Tank trucks and truck trailers must be equipped with:

    - A 2.5" fire type connection with hose;
    - A state-compliant air gap on the fill pipe;
    - Water-tight valves and fittings;
    - Appropriate signage; and,
    - Trucked Recycled Water Use Permit.

11. For each pick up of recycled water at the WWTP, Users are required to enter information into the Trucked Recycled Water Release Log. Logged information includes the truck license number, how much water was collected, the address of the site where recycled water will be applied and the quantity applied at each site.

12. Improper use of recycled water, as well as erroneous entries in the Recycled Water Release Log, could result in repeal of the Trucked Recycled Water Use Permit.

13. MCWD will verify the information provided in the log through random phone calls to the Recycled Water Supervisor or by unannounced site inspections.

14. In the event of an emergency concerning the truck fill station pipes or valves, (spillage, leaks, etc.), the truck driver needs to call MCWD's front desk at 760-934-2596. Emergency calls after regular business hours will be forwarded to on-call personnel.

15. Prior to recycled water delivery to a site, the User must confirm that any site with a potable water service connection has an approved backflow device with a valid test report on file.

16. The User must notify workers and/or the public when recycled water is used at a site and tell them that they are not to drink recycled water or use it for food preparation.

17. Trucked Recycled Water Users are required to install, maintain, and keep in place while using recycled water adequate purple signage to inform the public of on-site recycled water use. Typical locations for signage would be at site entrances. Signs must be no less than 4 inches wide by 8 inches tall and include the following wording: "Recycled Water – Do Not Drink" in English and in Spanish. Each sign must display an international symbol for "Do Not Drink." Signs must be placed no further than 1,000 feet apart.

18. Trucked Recycled Water Users shall permit MCWD or its authorized agents to access and inspect recycled water use sites, including facilities, equipment, practices and operations regulated by the Trucked Recycled Water Program.

19. Periodic inspections of the distribution sites will be performed by MCWD personnel to verify compliance with User requirements. A sample site inspection form is provided on Page 6 of these Guidelines.

20. MCWD reserves the right to discontinue supplying recycled water to owners and operators who violate the conditions of the Trucked Recycled Water Use Permit.

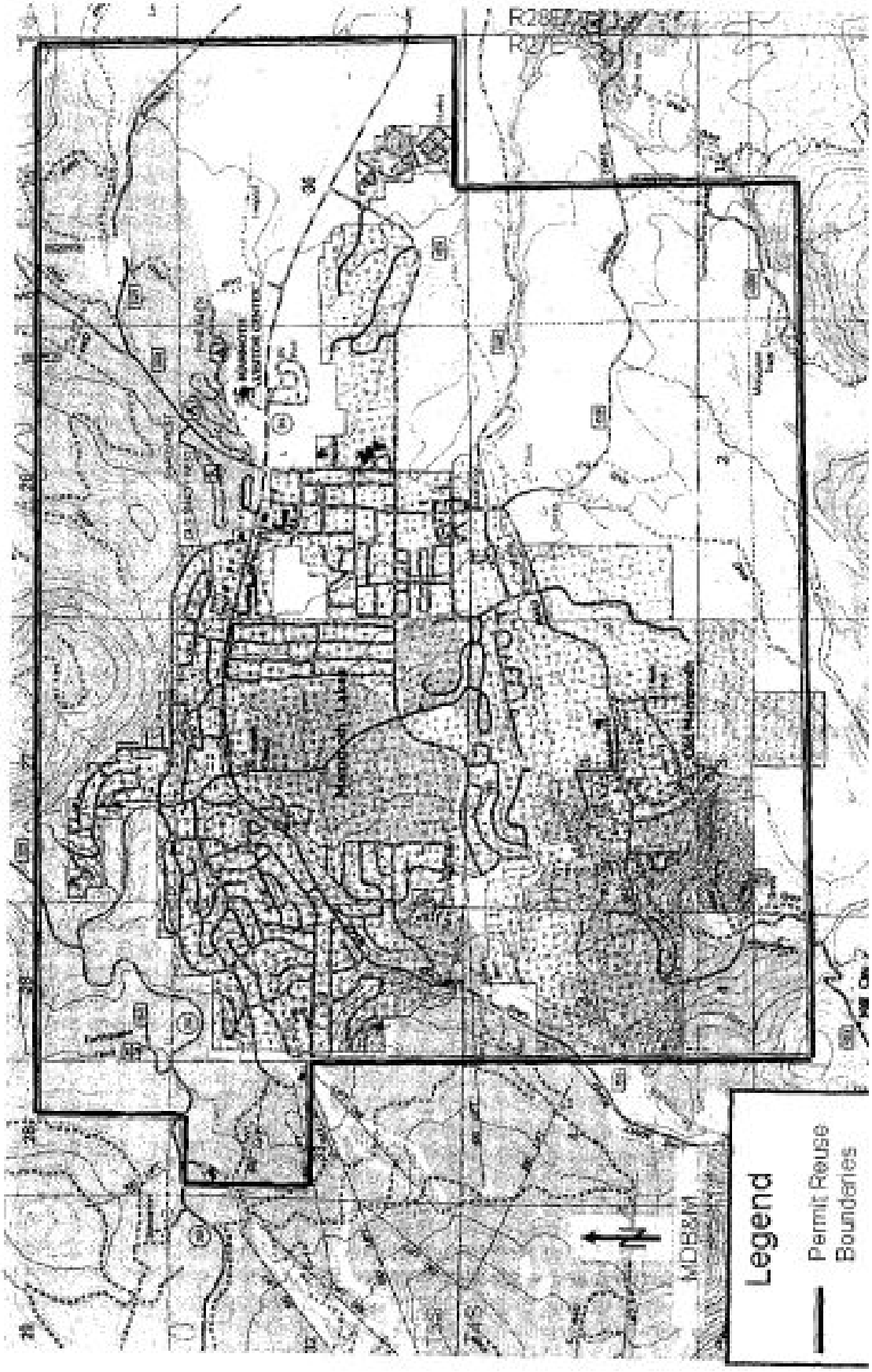
Trucked Recycled Water Use Requirements

1. Recycled water shall not be used as a domestic or animal water supply.
2. Recycled water must not be introduced into any permanent piping system and no connection shall be made between the truck tank and any part of a potable water system.
3. Prior to recycled water delivery to a site, the User must confirm that any site with a potable water service connection has an approved backflow device with a valid test report on file.
4. Precautions should be taken to avoid food coming in contact with recycled water while the use site is still wet. Recycled water Users should apply hand sanitizer or wash their hands with soap and potable water after working with recycled water and especially before eating or smoking.
5. The treatment, storage, distribution, or reuse of recycled water shall not create a nuisance as defined in Section 13050 of the California Water Code.
6. Recycled water shall not be applied where it could contact or enter passing vehicles, buildings, areas where food is handled or eaten, or storm drains.
7. No recycled water shall be applied to irrigation areas during periods when soils are saturated.
8. Recycled water shall not be allowed to escape from the designated use area(s) as surface flow that would either pond and/or enter waters of the state. Misuse of the recycled water that results in an unauthorized discharge to Mammoth Creek could result in loss of recycled water privileges and/or fines by the State Water Resources Control Board.
9. Recycled water shall not be allowed to escape from the designated use area(s) as an airborne spray that would visibly wet vegetation or any other surface. Spray or runoff shall not enter a dwelling or food handling facility, and shall not contact any drinking water fountain, unless specifically protected with a shielding device. The spray or runoff shall not enter any place where the public may be present during irrigation.
10. Recycled water shall not be applied in groundwater recharge and wellhead protection areas (so designated by local agencies). No distribution of recycled water shall take place within 50 feet of any domestic water supply well. No impoundment of recycled water shall occur within 100 feet of a domestic water supply well.
11. The use of recycled water shall not cause rising groundwater discharging to surface waters to impair surface water quality objectives or beneficial uses.
12. The incidental discharge of recycled water to waters of the State shall not unreasonably affect present and anticipated beneficial uses of water, and not result in water quality less than that prescribed in water quality control plans or policies.
13. No recycled water shall be discharged from treatment facilities, irrigation holding tanks, storage ponds, or other containment, other than for permitted reuse in accordance with State Water Resources Control Board Order WQ 2016-0068-DDW.
14. All above ground equipment, including pumps, piping, storage reservoirs, and valves, which may at any time contain recycled water shall be adequately and clearly identified with appropriate warning signs. Purple irrigation pipe shall be used for all recycled pipe installations. The User shall make all necessary provisions to inform the public that the liquid being distributed is recycled water and is unfit for human consumption. Signs must be of a size no less than 4 inches high by 8 inches wide that include the following wording: “RECYCLED WATER – DO NOT DRINK” and display an international symbol.
15. All recycled water storage ponds shall be adequately protected from erosion, washout, and flooding from a 24-hour rainfall event having a predicted frequency of once in 20 years.

Table 1. Permit Process for Trucked Recycled Water Use

Process of Issuing and Maintaining a Trucked Recycled Water Use Permit	**Recycled Water Program Document** *and/or Actions Required*	**Responsible Entity**
Step 1 – Request a copy of the MCWD Trucked Recycled Water Program Requirements and Use Permit Application. Apply for a Trucked Recycled Water Use Permit	**Trucked Recycled Water Program Requirements** *Contact the MCWD Operations Superintendent at 760-934-2596 ext. 230. Provide information to ensure User will comply with MCWD and State Requirements for trucked recycled water use*	Truck Owner/Operator
Step 2 – Issue a Trucked Recycled Water Use Permit (Dec. 31 expiration)	**Trucked Recycled Water Use Permit** *If all information is verified, issue final numbered permit*	MCWD
Step 3 – Permitted Users may access MCWD's recycled water pump station during regular business hours. **(NOTE: Recycled water is not guaranteed to be available. Availability is subject to water quality conditions and production limitations)**	**Trucked Recycled Water Release Log** *Complete a log entry at the pump station every time recycled water is collected. Carry a copy of the permit and User Guidelines*	Truck Owner/Operator
Step 4 – Follow regulations for recycled water transport and distribution	**Trucked Recycled Water Program Requirements**	Truck Owner/Operator
Step 5 – Conduct site inspections to verify adherence to recycled water use regulations	**Site Compliance Inspection Report** *Confirm application site was properly posted in the release log; Confirm BMPs in effect; Confirm operators are following User Requirements.Unannounced site visits may be conducted at any time*	MCWD
Step 6 – Renew permit annually	**Trucked Recycled Water Program Requirements**	Truck Owner/Operator MCWD

Permit Area Map



Trucked Recycled Water Program
Site Compliance Inspection Report

California State Water Resources Control Board Order WQ 2016-0068-DDW requires the Mammoth Community Water District to conduct routine compliance inspections of all Authorized Recycled Water User Sites. The MCWD Inspector must immediately notify the Recycled Water User of violation(s) identified during inspections and what corrective actions must be taken. If you have questions regarding this mandatory report, please contact the District at (760) 934-2596 ext. 230.

INSPECTION TYPE: ☐ INITIAL ☐ PERIODIC **TRWP USE PERMIT NO.:** _____

	YES	NO	
A	☐	☐	Are advisory signs, labeling and tags in good condition and posted consistent with TRWP Requirements to inform the public that recycled water is in use?
B	☐	☐	Have Use site staff received sufficient training in accordance to the TRWP Requirements?
C	☐	☐	If the Use area has a potable water service connection, is there an approved backflow device with a valid test report on file?
D	☐	☐	Are Best Management Practices in effect at all back-flow prevention devices, exposed piping, valves, hose bibs, points of connections, sprinklers, controllers, surface waters, storage facilities, outdoor eating areas, drinking fountains, etc. ?
E	☐	☐	Is there evidence of leaks or breaks in any Use area pipelines, irrigation system pipelines, valves or tubing?
F	☐	☐	Is there evidence of ponding of recycled water, and/or evidence of mosquitoes breeding within the Use area due to ponded water?
G	☐	☐	Is there evidence of recycled water runoff from the Use area? If yes, please estimate the volume, and sketch affected area on the back of this sheet.
H	☐	☐	Is there evidence of recycled water overspray to areas accessible to the public?
I	☐	☐	Is there an odor of wastewater origin within the Use area? If yes, describe apparent source, characterization, direction of travel, and any public use areas or off-site facilities affected by the odor.
J	☐	☐	Has the designated Responsible Person changed? If so, provide name and training verification of new Responsible Person below.

What corrective actions are being taken to correct any problems or violations noted above?

_____

_____

_____

_____

Users who fail to initiate corrective action to eliminate violation(s) in a timely manner may be subject to termination of recycled water service. If a violation is believed to constitute a hazard to the public health or threat to water quality, recycled water service may be terminated immediately.

AUTHORIZED USER SIGNATURE _____ DATE _____ TRWP INSPECTOR SIGNITURE _____ DATE _____

Truck Program SITE INSPECTION FORM Updated May 2021

1 of 1

MCWD Trucked Recycled Water Program
Trucked Recycled Water Use Permit

This permit must be available for inspection at all times. The User must keep a copy with the tanker truck and be prepared to present it to MCWD personnel for water pick-ups. The User must adhere to State Water Resources Control Board Order WQ 2016-0068-DDW, CCR Titles 17 and 22, and the MCWD Trucked Recycled Water Program Requirements to ensure proper use of the recycled water.

For Recycled Water Use in the MCWD Recycled Water Service Area Only

(For MCWD Use)
Permit Number: _____ Effective Date of Permit: _____ Expiration Date: _____

1. User Information

Name of User: _____
(Owner or Operator of the Truck(s) that Transport Recycled Water)

Address _____ City/State/Zip Code _____

Contact Person: _____ Phone No.:_____

Recycled Water Supervisor: _____

Phone Number (1) : _____ Phone Number (2) : _____

2. Approved Type of Use (Check all that apply)

Application Method: ☐ Tank Release Valve or Hose ☐ Tank Spray

Use of Recycled Water: ☐ Backfill Consolidation around Non-Potable Piping
☐ Construction Site Soil Compaction
☐ Mixing Concrete
☐ Construction Site Dust Control
☐ Cleaning Roads, Sidewalks and Outdoor Work Areas
☐ Restricted Access (Freeway) Landscape Irrigation
☐ Other: _____

Trucked Recycled Water is <u>not</u> approved for use in:

- Backfill Consolidation around Potable Piping
- Storm Drain Flushing
- Irrigation of Food Crops, Parks and Playgrounds, School Yards, Residential Landscaping, etc.

<u>All uses must be within the MCWD Recycled Water Service Area.</u>

3. No Entitlement to Recycled Water / Supply Subject to Availability

This Permit does not entitle User to a specific quantity of recycled water. Supply of recycled water to User is subject to availability as determined by MCWD and to any federal, state or local requirements which limit supply or availability. To the extent recycled water is available, supply shall be on a first-come, first-served basis. Entities with Recycled Water Agreements with MCWD shall have priority over User in supply of recycled water.

4. Permit Validity Period/Termination

This Permit shall be valid from the date of issuance until the expiration date noted on Page 1 unless it is terminated as provided below. This Permit may be terminated by the District if the District determines the User has violated any of the District's Trucked Recycled Water Guidelines, or the Regional Water Quality Control Board, or Department of Public Health Requirements, or any of the other requirements of this Permit. Termination shall be effective immediately upon notification by District by phone, fax, email or mail.

5. Permit Non-Transferable

This Permit is issued only to User as specified in Section 1 of this Permit above; it may not be transferred to any other entity or person.

6. Recycled Water Use Requirements

The District's Trucked Recycled Water Program Requirements ("Requirements"), which contain requirements and restrictions for storage, transportation and use of recycled water, are attached to this Permit and incorporated herein by this reference. User agrees to abide by all of the requirements and restrictions contained in the Requirements and the California Regional Water Quality Control Board/Department of Public Health recycled water requirements.

It is the responsibility of the User to distribute recycled water in a way that assures compliance at all times with current regulations. User has identified the person above as the Recycled Water Supervisor who is responsible for implementing worker/public protection requirements specified in the Guidelines and the California Regional Water Quality Control Board/Department of Public Health recycled water requirements at each site (e.g., that humans are not to drink recycled water or use it for preparing food, etc.).

In the event there is a recycled water spill, questions on compliance and requirements, or User notices a use not in accordance with requirements stated herein, User shall contact the Mammoth Community Water District immediately at 760-934-2596 ext. 230.

Certification and Indemnification

I certify that I am the authorized agent for the User cited in this application and that I have the authority to bind the User to the requirements of this Permit and Program. I hereby certify under penalty of perjury that the information provided in this permit application and in any attachment is true and correct to the best of my knowledge. I also certify that I have read the applicable recycled water rules and regulations of the State Water Resources Control Board and the California Department of Public Health and the District Trucked Recycled Water Program Guidelines and agree to abide by them.

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

Name of User: _____

Signature: _____

Title: _____ Date: _____

.....

MCWD Recycled Water Program Representative: _____

Signature: _____

Title: _____ Date: _____

This permit is subject to all prohibitions, specifications, and provisions of State Water Resources Control Board Order WQ 2016-0068-DDW.

Appendix E

(Cross Connection Control Program)

Appendix E

MCWD Recycled Water Distribution System
Cross Connection Emergency Response Plan

Mammoth Community Water District Recycled Water Program

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

1. Immediately shut down the reclaimed water supply to the facility.

2. Immediately notify the District by phone. This notification is to be followed by written notice within 24 hours. The written notice should include an explanation of the nature of the cross-connection, date and time discovered, and the steps taken to mitigate the cross-connection(s).

   Mammoth Community Water District 760-934-2596
   P.O. Box 597
   Mammoth Lakes, CA 93546

3. Keep the potable water system pressurized and post "DO NOT DRINK—NO TOMAR" signs at all potable water fixtures and outlets.
4. The District will notify the Mono County Public Health - Environmental Health Division and State Department of Public Health (DPH) of the reported cross connection.
5. Provide bottled water for employees until the potable water system is deemed safe to drink.
6. Collect water samples from the potable water system and perform a 24-hour bacteriological analysis (as instructed by the District). Water samples should be collected from the closest possible point to the cross-connection.
7. Identify the cause and location(s) of backflow and eliminate the cross-connection(s).
8. Conduct a cross-connection test in coordination with the District and the appropriate health department to verify that all cross-connection(s) have been eliminated.
9. Obtain approval from the District and the appropriate health department before returning the reclaimed water system to service.
10. If the bacteriological analysis conducted in Step 6 is positive, flush the potable water system and disinfect by maintaining a chlorine residual of at least 50 mg/L for 24 hours. Otherwise, proceed to Step 13.
11. Flush the potable water system after the 24 hour disinfection period of Step 10 and perform standard low chlorine test and bacteriological analysis.
12. If the results from Step 11 are acceptable, proceed to Step 13. Otherwise, repeat Step 10 and 11.
13. Obtain final approval from the District and the state and/or local city or county health department before removing signs.

Appendix E

MCWD-RWP SERVICE NUMBER

Cross-Connection Test Notification

Mammoth Community Water District Recycled Water Program
P.O. Box 597
Mammoth Lakes, CA 93546
Phone: 760-934-2596 FAX: 760-934-2143

48-Hour Minimum Notice

Owner's Representative:

Name: _____

Company Name: _____

Phone: _____

Fax: _____

Cell Phone: _____

Date: _____

Items to be completed By Owner Representative

Site name: _____

Site Address: _____

Proposed Test Date and Time: _____

Notices sent to:

☐ MCWD-RWP
John Pedersen FAX 760-934-2143

☐ Owner: _____
NAME / PHONE

☐ SITE SUPERVISOR _____
NAME / PHONE

☐ CROSS CONNECTION SPECIALIST: _____
NAME / PHONE

☐ AFFECTED WATER USERS

Items to be completed by Cross-Connection Specialist:

Company Name: _____

Company Address: _____

Specialist Name: _____

Specialist Certification No. : _____

Phone: _____ Cell Phone: _____ Fax: _____

☐ Specialist's information faxed to Owner's Representative

☐ Specialist's Information faxed to John Pedersen, MCWD-RWP

Appendix E

MCWD-RWP SERVICE NUMBER _____

Cross-Connection Test Checklist

Mammoth Community Water District Recycled Water Program

Site Name: _____

Site Address: _____

Date(s) Test Conducted: _____

Attendees at Test:

NAME	COMPANY	PHONE NUMBER

Pre-Test Monitoring:

☐ 24- hour prior notice to potable water users of service shut down

☐ Approved Backflow Prevention Device at Irrigation System Point of Connection

Irrigation System pressurized with stations running at normal schedule: YES ☐ NO ☐

Station Schedule: (As an Attachment) _____

Any Noted Unauthorized Connections or Uses of Irrigation Water System: YES ☐ NO ☐

Potable Water System:

Type of Pressure Monitoring Equipment	Location of Pressure Monitoring Equipment	Normal Operating Pressure

Recycled Water System:

Type of Pressure Monitoring Equipment	Location of Pressure Monitoring Equipment	Normal Operating Pressure

Appendix E

MCWD-RWP SERVICE NUMBER

Cross-Connection Test Checklist

Mammoth Community Water District Recycled Water Program

Pre-Test Monitoring (con't):

Spikes or Dips in Potable Water System Pressure Record: YES ☐ NO ☐

Spikes or Dips in Recycled Water System Pressure Record: YES ☐ NO ☐

If yes, explain before proceeding: _____

Pressure Test--Recycled Water System:

☐ Potable Water Systems left at Normal Operating Pressure

☐ Minimum 1-hour pre-test shutdown of Recycled Water System at Irrigation Pump Valve (typ. @ Meter)

☐ Depressurize Recycled Water System to 30 psi at Point of Test Location

☐ Recycled Water System Pressure held at 30 until first irrigation station activated

☐ All Irrigation stations activated for minimum 2 minutes per station

☐ Adjacent site irrigation systems activated during recycled water system shutdown

Spikes or Dips in Recycled Water System Pressure Record: YES ☐ NO ☐

Flows in Recycled Water System Noted: YES ☐ NO ☐

If yes, explain before proceeding: _____

Pressure Test--Potable Water System:

☐ Recycled Water System returned to and left at Normal Operating Pressure

☐ Close all points of potable water use

☐ Shutdown Potable Water Systems at all RPP Devices using shutoff Valve #1 (Record by Attachment)

☐ Depressurize Potable Water System to 30 psi at Points of Connection

☐ Run each recycled water irrigation station at least once during potable water shutdown

Spikes or Dips in Potable Water System Pressure Record: YES ☐ NO ☐

Flows in Potable Water System Noted: YES ☐ NO ☐

If yes, explain before proceeding: _____

RPP valve field test required to ensure proper operation:

☐ Serial No. 2545671 Maintenance Building Service

☐ Serial No. GH323 Domestic Supply to Club House

☐ Serial No. 683258 Comfort Station

☐ Serial No. 327GH Potable Irrigation to Club House

Appendix E

MCWD-RWP SERVICE NUMBER

Cross-Connection Test Checklist

Mammoth Community Water District Recycled Water Program

Site Name: _____

Site Address: _____

Date(s) Test Conducted: _____

I, _____, AWWA Cross-Connection Specialist # _____ after carefully reviewing the systems and conducting the test as per MCWD-RWP Rules and Regulations, find no indication of a cross-connection between the Recycled Water system and the Potable system at the above indicated location:

Items to be completed by Cross-Connection Specialist:

COMPANY NAME: _____

COMPANY ADDRESS: _____

SIGNED: _____

DATE TIME

PHONE: _____ CELL PHONE: _____ FAX: _____