

DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

Water Quality Control Commission

REGULATION NO. 84 - RECLAIMED WATER CONTROL REGULATION

5 CCR 1002-84

[Editor's Notes follow the text of the rules at the end of this CCR Document.]

84.1 AUTHORITY AND MATERIALS INCORPORATED BY REFERENCE 2

84.2 PURPOSE 2

84.3 SEVERABILITY 2

84.4 APPLICABILITY 2

84.5 DEFINITIONS 2

84.6 TREATER APPLICATION, TREATER AUTHORIZATION ISSUANCE AND TREATER RESPONSIBILITIES 8

84.7 RECLAIMED WATER CATEGORIES AND STANDARDS 16

84.8 ADDITIONAL FILTRATION AND DISINFECTION REQUIREMENTS FOR USE OF RECLAIMED WATER PRODUCED FROM CENTRALIZED SYSTEMS (CATEGORY 3 PLUS) 17

84.9 USER APPLICATION AND SITE MANAGEMENT PLAN (UASMP) AND USER AUTHORIZATION ISSUANCE 18

84.10 AUTHORIZED RECLAIMED WATER USES AND IMPLEMENTATION REQUIREMENTS 22

84.11 MONITORING, RECORD KEEPING AND REPORTING 42

84.12 VARIANCES 43

84.13 ENFORCEMENT 44

84.14 CERTIFICATION 44

84.15 PROPOSALS TO AUTHORIZE NEW USES 45

84.16 ADDITIONAL REQUIREMENTS FOR LOCALIZED RECLAIMED WATER TREATMENT SYSTEMS 50

84.1 AUTHORITY AND MATERIALS INCORPORATED BY REFERENCE

- (A) This regulation is promulgated pursuant to the Colorado Water Quality Control Act (CWQCA) section 25-8-101 through 25-8-702, C.R.S. In particular, it is promulgated under sections 25-8-202, 25-8-205, and 25-8-205.8, C.R.S.
- (B) Materials Incorporated by Reference
- (1) Any state regulation incorporated by reference is available at no cost online at sos.state.co.us.
 - (2) Any state statute incorporated by reference is available at no cost online in the Colorado Revised Statutes (CRS) at <https://leg.colorado.gov/agencies/office-legislative-legal-services/colorado-revised-statutes>.
 - (3) All other materials incorporated by reference may be examined at any state publications depository library or the Department at:

Colorado Department of Public Health and Environment Water Quality Control Division
4300 Cherry Creek Drive South Denver, Colorado 80246-1530 (303) 692-3500.

84.2 PURPOSE

The purpose of this regulation is to establish requirements, prohibitions, standards and concentration limits for the use of reclaimed water to protect public health and the environment while encouraging the use of reclaimed water.

84.3 SEVERABILITY

The provisions of this regulation are severable, and if any provisions or the application of the provisions to any circumstances is held invalid, the application of such provision to other circumstances, and the remainder of this regulation shall not be affected thereby.

84.4 APPLICABILITY

This regulation applies to the use of reclaimed water treated by centralized reclaimed water treatment systems and localized reclaimed water treatment systems for the Authorized Reclaimed Water Uses listed in section 84.10, Table A of this regulation (industrial, landscape irrigation, commercial, fire protection, agricultural irrigation and toilet and urinal flushing). Reclaimed water that is used or provided for use by a Treater or User for any other purpose that is not listed as an authorized use is prohibited and a violation of this regulation. Recreational uses of reclaimed water are strictly prohibited (e.g. swimming, dog swimming, fishing, boating, stand up paddle boarding, etc.) This regulation does not apply to wastewater that has been treated and released to state waters prior to subsequent use or to wastewater that has been treated and used at a domestic wastewater treatment plant site for landscape irrigation or process uses. Treaters and Users that have been granted a variance from provisions of this regulation, or have additional requirements may have different conditions that are specified in their Treater and User Authorizations. This regulation applies to individual Treaters and Users, as defined below.

84.5 DEFINITIONS

The following definitions shall apply:

- (1) Agricultural Irrigation means use of reclaimed water for irrigation of crops and trees, including Non-food Crop Irrigation and Silviculture, Non-Commercial Food Crop Growing Operation,

- Commercial Food Crop Growing Operation, Resident-Controlled Food Crop Irrigation and Edible and Non-Edible hemp.
- (2) Agronomic Rate means the rate of application of reclaimed water and associated nutrients to plants that is necessary to satisfy the plants' nutritional and watering requirements while strictly minimizing the amount of nutrients that run off to surface waters or which pass below the root zone of the plants.
 - (3) Automated Vehicle Washing means the cleaning of vehicles and associated equipment, such as trailers, where automated equipment is used to apply spray water, cleaning products, and/or rinse water, where there is no public exposure to reclaimed water under normal operations and only limited and controlled contact with reclaimed water by trained workers.
 - (4) Backflow Prevention Assembly has the same meaning as the term “backflow prevention assembly” as defined in Colorado Primary Drinking Water Regulations 5 CCR 1002-11 (Regulation #11).
 - (5) Backflow Prevention Method has the same meaning as the term “backflow prevention method” as defined in Colorado Primary Drinking Water Regulations 5 CCR 1002-11 (Regulation #11).
 - (6) Bag Filters means pressure-driven separation devices that remove particulate matter larger than 1 micrometer using an engineered porous filtration media. They are typically constructed of a non-rigid, fabric filtration media housed in a pressure vessel in which the direction of flow is from the inside of the bag to the outside.
 - (7) Cartridge Filters means pressure-driven separation devices that remove particulate matter larger than 1 micrometer using an engineered porous filtration media. They are typically constructed as rigid or semi-rigid, self-supporting filter elements housed in pressure vessels in which flow is from the outside of the cartridge to the inside.
 - (8) Centralized reclaimed water treatment system or Centralized System means a domestic wastewater treatment works that receives domestic wastewater from a diverse service area for treatment to produce reclaimed water for beneficial use where the service area has meaningful inputs from industrial or other diluting sources.
 - (9) Certified Cross-Connection Control Technician has the same meaning as the term “certified cross-connection control technician” as defined in Colorado Primary Drinking water Regulations 5 CCR 1002-11 (Regulation #11).
 - (10) Certified Operator has the same meaning as the term “certified operator” as defined in Water and Wastewater Facility Operators Certification Requirements 5 CCR 1003-2 (Regulation #100).
 - (11) Commercial Food Crop Growing Operation means a “covered farm” under the Rules Pertaining to the Administration and Enforcement of the Produce Safety Act, 8 CCR 1202-17.
 - (12) Commercial Laundry means a facility that uses water to clean clothing and other textile products where only laundry workers operate the washing machines and cleaning equipment, where there is no public exposure to reclaimed water under normal operations and only limited and controlled contact with reclaimed water by trained workers.
 - (13) Conventional Filtration means a series of processes including coagulation, flocculation, sedimentation (or equivalent form of clarification), and granular media filtration.
 - (14) Cultivator means any individual or individuals that are regularly working with irrigated crops, irrigation and/or soils that are irrigated with reclaimed water.

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- (15) Direct Filtration means a series of processes including coagulation and granular media filtration but excluding sedimentation.
- (16) Division means the Water Quality Control Division of the Colorado Department of Public Health and Environment.
- (17) Edible Hemp means industrial hemp seeds, oils, flowers and other hemp materials used to make edible products, dermal products, and internal use products for human and animal consumption.
- (18) Evaporative Industrial Processes means the use of water in an industrial process where the benefit of such use requires the evaporation of water, requiring additional make-up water, where there is no public exposure to reclaimed water under normal operations and only limited and controlled contact with reclaimed water by trained workers.
- (19) Fire Protection - Nonresidential means firefighting activities where water is made available at fire hydrants, from fire trucks, and in fire sprinkler and interior standpipe systems in commercial/industrial buildings.
- (20) Fire Protection - Residential means firefighting activities where water is made available at fire hydrants, from fire trucks, and in fire sprinkler and interior standpipe systems at any residential structure where the occupants do not have access to the plumbing for maintenance and repair.
- (21) Flood and Sheet Irrigation means irrigation whereby water is delivered to a field by ditch, pipe or some other means and flows over the ground through the crop.
- (22) Implementation Requirements means mandated practices, measures and conditions that shall be implemented by Users as defined in section 84.10 for authorized uses of reclaimed water, and for which Treater shall ensure, to the maximum extent practicable, that Users adhere to when using reclaimed water.
- (23) Industrial Hemp means a plant of the genus cannabis and any part of the plant, whether growing or not, containing delta-9 tetrahydrocannabinol concentration of no more than three-tenths of one percent on a dry weight basis (HB-35-61-101(7)17).
- (24) Irrigation System means the facilities, piping and other equipment used for landscape and agricultural irrigation.
- (25) Landscape Irrigation means irrigation of areas of grass, trees, and other vegetation that are accessible to the public, including, but not limited to, parks, greenbelts, golf courses, and common areas at apartments, townhouses, commercial/business parks, and other similar complexes.
- (26) Lay-flat hose means an industrial, light weight, heavy duty, flexible hose with supporting fabric built into the walls, which lies flat when empty which is used to transfer large volumes of liquid under pressure. Numerous lengths of hose may be connected using fittings that produce leak-free connections. Lay-flat hoses used to convey reclaimed water must be selected, designed, installed, implemented and maintained in accordance with best industry practices appropriate for the system and conditions present and the manufacturer's specifications (including installation and implementation specifications) and to comply with the requirements in Regulation 84.
- (27) Legally Responsible Individual means a legal representative listed in the User Application and Site Management Plan and User Authorization and/or Treater's Application and Authorization that has authority to make legally binding commitments for the "User" or the "Treater."
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- (28) Localized Reclaimed Water Treatment System or Localized System means a domestic wastewater treatment works that receives domestic wastewater from a single building, multiple buildings within a single property or area bounded by dedicated streets or ways, or a district designated by a City or County for treatment to produce reclaimed water for beneficial use where the source water does not have meaningful inputs from industrial or other diluting sources.
- (29) Management User means the legally responsible individual that manages a Resident-Controlled Food Crop Irrigation site that is responsible for educating residents, and, shall ensure, to the maximum extent practicable, that residents attain and maintain compliance with Regulation 84. The Management User has legal ability (regulation, ordinance, contract, or other acceptable mechanism) to have reclaimed water service terminated to a resident if the resident fails to comply with Regulation 84. A Management User can be a Treater.
- (30) Manual Non-Public Vehicle Washing means the cleaning of vehicles and associated equipment, such as trailers, where any or all of the following are applied manually in the cleaning process: spray water, cleaning products, and/or rinse water; where there is no public access to the vehicle washing facility and only limited and controlled contact with reclaimed water by trained workers.
- (31) Membrane Filtration means a pressure or vacuum driven separation process in which particulate matter larger than 1 micrometer is rejected by an engineered barrier, primarily through a size-exclusion mechanism, and which has a measurable removal efficiency of a target organism that can be verified through the application of a direct integrity test. This definition includes the common membrane technologies of microfiltration, ultrafiltration, nanofiltration, and reverse osmosis.
- (32) Non-Commercial Food Crop Growing Operation means any operations growing food crops that are not considered a “covered farm” under the Rules Pertaining to the Administration and Enforcement of the Produce Safety Act, 8 CCR 1202-17.
- (33) Non-Discharging Construction and Road Maintenance means the use of reclaimed water for non-potable applications where water is required for cooling, wetting, dust suppression, or other construction and road maintenance activities, where there is no public exposure to reclaimed water under normal operations and only limited and controlled contact with reclaimed water by trained workers.
- (34) Non-Evaporative Industrial Processes means the use of water in an industrial process where water is not evaporated in the process and is used within a contained system, where there is no public exposure to reclaimed water under normal operations and only limited and controlled contact with reclaimed water by trained workers.
- (35) Non-edible Hemp means hemp that is used for cover crop, fiber and other products that are not for human consumption.
- (36) Non-food Crop Irrigation and Silviculture means use of reclaimed water for the irrigation of crops and trees, excluding crops produced for direct human consumption, forage crops for lactating dairy animals, and trees that produce nuts or fruit intended for human consumption.
- (37) Oil and Gas Operations means exploring for oil and gas, including conducting seismic operations and the drilling of test bores; siting, drilling, deepening, recompleting, reworking, or abandoning a well; producing operations related to any well, including installing flowlines; the generating, transporting, storing, treating, or disposing exploration and production wastes; and any constructing, site preparing, or reclaiming activities associated with such operations. (see COGCC Rules and Regulations - Series 100 - Definitions)

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- (38) Person means an individual, corporation, partnership, association, state or political subdivision thereof, federal agency, state agency, municipality, commission, or interstate body.
- (39) Point of Compliance means a point identified by the Treater in the reclaimed water treatment or transmission system after all treatment has been completed and prior to dilution and blending of water has occurred. If reclaimed water is used for indoor non-potable uses within a building where plumbing fixtures are accessible by the general public, the “point of compliance” for disinfection residual is at the location where water is delivered to the occupied premises.
- (40) Potable Water has the same meaning as “Finished Water” as defined in Colorado Primary Drinking Water Regulations 5 CCR 1002-11 (Regulation #11).
- (41) Reclaimed Water is domestic wastewater that has received secondary treatment by a domestic wastewater treatment works (centralized system or a localized system) and such additional treatment as to enable the wastewater to meet the standards for approved uses.
- (42) Reclaimed Water Distribution System means the piping that distributes reclaimed water to the customer.
- (43) Repetitive Violation means a violation by a User or at a User Site that has been assigned corrective action in accordance with the Treater’s required Enforcement Escalation Plan per section 84.6(F)(5) and has not achieved compliance within the timeframe required in accordance with the plan.
- (44) Resident-Controlled Landscape Irrigation means irrigation of areas of grass, trees, and other vegetation located on the property dedicated to a single residential property (e.g., the yard for a single residence such as a house, row home or duplex).
- (45) Resident-Controlled Food Crop Irrigation means irrigation of vegetables, fruits and other food crops located on the property dedicated to a single residential property (e.g. the garden for a single residence such as a house, row home or duplex).
- (46) Restricted Access means controlled and limited access to the areas where reclaimed water meeting Category 1 standards, as defined in section 84.7, is used.
- (47) Reuse System Management Plan means a plan submitted to the Division with the Treater Application that describes how the Treater will comply with the requirements in section 84.6(A)(6).
- (48) Secondary Treatment means the biological treatment of wastewater to meet BOD₅, TSS; CBOD₅; and Oil and Grease numeric limitations in Regulations for Effluent Limitations 5 CCR 1002-62 (Regulation #62).
- (49) Site means any location using reclaimed water, per the approved Uses in section 84.10 Table A including associated conveyances or storage under the operational control of the User, and as such is subject to the Implementation Requirements in section 84.10.
- (50) Site Manager means an individual or individuals who are the representative(s) of the User responsible for educating trained workers, visitors and cultivators of the User’s Site, and shall ensure, to the maximum extent practicable, that visitors and cultivators attain and maintain compliance with Regulation 84. Site managers must be fully trained, educated and well versed in Regulation 84 to ensure safe onsite practices amongst visitors and cultivators. The Site Manager has legal ability to enforce for non-compliance, and request that the Treater terminate service if violations continue for a period of time until corrective actions are taken as described in the Treater’s Enforcement Escalation Plan in section 84.6(F)(5).
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- (51) State Waters means any and all surface and subsurface waters which are contained in or flow in or through this state, but does not include waters in sewage systems, waters in treatment works of disposal systems, waters in potable water distribution systems, and all water withdrawn for use until use and treatment have been completed (25-8-103(19), C.R.S.).
- (52) Toilet and Urinal Flushing or Fixture Flushing means the use of reclaimed water to flush toilets and urinals only in multifamily residential structures or nonresidential structures where the toilet and urinal installations are conducted in accordance with and conform to Article 155 of Title 12 [Plumbers] and Rules promulgated to that Article.
- (53) Trained Worker means a person employed at the site where reclaimed water is used, who has been provided with the information specific to the Implementation Requirements specified in section 84.10 that are applicable to that site's approved use(s) of reclaimed water.
- (54) Treater means a person who treats reclaimed water using a centralized reclaimed water treatment system or localized reclaimed water treatment system and provides reclaimed water to a User for the purpose of uses identified in section 84.10. A Treater contracted inspector also falls under this definition, and the Treater may also be a User.
- (55) Treatment Technique Requirement means a requirement that specifies a treatment technique(s) for a pathogen reduction target which results in a sufficient reduction in the level of the pathogen to comply with the requirements of Regulation #84.
- (56) Unrestricted Access means uncontrolled access to the areas where reclaimed water meeting the Category 2 standards, as defined in section 84.7, is used.
- (57) User means the entity or person listed as "User" in the User Application and Site Management Plan and User Authorization who uses reclaimed water and is responsible for the Site and for compliance with the requirements in section 84.9 and 84.10 of this regulation. A User may also be a Treater. A User may also be a person(s) designated by the User to use reclaimed water on a User Site.
- (58) User Application and Site Management Plan (UASMP) means the information and documentation a User is required to submit to the Treater to be subsequently submitted to the Division by the Treater under section 84.9(A). For Resident-Controlled Landscape Irrigation and Resident-Controlled Food Crop Irrigation, the UASMP applies to the aggregate of residences managed by a Management User. For Non-Commercial Food Crop Growing Operation, the UASMP applies to the aggregate or irrigated areas being managed by a Site Manager.
- (59) Visitor means anyone visiting a site where reclaimed water is used and approved in Table A of section 84.10.
- (60) Washwater Applications means water used in washing of miscellaneous construction/maintenance equipment, as well as concrete washout, mineral processing, and other similar uses where reclaimed water is used to remove material from equipment or a desired product, where there is no public exposure to reclaimed water under normal operations and only limited and controlled contact with reclaimed water by trained workers.
- (61) Zoo Operations means activities that are authorized uses under this regulation conducted within a zoo which is licensed by the USDA.

84.6 TREATER APPLICATION, TREATER AUTHORIZATION ISSUANCE AND TREATER RESPONSIBILITIES

- (A) Application to Treat and Distribute Reclaimed Water (Treater Application). To treat and distribute reclaimed water, Treater shall submit a complete Treater Application to the Division and provide a Division approved copy of the Treater Authorization to the local health authority, using a form established by the Division that shall include:
- (1) Treater information:
 - (a) Name of entity;
 - (b) Legally Responsible Individual's name;
 - (c) Address;
 - (d) Telephone number; and
 - (e) Email address.
 - (2) For each reclaimed water treatment facility owned and/or operated by the Treater where domestic wastewater is treated for distribution:
 - (a) Facility contact person's name;
 - (b) Address;
 - (c) Telephone number; and
 - (d) Email address (if different than the Legally Responsible Individual).
 - (3) Information demonstrating the Treater's ability to comply with the applicable reclaimed water standards and treatment described in section(s) 84.7 and 84.8 of this regulation. Localized systems must also demonstrate the ability to comply with the applicable requirements described in section 84.16of this regulation.
 - (4) Provide an 8.5" x 11" or 11" x 17" schematic of the treatment process showing the location of the proposed point(s) of compliance. Include the point of compliance for demonstration that secondary treatment has been attained which may be the same or different than the point where attainment of reclaimed water standards will be demonstrated. Include either:
 - (a) A copy of the site application approval letter and the approval letter for the reclaimed water treatment facility plans and specifications; or
 - (b) Evidence of submittal of a site application and plans and specifications to the Division (site application forms per Site Location and Design Regulations for Domestic Wastewater Treatment Works 5 CCR 1002-22 (Regulation # 22)).
 - (5) An analysis demonstrating that reclaimed water used for landscape irrigation or agricultural irrigation will be applied at or below agronomic rates. Landscape irrigation and agricultural irrigation uses may also be subject to or limits as contained in a control regulation governing the watershed within which the irrigation occurs.
 - (6) A reuse system management plan which includes:
 - (a) A description of the proposed reclaimed water treatment and distribution systems;

- (b) A description of how the Treater will comply with all of the applicable Treater Responsibilities in section 84.6(F);
 - (c) An Enforcement Escalation Plan (EEP with a description of how the Treater will comply with the requirements in section 84.6(F)(5);
 - (d) Evidence of the Treater's legal ability (regulation, ordinance, contract, or other acceptable means) to terminate service to a User if the User fails to comply with this regulation;
 - (e) A description of how the Treater will comply with the cross connection control requirements in sections 84.6(F)(12) and 84.6(F)(13), including but not limited to adherence, in coordination with other water suppliers, to any routine tests, surveys and inspections of backflow assemblies and methods and/or other approved cross connection control devices and methods.
 - (f) The requirements in section 84.6(A)(6) must be met two (2) years after the effective date of this regulation for Treater Authorizations with effective dates before the effective date of this regulation. Treaters that apply for Authorizations on or after the effective date of this regulation must comply with this requirement immediately.
- (7) A certification statement as per section 84.14 of this regulation.
- (8) For each User, a User Application and Site Management Plan (UASMP) developed in cooperation with the Treater that demonstrates how the User will comply with the Implementation Requirements in section 84.10.
- (9) Affirmation that the reuse of this water by the Treater will not materially injure water rights. For localized systems located within the service area of a water service provider, the Treater Application shall include an affirmation that the proposed installation of a localized system is allowed by the water service provider.
- (10) When reclaimed water is used for fire protection, the Treater Application shall also include a map indicating areas where reclaimed water is to be supplied for fire protection uses and identifying the fire protection authority(s) having jurisdiction. The Treater Application shall also include a letter from the fire protection authority(s) having jurisdiction indicating their approval of using reclaimed water for fire protection activities.
- (11) Where the land application of reclaimed water is subject to limitations on concentration and/or loading of nitrogen or phosphorus pursuant to a control regulation adopted by the Water Quality Control Commission, a statement as to whether the Treater intends to have such limitations included in the notice of authorization issued under this regulation or under a permit issued pursuant to Regulation #61.
- (B) Division Review and Issuance of Treater Authorization. The Division shall either issue or deny Treater Authorization, or notify the Treater that the Treater Application is incomplete within sixty (60) calendar days of the Division's receipt of the application. If the Division determines that the Treater Application or Authorization needs public notice, the Division shall issue or deny the Authorization within ninety (90) calendar days. Upon the written agreement of the Treater, the review period may be extended for a period mutually agreed to by the Treater and the Division.
- (1) The Treater shall be notified in writing upon denial of the Treater Authorization of such action and the reason(s) for the denial. Reasons for denial may include but not be limited to determination that the Treater Authorization would not be protective of public health and the environment.

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- (2) The Division shall issue a separate Authorization to the Treater and to each User. Treaters and Users planning to use reclaimed water shall have or obtain a Treater and/or User Authorization from the Division prior to any use of reclaimed water.
- (C) Appeal of Issuance or Denial of Treater Authorization. The Treater or User, or any other person potentially adversely affected or aggrieved by Division issuance or denial of a Treater Authorization, may submit a request, within thirty (30) days of the date of issuance or denial, to the Administrator of the Water Quality Control Commission ("Commission"), for a hearing.
- (1) Such hearing shall be conducted pursuant to the requirements of the Procedural Rules 5 CCR 1002-21 (Regulation #21),
- (2) The person requesting the hearing shall have the burden of proof in all hearings held pursuant to this section.
- (D) Treater Authorization Renewal and Modification. The Division will review individual Treater Authorizations to be considered for renewal no more frequently than every five (5) years, unless the conditions for modification in this part are met. The Treater shall provide information required by the Division as necessary to renew Treater Authorizations within 180 days of notification by the Division, unless a later deadline is provided by the Division.
- (1) A Treater Authorization may be modified for renewal in whole or in part earlier than five (5) years for reasons determined by the Division, including but not limited to, the following:
- (a) Violation of any terms or conditions of the Treater Authorization;
- (b) Obtaining a Treater Authorization by misrepresentation or failing to disclose any fact which is material to the granting or denial of a Treater Authorization or to the establishment of terms or conditions of the Treater Authorization;
- (c) Materially false or inaccurate statements or information in the Treater Application;
or
- (d) A determination that the authorized activity endangers human health or the classified existing uses of state waters and can only be regulated to acceptable levels by permit modifications or termination.
- (2) In determining a renewal frequency greater than five (5) years, the Division will also consider:
- (a) Whether the Treater holds an exceptionally high number of User Authorizations that would make it difficult to comply with the renewal schedule;
- (b) Any other circumstances that would make it difficult to comply with the renewal schedule.
- (E) Terms and Conditions of Treater Authorizations. Treater Authorizations issued by the Division shall contain such terms, limitations, and conditions as are deemed necessary by the Division to protect public health and the environment and to ensure compliance with this regulation, except for those Treater Authorizations that contain a schedule of compliance as determined by the Division. At a minimum, all Treater Authorizations shall contain the following:
- (1) Treater information provided in sections 84.6(A)(1) and 84.6(A)(2) and a list of approved Users and their associated uses shall be included;

- (2) Issuance and effective dates;
- (3) The approved uses as defined in Table A of section 84.10, including the category of reclaimed water, and Implementation Requirements for each approved use in section 84.10, the associated numeric limit for each use, and requirements from sections 84.7; 84.8, and for localized systems, 84.16;
- (4) For User Authorizations, the location(s) of use, a description of the approved use(s), and Implementation Requirements that meet the requirements of section 84.10, as applicable;
- (5) A requirement that the Treater implement its Reuse System Management Plan that meets the requirements of section 84.6(A)(6) to ensure User compliance with this regulation. For User Authorizations, include a requirement that the User comply with the UASMP;
- (6) Where the Treater has so requested in the Treater Application per section 84.6(A)(5), conditions defining limitations for concentration and loading of nitrogen and/or phosphorus pursuant to a control regulation adopted by the Water Quality Control Commission;
- (7) A requirement to submit information to the Division requesting the amendment of a Treater Application prior to making any of the following significant changes:
 - (a) Change of contact for the Legally Responsible Individual or facility contact;
 - (b) Adding an additional User or deleting a User;
 - (c) When a Treater proposes any significant physical or operational changes;
 - (d) Reclaimed Water treatment is discontinued (termination of a Treater Authorization); and
 - (e) Transfer of ownership or operational control. (f) If reclaimed water is used for irrigation, when there is a significant change in the agronomic rate analysis; and
 - (g) When any User governed by an existing User Authorization significantly modifies or changes its physical or operational use of reclaimed water, including, but not limited to, the addition of landscape area to be irrigated that is not contiguous to an existing approved area, addition of areas where reclaimed water is to be used for fire protection, addition of a new user or use in a new commercial or industrial process, or use in a new location.

Said request for amending the Treater Application shall be made at least thirty days prior to implementing a change described in subsections (a), (b), or (f), above, and at least sixty days prior to implementing a change described by subsections (c), (d), (e), or (g) above.
- (8) Terms for modification, revocation, renewal, or termination;
- (9) Required monitoring, as is reasonably necessary, to be performed by the User;
- (10) Reporting and record keeping requirements;
- (11) Public access restrictions, if applicable; and

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- (12) A statement of applicable civil and criminal penalties.
 - (13) For Resident-Controlled Food Crop Irrigation ONLY, Treater Authorizations will list requirements for information required in the Annual Report.
- (F) Treater Responsibilities
- (1) Treaters must comply with this regulation, meet the reclaimed water categories and standards in sections 84.7 and 84.8 (when applicable), supply reclaimed water for authorized uses in accordance with Table A in section 84.10, and comply with the requirements that are authorized in the Treater Authorization.
 - (2) Treaters must review UASMPs, and forms for amending UASMPs for reasons listed in section 84.9(E)(5), for the following prior to signing and submitting them to the Division:
 - (a) The UASMP includes the information required by this regulation and the Division form, and the information regarding site information, including but not limited to site maps, descriptions, and if applicable the agronomic rate analysis that accurately reflect the conditions that will be present at the Site when use of reclaimed water occurs.
 - (b) Ensure latitude and longitude of where reclaimed water is being used are complete and correct;
 - (c) All necessary attachments are included with the UASMP;
 - (d) Ensure the Legally Responsible Individual has signed/certified the UASMP;
 - (e) Any modifications that require notification to the Division in section 84.6(D)(7); and
 - (f) Ensure that each answer describes an accurate process or mechanism to comply with the requirements in this regulation.
 - (3) Maintain accurate records of the following:
 - (a) Copies of active/effective UASMP's and User Authorizations; and
 - (b) Copies of UASMPs and User Authorizations previously in effect for three (3) years following the termination date.
 - (4) Develop and conduct an annual education and training program for all Users, Site Managers (when applicable) and Management Users (when applicable) that meets the following minimum requirements:
 - (a) A process to verify and document that all Users have received this education and training;
 - (b) A definition of reclaimed water and why it is not suitable for drinking (e.g. it is not treated to drinking water standards);
 - (c) Users should wash their hands with soap and potable water if possible after using reclaimed water, and that if soap and water are not available, to use hand sanitizer containing at least 60% alcohol. Users should be educated that hand sanitizer is not as effective as hand washing with soap and potable water;
 - (d) Users are required to implement the relevant requirements in this regulation for the prescribed authorized use(s) or be subject to the compliance and/or
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- enforcement actions from both the Treater and the Division that result from non-compliance;
- (e) The Implementation Requirements section 84.10 and User requirements in section 84.9;
 - (f) Ensure Users, Site Managers (when applicable) and Management Users (when applicable) are knowledgeable about and capable of implementing the requirements in the UASMP and User Authorization;
 - (g) That the UASMP and User Authorization must be kept onsite or be easily accessible;
 - (h) Strictly minimize ponding or runoff of reclaimed water; and
 - (i) For irrigation uses, that irrigation shall not occur in excess of agronomic rate.
- (5) Oversee the use of reclaimed water by Users to ensure, to the maximum extent practicable, that Users attain and maintain compliance with this regulation including but not limited to User adherence to the applicable Implementation Requirements in section 84.10 at User Sites. A description of the Treater's oversight of reclaimed water use by Users must be provided in the EEP per section 84.6(A)(6) submitted with the Reuse System Management Plan. The EEP shall include:
- (a) How the Treater will identify User's repetitive and recalcitrant violations;
 - (b) A range of enforcement responses the Treater will take to minimize and correct violations, including repetitive and recalcitrant violations;
 - (c) A description of time periods within which responses will take place;
 - (d) A process and description for termination of reclaimed water service to a Site (temporary or permanent) when necessary to obtain and maintain compliance;
 - (e) When applicable, a description of how Treaters will administer the inspection requirements for uses that require Site Managers and Management Users.
 - (f) The requirements in section 84.6(F)(5) must be met two (2) years after the effective date of this regulation for Treater Authorizations with effective dates before the effective date of this regulation. Treaters that apply for Authorizations on or after the effective date of this regulation must comply with this requirement immediately.
- (6) Implement the Treater's reuse system management plan as described in section 84.6(A)(6).
- (7) Maintain records of inspections, non-compliance determinations and corrective actions for all inspections for at least three (3) years.
- (8) Report violations to the division as described in section 84.11(C).
- (9) Treaters shall furnish to the Division, within sixty days, any information which the Division may request to determine whether cause exists for modifying, revoking and reissuing the User or Treater Authorization, or to determine compliance with this regulation or the applicable User or Treater Authorization.
- (10) Treaters that own or operate impoundments containing reclaimed water must do one of the following:
- (a) Be authorized to discharge under a CDPS permit or

- (b) Have received a waiver based on the seepage rate pursuant to section 61.14(9)(a)
 - (c) Comply with the Land Application Discharge requirements in 84.10(C) as applicable.
 - (d) The requirements in section 84.6(F)(10) and 84.10(A)(14) must be met five (5) years after the effective date of this regulation for Treater and User Authorizations with effective dates before the effective date of this regulation. Treaters and Users that apply for Authorizations on or after the effective date of this regulation must comply with this requirement immediately.
- (11) Ensure all Users comply with the Land Application Discharge requirements in section 84.10(C).
- (12) When supplementing reclaimed water with potable water, the Treater must ensure compliance with the Backflow Prevention and Cross-Connection Rule in Colorado Primary Drinking Water Regulations 5 CCR 1002-11 (Regulation #11).
- (13) Supplementing reclaimed water with other non-potable supplies shall not be allowed except through an appropriate cross connection control device or method, and shall be provided at all service connections between reclaimed water and other non-potable water sources. Routine inspections/surveys/tests must be completed in accordance with the Treater's cross connection control program as described in the Reuse System Management Plan per section 84.6(A)(6).
- (14) For Commercial Food Crop Growing Operation ONLY, Treaters must:
- (a) On a quarterly basis, monitor for TDS and submit results (mg/L) to the Division in the Discharge Monitoring Reports, and email the results to all food crop irrigation Users. These results can be provided within a larger report.
 - (b) If requested by the User, the Treater must monitor and submit the following information upon request by the User within 60 days of the request, and to the Division in the Treater's Annual Report: Monitoring data that is less than 12 months old for nickel, arsenic, lead, cadmium and/or mercury concentrations from the Point of Compliance, or if the discharge is of substantially the same quality as the effluent discharged to state waters under a CDPS permit, from the point of compliance for that CDPS permit.
- (15) For Non-Commercial Food Crop Growing Operation ONLY, Treaters must:
- (a) On a quarterly basis, monitor for TDS and submit results (mg/L) to the Division in the Discharge Monitoring Reports, and email the results to all food crop irrigation Users. These results can be provided within a larger report.
 - (b) If requested by the User, the Treater must monitor and submit the following information upon request by the User within 60 days of the request, and to the Division in the Treater's Annual Report: Monitoring data that is less than 12 months old for nickel, arsenic, lead, cadmium and/or mercury concentrations from the Point of Compliance, or if the discharge is of substantially the same quality as the effluent discharged to state waters under a CDPS permit, from the point of compliance for that CDPS permit.

- (c) Treaters must notify the Legally Responsible Individual or associated entity and Site Manager if the single sample maximum *E. coli* standard, as authorized in the Treater Authorization, is exceeded.
 - (d) Conduct one inspection prior to the first use of reclaimed water at a site each calendar year with the Site Manager.
 - (e) During the irrigation season, conduct a second inspection during the period when irrigation is occurring each year and at least 30 days from the initial inspection (unless irrigation only occurs for 45 days) with the Site Manager.
 - (f) Inspections must involve checking that all of the applicable Implementation Requirements in 84.10 are being implemented, conditions at the Site are consistent with the UASMP and User Authorization and that Users are minimizing ponding and runoff by irrigating at an agronomic rate.
 - (g) If a site is in non-compliance, unless the non-compliance issue(s) are corrected during the inspection, re-inspect the site once the correction(s) are made and document and keep record(s) of the corrective actions. Treaters are required to inform and communicate with the User about compliance plans and corrective actions. If hoses are being used, the Treater, Site Manager and/or the Division reserve the right to lock the hose bibs until corrective actions are complete.
- (16) For Edible and Non-Edible Hemp Irrigation ONLY, Treaters must:
- (a) If requested by the User, the Treater must monitor and submit the following information upon request by the User within 60 days of the request, and to the Division in the Treater's Annual Report: Monitoring data that is less than 12 months old for nickel, arsenic, lead, cadmium and/or mercury concentrations from the Point of Compliance, or if the discharge is of substantially the same quality as the effluent discharged to state waters under a CDPS permit, from the point of compliance for that CDPS permit.
 - (b) Inspections must be conducted with the Site Manager. Inspections must involve checking that all of the applicable Implementation Requirements in 84.10 are being implemented, conditions at the Site are consistent with the UASMP and User Authorization and that Users are minimizing ponding and runoff by irrigating at an agronomic rate.
 - (c) If a site is in non-compliance, unless the non-compliance issue(s) are corrected during the inspection, re-inspect the site once the correction(s) are made and document and keep record(s) of the corrective actions. Treaters are required to inform and communicate with the User about compliance plans and corrective actions. If hoses are being used, the Treater, Site Manager and/or the Division reserve the right to lock the hose bibs until corrective actions are complete.
- (17) For Resident-Controlled Food Crop Irrigation ONLY, Treaters must:
- (a) On a quarterly basis, monitor for TDS and submit results (mg/L) to the Division in the Discharge Monitoring Reports, and email the results to all food crop irrigation Users. These results can be provided within a larger report.
 - (b) If requested by the User, the Treater must monitor and submit the following information upon request by the User within 60 days of the request, and to the Division in the Annual Report: Monitoring data that is less than 12 months old for

nickel, arsenic, lead, cadmium and/or mercury concentrations from the Point of Compliance, or if the discharge is of substantially the same quality as the effluent discharged to state waters under a CDPS permit, from the point of compliance for that CDPS permit.

- (c) Notify the Legally Responsible Individual or associated entity and the Management User if the single sample maximum *E. coli* standard, as authorized in the Treater Authorization, is exceeded.
 - (d) Monitor water usage in gallons at minimum on a monthly basis to ensure agronomic rate is not exceeded. The UASMP shall indicate whether the monitoring responsibility belongs to the Treater or the Management User.
 - (e) At minimum, conduct 10% representative garden site visits annually with a representative that uses reclaimed water to ensure compliance with this regulation, the UASMP and User Authorization.
 - (f) Inspections must involve checking that all of the applicable Implementation Requirements in 84.10 are being implemented, conditions at the Site are consistent with the UASMP and User Authorization and that Users are minimizing ponding and runoff by irrigating at an agronomic rate.
 - (g) If a site is in non-compliance, unless the non-compliance issues are corrected during the inspection, re-inspect the site once corrections are made and document and keep record(s) of the corrective actions. Treaters and Management Users are required to inform and communicate with the user about compliance plans and corrective actions.
- (18) For Oil and Gas Operations ONLY, Treaters must:
- (a) Conduct an initial site inspection for each new User just prior to drilling operation to ensure compliance with this regulation, the UASMP and User Authorization.
 - (b) Inspections must involve checking that all of the applicable Implementation Requirements in 84.10 are being implemented, conditions at the Site are consistent with the UASMP and User Authorization and that Users are minimizing ponding and runoff by irrigating at an agronomic rate.
 - (c) If a site is in non-compliance, unless the non-compliance issues are corrected during the inspection, re-inspect the site once corrections are made and document and keep record(s) of the corrective actions. Treaters and Management Users are required to inform and communicate with the user about compliance plans and corrective actions.

84.7 RECLAIMED WATER CATEGORIES AND STANDARDS

- (A) Category 1 Standards: Reclaimed water, for uses where Category 1 water is required, shall, at a minimum, receive secondary treatment with disinfection. The following reclaimed water standards shall apply at the point of compliance:

<u>Parameter</u>	<u>Limit</u>
<i>E. coli</i> /100 ml	126/100 ml monthly geometric mean and 235/100 ml single sample maximum.
Total Suspended Solids	30 mg/L as a daily maximum.

- (B) Category 2 Standards: Reclaimed water, for uses where Category 2 water is required, shall, at a minimum, receive secondary treatment with filtration and disinfection. The following reclaimed water standards shall apply at the point of compliance:

<u>Parameter</u>	<u>Limit</u>
<i>E. coli</i> /100 ml	126/100 ml monthly geometric mean and 235/100 ml single sample maximum.
Turbidity, NTU	Not to exceed 3 NTU as a monthly average and not to exceed 5 NTU in more than 5 percent of the individual analytical results during any calendar month.

- (C) Category 3 Standards: Reclaimed water for uses where Category 3 water is required shall, at a minimum, receive secondary treatment with filtration and disinfection. The following reclaimed water standards shall apply at the point of compliance:

<u>Parameter</u>	<u>Limit</u>
<i>E. coli</i> /100 ml	None detected in at least 75% of samples in a calendar month and 126/100 ml single sample maximum.
Turbidity, NTU	Not to exceed 3 NTU as a monthly average and not to exceed 5 NTU in more than 5 percent of the individual analytical results during any calendar month.

84.8 ADDITIONAL FILTRATION AND DISINFECTION REQUIREMENTS FOR USE OF RECLAIMED WATER PRODUCED FROM CENTRALIZED SYSTEMS (CATEGORY 3 PLUS)

- (A) The Treater must properly operate and maintain all required treatment systems when producing reclaimed water in accordance with this regulation, the Treater Authorization, and the site location and design approvals.
- (B) In addition to the factors to be considered and approved by the Division under Regulation #22, the following filtration and disinfection requirements apply to reclaimed water produced from centralized systems specifically for Category 3 uses of indoor toilet and urinal flushing, Non-Commercial Food Crop Growing Operation, and Resident-Controlled Food Crop Irrigation Sites. In the event of a conflict between Regulation #22 and the following filtration and disinfection requirements, the following requirements shall control over any conflicting filtration and disinfection requirements in Regulation #22:
- (1) In addition to the requirements listed in 84.7(C), the Treater must properly operate filtration and disinfection of secondary treated wastewater while producing reclaimed water that reliably achieves all of the following:
- (a) Disinfection that provides a minimum of 99.999 (5-log) inactivation of enteric viruses by at least one of the following treatment techniques.
- (i) For free chlorine or monochloramines, log inactivation of viruses to be determined as referenced in 5-CCR-1002-11 and defined by the USEPA for disinfection of surface water (Hepatitis A).
- (ii) Minimum UV of 40 mJ/cm² using a validated reactor per the Ultraviolet Disinfection Guidance Manual for the Final Long Term 2 Enhanced Surface Water Treatment Rule (November 2006).
- (b) Filtration by any one of the following treatment techniques:

- (i) Conventional or direct filtration.
 - (ii) Membrane filtration accepted for use by the division in accordance with section 11.8 of 5 CCR 1002-11.
 - (iii) Bag or cartridge filtration accepted for use by the division in accordance with section 11.8 of 5 CCR 1002-11.
 - (iv) Alternative filtration technologies accepted by the Division in accordance with Wastewater Design Criteria Alternative Technology Acceptance that is third party challenge tested to reliably remove 99.9% of challenge particles that are at most 3 micron diameter.
- (c) The Treater must return any recycled spent filter backwash water, thickener supernatant, or liquids from the dewatering process to a location within the treatment process that is before the filtration technology or an alternative Division-approved location.
- (i) For conventional or direct filtration, the location of return must be prior to the coagulant feed location.
 - (ii) For all other filtration technologies, the location of return must be prior to the filtration process and approved by the Division.

84.9 USER APPLICATION AND SITE MANAGEMENT PLAN (UASMP) AND USER AUTHORIZATION ISSUANCE

- (A) Users shall submit a User Application and Site Management Plan to the Treater using a form established by the Division that shall include:
- (1) User information including:
 - (a) User organizational name;
 - (b) Legally Responsible Individual's name, title and contact information.
 - (2) Facility information including:
 - (a) Facility name, including the business operating name, if applicable;
 - (b) Address;
 - (c) Latitude and longitude (center of property);
 - (d) Site common name, if any.
 - (3) Other contact information including:
 - (a) Site contact name, title and contact information;
 - (b) Site Manager name, title and contact information (if applicable);
 - (c) Other contact types (optional);
 - (d) Certified Operator name, certification number and contact information (for Localized Systems only).
 - (4) A description of the following:

- (a) How reclaimed water will be used;
 - (b) The potential for public contact during use of reclaimed water;
 - (c) How the User intends to comply with the Implementation Requirements for the applicable use(s) identified in this application as specified in section 84.10; and
 - (d) A list of all water sources used at the location where reclaimed water is used.
- (5) All Users must provide a current map and/or diagram (8.5" x 11" or 11" x 17") that indicates all areas where reclaimed water will be used and/or applied. The following information must be provided on the map for the specific uses listed:
- (a) For Toilet and Urinal Flushing, the map must indicate potable, non-potable and wastewater systems within the building.
 - (b) For Landscape and Agricultural irrigation, the map must indicate the acreage or distance around the perimeter of the Site being irrigated and type of landscape or agriculture being irrigated.
 - (c) For Fire Protection, the map must indicate areas where reclaimed water is to be supplied for fire protection uses, location(s) of fire hydrants.
 - (d) For Commercial Food Crop Growing Operations, Non-commercial Food Crop Growing Operations and Edible and Non-Edible Hemp Irrigation, the map must indicate locations of the required signage and hand sanitation stations in sections 84.10(B)(14), 84.10(B)(15) and 84.10(B)(17).
- (6) For irrigation uses, an analysis that demonstrates that reclaimed water used for irrigation will be applied at or below agronomic rates (guidance to calculate agronomic rate analysis: <https://cdphe.colorado.gov/water-quality-reclaimed-water-reuse-permits>).
- (7) UASMPs must be kept onsite (or easily accessible), current with regards to Site conditions (e.g. maps and/or diagrams, contact information, how the Site is complying with Implementation Requirements, etc.) and available for Division or Treater review.
- (8) A certification statement as per section 84.14 of this regulation. Each UASMP shall include a statement signed by the User, or a legal representative of the User, that certifies:
- (a) The User has been provided a copy of Regulation 84 and agrees to comply with the applicable requirements of this regulation, in particular the Implementation Requirements described in section 84.10; the User Authorization and UASMP. If applicable, include the access restrictions when Category 1 reclaimed water is used. The User shall submit a certification statement per section 84.14 of this regulation with the information provided in this item; and
 - (b) The User agrees to allow the Treater or the Division reasonable access to the Site to determine whether the User is in compliance with this regulation, the User Authorization and UASMP, and/or to perform monitoring and analysis as may be required in section 84.16 for localized systems.
- (9) Irrigation uses may also be subject to limits as contained in a control regulation governing the watershed within which the irrigation occurs. The allocation or limit will be included in the User Authorization and/or a permit issued pursuant to Regulation # 61.

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- (10) Each UASMP must be fully reviewed and signed by the Treater prior to submission to the Division.
- (11) Each UASMP must be completed in its entirety and required attachments that are listed on the User Application (e.g. maps, agronomic rate analyses, reports, etc.) must be provided. UASMPs that are not complete will not be processed by the Division until all the required information and attachments are completed and submitted.
- (B) Division Review and Issuance of User Authorization. The Division shall either issue or deny the User Authorization, or notify the User that the UASMP is incomplete within sixty (60) calendar days of the Division's receipt of the application. If the Division determines that the UASMP or User Authorization needs public notice, the Division shall issue or deny the Authorization within ninety (90) calendar days. Upon the written agreement of the User, the review period may be extended for a period mutually agreed to by the User and the Division.
- (1) The User shall be notified in writing upon denial of the User Authorization of such action and the reason(s) for the denial. Reasons for denial may include but not be limited to determination that the User Authorization would not be protective of public health and the environment.
- (2) The Division shall issue a separate authorization to the Treater and to each User. Treaters and Users planning to use reclaimed water shall have or obtain a Treater and/or User Authorization from the Division prior to any use of reclaimed water.
- (C) Appeal of Issuance or Denial of User Authorization. The Treater or User, or any other person potentially adversely affected or aggrieved by Division issuance or denial of a User Authorization may submit a request, within thirty (30) days of the date of issuance or denial, to the Administrator of the Water Quality Control Commission ("Commission"), for a hearing.
- (1) Such hearing shall be conducted pursuant to the requirements of the Procedural Rules 5 CCR 1002-21, (Regulation #21).
- (2) The person requesting the hearing shall have the burden of proof in all hearings held pursuant to this section.
- (D) User Authorization Renewal and Modification. The Division will review individual User Authorizations to be considered for renewal no more frequently than every five (5) years, unless the conditions for modification in this part are met. The User shall provide information required by the Division as necessary to renew User Authorizations within 180 days ~~six (6) months~~ of notification by the Division, unless a later deadline is provided by the Division. A User Authorization may be modified for renewal in whole or in part earlier than five (5) years for reasons determined by the Division, including but not limited to, the following:
- (1) Violation of any terms or conditions of the User Authorization;
- (2) Obtaining a User Authorization by misrepresentation or failing to disclose any fact which is material to the granting or denial of a User Authorization or to the establishment of terms or conditions of the User Authorization;
- (3) Materially false or inaccurate statements or information in the User Application; or
- (4) A determination that the authorized activity endangers human health or the classified existing uses of state waters and can only be regulated to acceptable levels by permit or termination.

- (E) Terms and Conditions of User Authorizations. User Authorizations issued by the Division shall contain such terms, limitations, and conditions as are deemed necessary to protect public health and the environment and to ensure compliance with this regulation, except for those User Authorizations that contain a schedule of compliance as determined by the Division. At a minimum, all User Authorizations shall contain the following:
- (1) User information provided in the UASMP in sections 84.9(A)(1), 84.9(A)(2), and 84.9(A)(3);
 - (2) Issuance and effective date;
 - (3) The applicable authorized use(s) as defined in Table A of section 84.10, including the category of reclaimed water, and Implementation Requirements that Users must execute for the authorized use(s) in section 84.10.
 - (4) The location(s) of use and a description of the approved use(s);
 - (5) A requirement to submit information using a form developed by the Division to the Treater requesting the amendment of a UASMP sixty (60) days, or an alternative timeline determined by the Treater, prior to making any of the following significant changes. The Treater must review, sign and submit the form to the Division thirty (30) days prior to the User making changes:
 - (a) Change of contact for Legally Responsible Individual, facility contact, Site Manager (if applicable) and Management User (if applicable);
 - (b) Transfer of ownership or operational control;
 - (c) If reclaimed water is used for irrigation, when there is a significant change in the agronomic rate analysis;
 - (d) When any User governed by an existing User Authorization significantly modifies or changes its physical or operational use of reclaimed water, including, but not limited to, the addition of landscape area to be irrigated that is not contiguous to an existing approved area, addition of areas where reclaimed water is to be used for fire protection, addition of a new User or use in a new commercial or industrial process, or use in a new location;
 - (e) A modification is made to the Site that would substantially change operations, reclaimed water usage and/or Implementation Requirements as described in section 84.10; or
 - (f) Reclaimed water use at the Site is discontinued (termination of User Authorization).
 - (6) Terms for modification, revocation, renewal, or termination;
 - (7) Required monitoring, as is reasonably necessary, to be performed by the User;
 - (8) Reporting and record keeping requirements;
 - (9) Public access restrictions, if applicable; and
 - (10) A statement of applicable civil and criminal penalties.

84.10 AUTHORIZED RECLAIMED WATER USES AND IMPLEMENTATION REQUIREMENTS

Table A: Authorized Uses of Reclaimed Water

Authorized Uses	Category 1	Category 2	Category 3	Implementation Requirements
INDUSTRIAL				
Evaporative Industrial Processes	Allowed	Allowed	Allowed	84.10(A) and 84.10(B)(1)
Non-Discharging Construction and Road Maintenance	Allowed	Allowed	Allowed	84.10(A) and 84.10(B)(2)
Non-Evaporative Industrial Processes	Allowed	Allowed	Allowed	84.10(A) and 84.10(B)(3)
Oil and Gas Operations	Not Allowed	Allowed	Allowed	84.10(A) and 84.10(B)(4)
Washwater Applications	Not Allowed	Allowed	Allowed	84.10(A) and 84.910(B)(5)
LANDSCAPE IRRIGATION				
Restricted Access	Allowed	Allowed	Allowed	84.10(A) and 84.10(B)(6)
Unrestricted Access	Not Allowed	Allowed	Allowed	84.10(A) and 84.10(B)(7)
Resident-Controlled	Not Allowed	Not Allowed	Allowed	84.10(A) and 84.10(B)(8)
COMMERCIAL				
Zoo Operations	Allowed	Allowed	Allowed	84.10(A) and 84.10(B)(9)
Commercial Laundries	Not Allowed	Allowed	Allowed	84.910(A) and 84.10(B)(10)
Automated Vehicle Washing and Manual Non-Public Vehicle Washing	Not Allowed	Allowed	Allowed	84.10(A) and 84.10(B)(11)
FIRE PROTECTION				
Nonresidential Fire Protection	Not Allowed	Allowed	Allowed	84.10(A) and 84.10(B)(12)
Residential Fire Protection	Not Allowed	Not Allowed	Allowed	84.10(A) and 84.10(B)(12)
AGRICULTURAL IRRIGATION				
Non-Food Crop Irrigation and Silviculture	Allowed	Allowed	Allowed	84.10(A) and 84.10(B)(13)
Commercial Food Crop Growing Operation	Not Allowed	Allowed	Allowed	84.10(A) and 84.10(B)(14)

Authorized Uses	Category 1	Category 2	Category 3	Implementation Requirements
Non-Commercial Food Crop Growing Operation	Not Allowed	Not Allowed	Allowed (Category 3 Plus)	84.10(A) and 84.10(B)(15)
Resident-Controlled Food Crop Irrigation	Not Allowed	Not Allowed	Allowed (Category 3 Plus)	84.10(A) and 84.10(B)(16)
Non-Edible Hemp Irrigation	Allowed	Allowed	Allowed	84.10(A) and 84.10(B)(17)
Edible Hemp Irrigation	Not Allowed	Not Allowed	Allowed (Category 3 Plus)	84.10(A) and 84.10(B)(17)
TOILET AND URINAL FLUSHING	Not Allowed	Not Allowed	Allowed (Category 3 Plus)	84.10(A) and 84.10(B)(18)

(A) Implementation Requirements. Implementation Requirements for All Authorized Reclaimed Water Uses

- (1) Cross Connection Control. Sites that supplement reclaimed water with potable and other non-potable water sources must be in compliance with the requirements in the Treater's cross connection control program as per sections 84.6(F)(12) and 84.6(F)(13).
- (2) Labeling of Conveyances and Appurtenances. If the use of reclaimed water is subject to Colorado's Plumbing Rules and Regulations (3 CCR 720-1), Users and Treaters must comply with the labeling requirements included therein, and this must be clarified in the UASMP. If the use of reclaimed water is not subject to Colorado's Plumbing Rules and Regulations, then water piping, conveyances and appurtenances that deliver reclaimed water shall be purple in color or the piping shall be installed with a purple identification tape or wrap the entire length of the piping and shall be embossed, or integrally stamped or marked, with the words: "NONPOTABLE RECLAIMED WATER – NOT FOR DRINKING or DO NOT DRINK". The requirements of 84.10(A)(2) shall not apply to existing underground irrigation and other piping and infrastructure that is not visible to the public. The Division has authority to require additional labeling requirements, or alternative labeling requirements contingent upon authorized uses of reclaimed water, accessibility, and public exposure in the UASMP and the User Authorization.
 - (a) The requirements in section 84.10(A)(2) must be met two (2) years after the effective date of this regulation for User and Treater Authorizations with effective dates before the effective date of this regulation. Users and Treaters that apply for Authorizations on or after the effective date of this regulation must comply with this requirement immediately.
- (3) Education and Training. All Users, Site Managers and Management Users must participate in the Treater's annual education and training program as required in section 84.6(F)(4). The Division has authority to require additional education and training requirements in the UASMP and the User Authorization contingent upon authorized uses of reclaimed water, accessibility, and public exposure, and as applicable public and environmental health information comes available.

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- (4) Signage Requirements. Signage is required to ensure the public and Users are informed that non-potable water is in use and that it is not for drinking. If the use of reclaimed water is subject to Colorado's Plumbing Rules and Regulations (3 CCR 720-1), Users and Treaters must comply with the signage requirements included therein, and this must be clarified in the UASMP. If the use of reclaimed water is not subject to Colorado's Plumbing Rules and Regulations, the signage requirements set forth herein are required. The Division has authority to require additional signage requirements contingent upon authorized uses of reclaimed water, accessibility, and public exposure in the UASMP and the User Authorization.
- (a) Signage shall read as follows: "NON-POTABLE RECLAIMED WATER IN USE-NOT FOR DRINKING or DO NOT DRINK."
 - (b) Where plumbing is accessible, a sign that meets 84.10(A)(4) and indicates that maintenance and modifications can only be done by trained personnel. Separate signs are allowed.
 - (c) Impoundments that contain reclaimed water must have at least one sign that meets 84.10(A)(4) unless the impoundment is restricted to the general public and is only accessible by trained personnel.
 - (d) Signage must be visible and in the appropriate language to be understood by the majority of the Users and/or Site Visitors.
 - (e) The requirements in section 84.10(A)(4) must be met two (2) years after the effective date of this regulation for User and Treater Authorizations with effective dates before the effective date of this regulation. Users and Treaters that apply for Authorizations on or after the effective date of this regulation must comply with this requirement immediately.
- (5) Reclaimed Water Use Areas. Use of reclaimed water shall be confined to the authorized use areas, operations or processes, and precautions shall be taken to ensure reclaimed water will not be sprayed or enter into any area not designated for application such as drinking water facilities and areas where food is being prepared.
- (6) Leak Repair. Leaks in plumbing, fixtures, equipment, sprinkler systems (indoor fire and outdoor), hoses, hose bibs and any other mechanism where reclaimed water is used or transmitted must be repaired immediately. If the leak cannot be repaired immediately, leak repair must be scheduled, and reclaimed water use must be discontinued until repairs can be made. Spills require reporting in accordance with §25-8-601(2) CRS.
- (7) Reclaimed Water Disposal. Disposal of reclaimed water from any storage, conveyance or other source whereby reclaimed water was used shall be done in such a manner that does not create a point source discharge requiring a NPDES or CDPS permit or does not create a spill that would require reporting in accordance with §25-8-601(2) CRS.
- (8) Operation of the Reclaimed Water Onsite Distribution or Irrigation System. Operation of the reclaimed water onsite distribution or irrigation system, including valves, outlets, couplers, and sprinkler heads, and residential, commercial or industrial facilities and equipment utilizing reclaimed water, shall be performed only by personnel authorized by the User and trained in accordance with the Treater's education and training program per section 84.6(F)(4) and the requirements in section 84.10(A) and applicable sections in 84.10(B).

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- (9) Vehicle and Tank Hauling. Vehicles and tank trailers used to haul reclaimed water must comply with the requirements in section 84.10(B)(4)(e).
 - (10) Users must submit the UASMP to the Treater to be reviewed and signed by the Treater prior to the Treater submitting it to the Division.
 - (11) Users must maintain an accurate UASMP onsite or in an easily accessible location.
 - (12) Users must report violations in accordance with section 84.11(C).
 - (13) Users shall furnish to the Division, within sixty days, any information which the Division may request to determine whether cause exists for modifying, revoking and reissuing the User Authorization, or to determine compliance with this regulation or the applicable User Authorization.
 - (14) Users that own or operate impoundments containing reclaimed water must do one of the following:
 - (a) Be authorized to discharge under a CDPS permit or
 - (b) Have received a waiver based on the seepage rate pursuant to section 61.14(9)(a)
 - (c) Comply with the Land Application Discharge requirements in 84.10(C) as applicable.
- (B) Implementation Requirements for Specific Authorized Reclaimed Water Uses.
- (1) Evaporative Industrial Processes
 - (a) If there is a significant likelihood for aerosols to drift to public or worker areas, signage meeting the requirements in section 84.10(A)(4) is required in those areas. Supplemental disinfection and disinfectant residual and/or public access restrictions are required.
 - (b) If Category 1 reclaimed water is used, public access to areas where reclaimed water is used must be restricted by time or by barrier.
 - (2) Non-Discharging Construction and Road Maintenance
 - (a) Applications rates or other measures shall be employed to minimize ponding or runoff from the area approved for application and use.
 - (b) The exterior of the tank shall be labeled with signage indicating the tank is transporting reclaimed water.
 - (c) Where there is potential for trained worker or public exposure to aerosols generated in the use, Users of Categories 1 and 2 reclaimed water shall employ measures to prevent frequent exposure of trained workers and the public to aerosols by one of the following methods:
 - i. Restricted access;
 - ii. A minimum setback distance of 100 feet between the nearest source of aerosol generations and areas where trained workers or the public are normally present;
 - iii. Physical barriers between aerosol sources and humans;
 - iv. Personal protective equipment to prevent inhalation;
-

- v. Functionally equivalent measures approved by a qualified individual (e.g. a certified industrial hygienist); or
 - vi. Other measures approved by the Division and authorized in the User Authorization.
 - (d) If Category 1 reclaimed water is used, public access to areas where reclaimed water is used must be restricted by time or by barrier.
- (3) Non-Evaporative Industrial Processes
 - (a) Where there is potential for worker or public exposure to aerosols generated in the use, Users of Categories 1 and 2 reclaimed water shall employ measures to prevent frequent exposure of trained workers and the public to aerosols by one of the following methods:
 - i. Implement onsite disinfection residual within the premise plumbing;
 - ii. Restricted access;
 - iii. A minimum setback distance of 100 feet between the nearest source of aerosol generations and areas where trained workers or the public are normally present;
 - iv. Physical barriers between aerosol sources and humans;
 - v. Personal protective equipment to prevent inhalation;
 - vi. Functionally equivalent measures approved by a qualified individual (e.g. a certified industrial hygienist); or
 - vii. Other measures approved by the Division and authorized in the User Authorization.
 - (b) A sign that meets the minimum requirements in section 84.10(A)(4) is required in the area(s) where reclaimed water is used.
 - (c) If Category 1 reclaimed water is used, public access to areas where reclaimed water is used must be restricted by time or by barrier.
- (4) Oil and Gas Operations
 - (a) Comply with the educational requirements in section 84.10(A)(3) and:
 - i. All staff managing reclaimed water and/or implementing the Implementation Requirements, the UASMP and the User Authorization must receive required training prior to their initial shift on the Site and annually thereafter.
 - ii. Each individual required to receive this education must affirm with a signature that the training was received. These training records must be available on site or easily assessable for the Division and/or Treater for review.
 - (b) Comply with the minimum Signage Requirements in 84.10(A)(4) and:
 - i. For Sites under three acres, signs of at least 8.5 x 11" must be placed on portions of the perimeter within public view. For Sites over three acres but smaller than 25 acres, signs of at least 8.5 x 11" must be placed at no greater than 500 feet apart on any portions of the perimeter within public view. Distance and locations of signage must be described via map or description in the UASMP and User Authorization for the Site.

- (c) A Site Manager is required. Responsibilities and authority for Site Managers are:
- i. Ensure an accurate UASMP and User Authorization are onsite or easily accessible, and when required per section 84.9(E)(5), submit UASMP modifications to amend the User Authorization to the Treater and Division.
 - ii. Maintain accurate records of signatures for Trained Workers and other individuals that use reclaimed water on the authorized Site who have been educated per 84.10(B)(4)(a).
 - iii. Ensure all staff managing reclaimed water and contracted workers who implement the requirements in this regulation and other individuals that use reclaimed water on the authorized Site are educated about reclaimed water per the education and training requirements in sections 84.6(F)(4), 84.10(A)(3) and 84.10(B)(4)(a).
 - iv. Ensure all staff managing reclaimed water and contracted workers who implement the requirements in this regulation and other individuals that use reclaimed water on the authorized Site are in compliance with the applicable Implementation Requirements in section 84.10 and the requirements in the UASMP and User Authorization.
 - v. Implement appropriate procedures and actions to minimize the occurrence of violations, and obtain compliance with the requirements of the UASMP and User Authorization. If necessary, implement sanctions for recalcitrant and repetitive violations that includes but is not limited to requesting termination of service of reclaimed water to the Site.
 - vi. Inspect Site prior to each approved use to ensure all of the requirements in the User Authorization and UASMP are in compliance.
 - vii. Ensure that there are no discharges to groundwater or state waters during “shut down” of a Site when discontinuing use of reclaimed water.
 - viii. Report violations to the Treater and the Division and keep violations documented with the location information until use of reclaimed water ceases.
- (d) Requirements for lay-flat hoses, couplings, and other appurtenances:
- i. Identify the conveyance as carrying non-potable water by labelling every section of pipe as “non-potable water” using stenciling or some other labelling mechanism. Alternatively, signage that states “non-potable water” can be placed at every coupling, joint or pump.
 - ii. During periods of reclaimed water use within the lay-flat conveyance, an additional method of identification must be utilized to clearly indicate that reclaimed water is being transported through the line. This must be accomplished by placing small flags, ribbon, tape, etc. labeled with “RECLAIMED WATER – NOT FOR DRINKING OR DO NOT DRINK” at the mid-point between couplings, joint or pump (each section of hose) or approximately every 350 feet. This requirement can be reduced in areas where access is limited (such as through private property), but must be identified in the UASMP.
 - iii. Pass a hydrostatic pressure test conducted in accordance with the UASMP using methods, procedures and practices that reflect best industry practices appropriate for the system and conditions present and that provides appropriate results to confirm leaks are not present in the conveyance system and comply with the requirements within Regulation

84. Results of testing must be available for verification during any Site inspection.
- iv. Inspect the hose daily for leaks. If a leak is detected or discovered, immediately discontinue use until the leak has been properly repaired such that the leak is no longer present. Records of daily leak inspections must be maintained for a minimum of one year and kept onsite for Treater and Division review.
 - v. Install and operate appropriate leak detection equipment.
 - vi. All spills requiring reporting in accordance with §25-8-601 (2), CRS must be reported to CDPHE using the toll-free 24-hour environmental emergency and incident reporting line within 24 hours of being discovered. Spills must also be reported to the Treater within 24 hours.
 - vii. To protect potable water sources, backflow prevention or cross connection control equipment must be used when loading water from a potable water source.
 - viii. If lay-flat hose is extended through public or private property, property owners must be notified that non-potable, reclaimed water is being delivered through the lay-flat hose and that the hose should not be tampered with. The process used to notify property owners, including how the notification is issued and the timing of the notice, must be explained within the UASMP.
 - ix. When lay-flat hose intersects a roadway, a hose protector ramp must be used to prevent vehicles and other equipment from directly driving over the hose.
- (e) Vehicles and tank trailers used to haul reclaimed water must follow the following requirements:
- i. The exterior of the tank shall be labelled with signage indicating the tank is transporting non-potable water.
 - ii. The driver is required to notify the Treater and User of any spills of reclaimed water. All spills requiring reporting in accordance with §25-8-601(2) CRS must be reported to CDPHE using the toll-free 24-hour environmental emergency and incident reporting line.
 - iii. To protect potable water supplies, backflow prevention or cross connection control equipment must be used when loading water from a potable water source into tank labeled as non-potable.
- (f) When reclaimed water is delivered through temporary conveyances, the conveyance must meet the definition of lay flat hose as defined in section 84.5(26) or be constructed of HDPE material.
- (g) Disposal of reclaimed water from any storage, conveyance or other source whereby reclaimed water was used shall be done in such a manner that does not create a point source discharge requiring a NPDES or CDPS permit or does not create a spill that would require reporting in accordance with §25-8-601(2) CRS.
- (h) The Division and Treaters must be notified at least one (1) week prior to the installation of any lay-flat hose that is to be used for conveyance of reclaimed water. The Division and Treaters must also be notified within 24 hours of the removal of any lay-flat hose that has been utilized for conveyance of reclaimed water.

- (i) Prior to the commencement of any oil and gas operations at a pad site, Operator must complete an initial analysis of reclaimed water delivered to the Site and obtain results prior to use of reclaimed water for Oil and Gas Operation on Site.
 - i. The initial analysis must include an analytical method that characterizes and quantifies the microbiological water quality of the reclaimed water.
 - ii. If the reclaimed water remains on location, additional analyses using the same analytical method must be conducted on samples obtained from site bulk storage to ensure water quality is still appropriate to avoid introduction of sulfur reducing bacteria into the well formation. The frequency must be at least every 10 calendar days unless the UASMP documents that an alternative frequency can achieve this requirement.
 - iii. Each User will record the analytical results and will make those results available to the Treater or Division upon request.
 - iv. The UASMP shall include a detailed description of the analytical practice.
- (5) Washwater Applications
 - (a) Washing activities must be contained (e.g., flow into lined pit or approved concrete washout area, or within enclosed equipment), as to prevent any off-site runoff or discharge to groundwater. Workers shall be trained on the proper use and washing procedures when using reclaimed water.
 - (b) A sign that meets the minimum requirements in section 84.10(A)(4) is required in the area(s) where reclaimed water is used.
 - (c) Applications rates or other measures shall be employed to minimize ponding or runoff from the area approved for application and use.
 - (d) Where there is potential for trained worker or public exposure to aerosols generated in the use, Users of Category 2 reclaimed water shall employ measures to prevent frequent exposure of trained workers and the public to aerosols by one of the following methods:
 - i. Restricted access,
 - ii. A minimum setback distance of 100 feet between the nearest source of aerosol generations and areas where trained workers or the public are normally present,
 - iii. Physical barriers between aerosol sources and humans,
 - iv. Personal protective equipment to prevent inhalation,
 - v. Functionally equivalent measures approved by a qualified individual (e.g. a certified industrial hygienist), or
 - vi. Other measures approved by the Division and authorized in the User Authorization.
- (6) Restricted Access Landscape Irrigation
 - (a) Application rates or other measures shall be employed to minimize ponding or runoff from the area approved for application and use and prevent irrigation in excess of agronomic rate. Application rates must be controlled to ensure that associated pollutants do not pass through the root zone of the plants to be irrigated (e.g. automated irrigation schedule, rain shutoff devices, application at evapotranspiration rates adjusted for efficiency, daily inspections, or other means).

- (b) Flood and sheet irrigation are prohibited.
 - (c) Ensure that direct and windblown spray and other means of human exposure from irrigation systems will be confined to the areas designated and approved in the User Authorization.
 - (d) There must be signage that meets the requirements in section 84.10(A)(4).
 - (e) If using Category 1 reclaimed water, restrict access to landscaped areas either by:
 - i. Irrigating only during periods approved in the User Authorization so as to strictly minimize public contact with reclaimed water, or
 - ii. Installing barriers to prevent public access to the Site, as approved in the User Authorization, restricting irrigation to times when the barriers are in place, and ceasing irrigation at least one hour prior to the barriers being totally or partially removed.
- (7) Unrestricted Access Landscape Irrigation
- (a) Application rates or other measures shall be employed to minimize ponding or runoff from the area approved for application and use and prevent irrigation in excess of agronomic rate. Application rates must be controlled to ensure that associated pollutants do not pass through the root zone of the plants to be irrigated (e.g. automated irrigation schedule, rain shutoff devices, application at evapotranspiration rates adjusted for efficiency, daily inspections, or other means).
 - (b) Flood and sheet irrigation are prohibited.
 - (c) Ensure that direct and windblown spray and other means of human exposure from irrigation systems will be confined to the areas designated and approved in the User Authorization.
 - (d) There must be signage that meets the requirements in section 84.10(A)(4).
 - (e) No reclaimed water piping shall be extended to or supported from any residential structure and there shall be no accessible above ground outlets from the reclaimed water system at any residential structure. At least one exterior hose bib, supplied with potable water, shall be labeled and provided at each residential structure.
- (8) Resident-Controlled Landscape Irrigation
- (a) Application rates or other measures shall be employed to minimize ponding or runoff from the area approved for application and use and prevent irrigation in excess of agronomic rate.
 - (b) Ensure that direct and windblown spray and other means of human exposure from irrigation systems will be confined to the areas designated and approved in the User Authorization.
 - (c) No reclaimed water piping shall be extended to or supported from any residential structure and there shall be no accessible above ground outlets from the reclaimed water system at any residential structure. At least one exterior hose bib, supplied with potable water, shall be labeled and provided at each residential structure.

- (d) Each residence must have at least one sign that indicates that irrigation is from non-potable water and that it is not suitable for drinking.
 - (e) Unless a homeowners association or other entity acceptable to the Division (e.g. property management company) assumes responsibility, the Treater shall be responsible for all information required in the UASMP and shall act as the User's legal representative for purposes of certification pursuant to section 84.14.
- (9) Zoo Operations
- (a) If Category 1 reclaimed water is used, public access to areas where reclaimed water is used must be restricted by time or by barrier.
- (10) Commercial Laundries
- (a) Where there is potential for trained worker or public exposure to aerosols generated in the use, Users of Category 2 reclaimed water shall employ measures to prevent frequent exposure of trained workers and the public to aerosols by one of the following methods:
 - i. Implement onsite disinfection residual within the premise plumbing,
 - ii. Restricted access,
 - iii. A minimum setback distance of 100 feet between the nearest source of aerosol generations and areas where trained workers or the public are normally present,
 - iv. Physical barriers between aerosol sources and humans,
 - v. Personal protective equipment to prevent inhalation,
 - vi. Functionally equivalent measures approved by a qualified individual (e.g. a certified industrial hygienist), or
 - vii. Other measures approved by the Division and authorized in the User Authorization.
 - (b) There must be at least one sign that meets the minimum signage requirements in section 84.10(A)(4) at the entrance of the facility.
- (11) Automated Vehicle Washing and Manual Non-Public Vehicle Washing
- (a) Applications rates or other measures shall be employed to minimize ponding or runoff from the area approved for application and use.
 - (b) Where there is potential for trained worker or public exposure to aerosols generated in the use, Users of Category 2 reclaimed water shall employ measures to prevent frequent exposure of trained workers and the public to aerosols by one of the following methods:
 - i. Restricted access,
 - ii. A minimum setback distance of 100 feet between the nearest source of aerosol generations and areas where trained workers or the public are normally present,
 - iii. Physical barriers between aerosol sources and humans,
 - iv. Personal protective equipment to prevent inhalation,
 - v. Functionally equivalent measures approved by a qualified individual (e.g. a certified industrial hygienist), or

- vi. Other measures approved by the Division and authorized in the User Authorization.
- (c) There must be at least one sign that meets the minimum signage requirements in section 84.10(A)(4) located at each vehicle entry point.
- (12) Nonresidential Fire Protection and Residential Fire Protection
 - (a) The User shall develop and implement a program, including notices in fire department newsletters and fire department preplans to educate the public and firefighters that reclaimed water is used for fire protection. An annual cross connection control inspection or test shall be made at each structure to which reclaimed water piping is extended for fire protection to ensure that no cross connection exists.
 - (b) Land Application discharges of reclaimed water from the fire suppression system during emergency firefighting activities that results in complete evapotranspiration is allowed and not subject to reporting requirements in 25-8-601(2), C.R.S.
- (13) Non-Food Crop Irrigation and Silviculture
 - (a) Application rates or other measures shall be employed to minimize ponding or runoff from the area approved for application and use and prevent irrigation in excess of agronomic rate. Application rates must be controlled to ensure that associated pollutants do not pass through the root zone of the plants to be irrigated (e.g. automated irrigation schedule, rain shutoff devices, application at evapotranspiration rates adjusted for efficiency, daily inspections, or other means).
 - (b) Flood and sheet irrigation are prohibited.
 - (c) If using Category 1 reclaimed water, restrict access to landscaped areas either by:
 - i. Irrigating only during periods approved in the User Authorization so as to strictly minimize public contact with reclaimed water, or
 - ii. Installing barriers to prevent public access to the Site, as approved in the User Authorization, restricting irrigation to times when the barriers are in place, and ceasing irrigation at least one hour prior to the barriers being totally or partially removed.
 - (d) Ensure that direct and windblown spray and other means of human exposure from irrigation systems will be confined to the areas designated and approved in the User Authorization.
 - (e) There must be signage that meets the requirements in section 84.10(A)(4).
- (14) Commercial Food Crop Growing Operation
 - (a) Application rates or other measures shall be employed to minimize ponding or runoff from the area approved for application and use and prevent irrigation in excess of agronomic rate. Application rates must be controlled to ensure that associated pollutants do not pass through the root zone of the plants to be irrigated (e.g. automated irrigation schedule, rain shutoff devices, application at evapotranspiration rates adjusted for efficiency, daily inspections, or other means).
 - (b) Flood and sheet irrigation are prohibited.

- (c) Ensure that direct and windblown spray and other means of human exposure from irrigation systems will be confined to the areas designated and approved in the User Authorization.
 - (d) Commercially Processed Crops Sites must comply with any applicable requirements of the Rules Pertaining to the Administration and Enforcement of the Produce Safety Act, 8 CCR 1202-17. Compliance information with 8 CCR 1202-17 must be described in the Regulation 84 Annual Report provided by the Treater.
 - (e) Harvesting of crops in areas where irrigation is occurring and making the soil and/or plant wet is prohibited. Public access in areas where irrigation is occurring and making the soil and/or plants wet is prohibited. Irrigation schedules must be described in the UASMP.
 - (f) Irrigation of sprouts is prohibited where the sprout is the food crop, including but not limited to bean sprouts, alfalfa sprouts, and hemp clones.
 - (g) Comply with the educational requirements in section 84.10(A)(3) and:
 - i. Educate Users, cultivators and visitors of the hand washing and hand washing station requirements under the Rules Pertaining to the Administration and Enforcement of the Produce Safety Act, 8 CCR 1202-17.
 - ii. Each individual required to receive this education must affirm with a signature that the training was received. These training records must be available on Site or easily assessable for the Division and/or Treat for review.
 - (h) Comply with the minimum Signage Requirements in section 84.10(A)(4) and inform on either the same sign or different signs that crops are irrigated with reclaimed water. One of the following frequency and distance requirements must also be met:
 - i. For Sites under three acres, signs of at least 8.5 x 11" must be placed on portions of the perimeter within public view. For Sites over three acres but smaller than 25 acres, signs of at least 8.5 x 11" must be placed at no greater than 500 feet apart on any portions of the perimeter within public view. Distance and locations of signage must be described via map or description in the UASMP and User Authorization for the Site.
 - ii. A sign of at least 2 x 1' must be placed at the main point of entry to the Site that also states that hands should be washed after coming into contact with irrigated crops or soils and/or irrigation of crops, and produce must be washed with potable water after harvest.
 - (i) A manual or display must be onsite at all times that describe what reclaimed water is, the Implementation Requirements required by the UASMP and the User Authorization, and irrigation practices that will prevent irrigation in excess of agronomic rate and minimize ponding or runoff of reclaimed water. This must be accessible to all visitors, trained workers and Users.
 - (j) Hand washing facilities as required in the Rules Pertaining to the Administration and Enforcement of the Produce Safety Act, 8 CCR 122-17 must be provided.
- (15) Non-Commercial Food Crop Growing Operation
- (a) Application rates or other measures shall be employed to minimize ponding or runoff from the area approved for application and use and prevent irrigation in

- excess of agronomic rate. Application rates must be controlled to ensure that associated pollutants do not pass through the root zone of the plants to be irrigated (e.g. automated irrigation schedule, rain shutoff devices, application at evapotranspiration rates adjusted for efficiency, daily inspections, or other means).
- (b) Ensure that direct and windblown spray and other means of human exposure from irrigation systems will be confined to the areas designated and approved in the User Authorization.
 - (c) Comply with the educational requirements in section 84.10(A)(3) and:
 - i. Educate Users and Cultivators that potable water must be used to wash hands and produce after harvesting produce, irrigating with reclaimed water and interacting with soils irrigated with reclaimed water. If hand washing with potable water is not available, hand sanitizer containing at least 60% alcohol must be used.
 - ii. Each individual required to receive this education must affirm with a signature that the training was received. These training records must be available on site or easily assessable for the Division and/or Treat tor review.
 - (d) Comply with the minimum Signage Requirements in section 84.10(A)(4) and inform on either the same sign or different signs that crops are irrigated with reclaimed water. One of the following frequency and distance requirements must also be met:
 - i. For Sites under three acres, signs of at least 8.5 x 11" must be placed on portions of the perimeter within public view. For Sites over three acres but smaller than 25 acres, signs of at least 8.5 x 11" must be placed at no greater than 500 feet apart on any portions of the perimeter within public view. Distance and locations of signage must be described via map or description in the UASMP and User Authorization for the Site.
 - ii. A sign of at least 2 x 1' must be placed at the main point of entry to the Site that also states that hands should be washed with potable water after coming into contact with irrigated crops or soils and/or irrigation of crops, and produce must be washed with potable water after harvest.
 - (e) Hose bibs that supply reclaimed water must be locked (with a non-duplicative key for access) and/or only accessible by a key code that may not be shared with any individual who has not received the Treater's education and training program in section 84.6(F)(4) and additional educational requirements in section 84.10(A)(3) and section 84.10(B)(15)(c).
 - (f) Children in eighth grade or younger must be supervised by an adult at the garden. Minors who are in ninth grade and older who have not been educated per the Treater's education and training program in section 84.6(F)(4) and section 84.10(B)(15)(c) must also be supervised by an adult. Supervising adults must be educated per the Treater's education and training program in section 84.6(F)(4).
 - i. For Sites that use hoses for reclaimed water irrigation, one additional supervising adult must be present with children in eighth grade and younger to oversee the appropriate use for each active hose/hose spigot beyond the first. If a Site is three acres or more, and the garden is divided into different sections that are clearly demarcated, children in eighth grade or younger can be on site if they are in a section where the

- water delivery mechanism in that section is disabled and the child is supervised.
- ii. This condition will not apply to a Site upon findings that monitoring for one irrigation season demonstrates that reclaimed water on-site meets the Category 3 water quality standards (no E. coli detected in at least 75% of samples in a calendar month and 126 cfu/100 ml single sample maximum). Monitoring shall occur at least every other month during the irrigation season. If the Division omits this condition from the User Authorization, the User must continue to monitor E. coli levels at the Site at least every other month during the irrigation season. Results must be submitted to the division for approval before this condition is not applicable to the User Authorization. If E. coli levels are above 126 cfu/100 ml at the Site, E. coli is detected in more than 25% of samples in a calendar month, the User fails to continue monitoring, or the Division or the Treater have found that the User is not consistently complying with this Regulation and all applicable requirements in the UASMP and User Authorization, the Division may require compliance with this condition through an amended User Authorization.
- (g) A manual or display must be onsite at all times that describe what reclaimed water is, the Implementation Requirements required by the UASMP and the User Authorization, and irrigation practices that will prevent irrigation in excess of agronomic rate and minimize ponding or runoff of reclaimed water. This must be accessible to all Visitors, Trained Workers and Users.
 - (h) Irrigation of sprouts is prohibited where the sprout is the food crop, including but not limited to bean sprouts, alfalfa sprouts, and hemp clones.
 - (i) Users shall allow the Division or its authorized representative to conduct inspection of the Site at a reasonable time and in a reasonable manner, without prior notification, to assess compliance with this regulation and the User Authorization. This includes allowing access to area(s) where irrigation is occurring and allowing the Division or its authorized representative to interview any person(s) present at the Site. Pursuant to CRS 25-8-306, the Division will provide the User with the credentials for any inspector that may conduct such inspections at a date prior to conducting any inspections and inspectors will present proper credentials to any User present at the Site who requests them at the time of inspection.
 - (j) A Site Manager is required. Responsibilities and authority for Site Managers are:
 - i. Ensure an accurate UASMP and User Authorization are onsite or easily accessible, and when required per section 84.9(E)(5), submit UASMP modifications to amend the User Authorization to the Treater and Division.
 - ii. Maintain accurate records of Cultivators, Trained Workers and other individuals that use reclaimed water on the authorized Site that have been educated per 84.10(B)(15)(c).
 - iii. Ensure all Cultivators, Trained Workers and other individuals that use reclaimed water on the authorized Site are educated about reclaimed water per the requirements in sections 84.6(F)(4) and 84.10(A)(3) and 84.10(B)(15)(c).
 - iv. Ensure all Cultivators, Trained Workers and other individuals that use reclaimed water on the authorized Site are in compliance with the applicable Implementation Requirements in section 84.10 and the requirements in the UASMP and User Authorization.

- v. Implement appropriate procedures and actions to minimize the occurrence of violations, and obtain compliance with the requirements of the UASMP and User Authorization. Implement sanctions for recalcitrant and repetitive violations that includes but is not limited to denial of water use or banning individuals from the Site.
 - vi. Inspect Site prior to the first of reclaimed water at the Site each calendar year.
 - vii. Routine inspections are requirement every 14 days and at least 5 days from the previous inspection. Inspections must include and document that all Implementation Requirements and conditions in the UASMP and User Authorization are being met and available for the Division and Treater to review.
 - viii. Ensure compliance with 84.10(B)(15)(m).
 - (k) Irrigation equipment that is used for reclaimed water shall not be hooked up to potable water spigots or hose bibs.
 - (l) Users may need to provide any additional information necessary in the UASMP to identify how they will comply with the Implementation Requirements in 84.10 and to prevent irrigation in excess of the agronomic rate and to minimize ponding or runoff of reclaimed water. BMPs include any method used to protect public health and the environment. BMPs include, but are not limited to, schedules of activities, prohibitions of practices, maintenance procedures, and other management practices.
 - (m) Potable water supply or hand sanitizer containing at least 60% alcohol must be readily available for Users, Visitors and Trained Workers to sanitize hands after any interaction with landscapes or agricultural crops that have been irrigated with reclaimed water. If the Site is not located within a reasonable distance from lavatories/sinks, hand sanitizer or a portable hand washing station may be used and:
 - i. Unused water from portable hand washing stations must be disposed of in an area whereby it will not come into contact with crops, soils or infiltration into soils near crops. The disposal must not create an unpermitted point source discharge to a water of the state.
- (16) Resident-Controlled Food Crop Irrigation
- (a) Application rates or other measures shall be employed to minimize ponding or runoff from the area approved for application and use and prevent irrigation in excess of agronomic rate. Application rates must be controlled to ensure that associated pollutants do not pass through the root zone of the plants to be irrigated (e.g. automated irrigation schedule, rain shutoff devices, application at evapotranspiration rates adjusted for efficiency, daily inspections, or other means).
 - (b) Ensure that direct and windblown spray and other means of human exposure from irrigation systems will be confined to the areas designated and approved in the User Authorization.
 - (c) All property owners and renters must be provided with an educational manual and verbally educated by the Management User that complies with the minimum requirements set forth in section 84.10(A)(3) and the minimum requirements set forth in the Treater's education and training program in section 84.6(F)(4). Additionally, the Management User shall:

- i. Educate Users and cultivators that produce and hand washing with potable water is required after harvesting produce, irrigating with reclaimed water and interacting with soils irrigated with reclaimed water.
 - ii. Each individual required to receive this education must affirm with a signature that the training was received. These training records must be available on site or easily assessable for the Division and/or Treator review.
 - iii. If the property is rented or sold at a later date, the new occupants must also be provided with the verbal education and manual, and provide signature that education was received. The Management User must retain the signatures onsite.
- (d) A manual or display must be onsite at all times that describe what reclaimed water is, the Implementation Requirements required by the UASMP and the User Authorization, and irrigation practices that will prevent irrigation in excess of agronomic rate and minimize ponding or runoff of reclaimed water. This must be accessible to all visitors, trained workers and Users.
- (e) Irrigation of sprouts is prohibited where the sprout is the food crop, including but not limited to bean sprouts, alfalfa sprouts, and hemp clones.
- (f) If the Site is irrigated with an automated irrigation system, the food crops must be irrigated on a separate irrigation zone than the non-food crop landscape.
- (g) A Management User is required. Responsibilities and authority for Management Users are:
 - i. Ensure each homebuyer or renter that uses reclaimed water on the authorized Site are educated about reclaimed water per the education and training requirements in sections 84.6(F)(4), 84.10(A)(3) and 84.10(B)(16)(c), that the educational manual described in section 84.10(B)(16)(c) is provided prior to residents occupying the property, and a signature is obtained by the homeowner or renter that proves acknowledgement of understanding of the risks associated with using reclaimed water. Copies of signed documents must be kept onsite by the Management User.
 - ii. Maintain up to date maps/records of locations, number and acreage of Sites where reclaimed water is used to irrigate edible crops and landscapes, and update Treater on a biannual basis.
 - iii. Calculate the agronomic rate analysis for each Site to ensure agronomic rate will not be exceeded.
 - iv. Monitor water usage in gallons at minimum on a monthly basis to ensure agronomic rate is not exceeded. The UASMP shall indicate whether the monitoring responsibility belongs to the Treater or the Management User.
 - v. Implement appropriate procedures and actions to obtain compliance with, the requirements of the UASMP and User Authorization. Implement sanctions for recalcitrant and repetitive violations that includes but is not limited to denial of water use.
 - vi. The division will not issue a User Authorization if the agronomic rate analysis demonstrates that given the nitrogen concentrations in the

- reclaimed water, that there is a reasonable potential that with the quality of irrigation water needed, the agronomic rate will be exceeded.
- vii. During inspections by the Division, violations will be issued to the Management User and/or Legally Responsible Individual or associated entity listed in the User Authorization.
 - viii. Management Users must, at minimum, conduct 10% representative garden Site visits annually with Users of reclaimed water. Inspections must include and document that all Implementation Requirements and conditions in the UASMP and User Authorization are being met. Inspection results must be and available for the Division and Treater to review.
 - ix. Report violations to the Treater and Division and keep violations documented with the location information.
 - (h) Each residence must have at least one sign that indicates that irrigation is from non-potable water, it is not suitable for drinking and that food crops should be washed with potable water.
 - (i) Only drip, subsurface drip, button drip or other low to the ground irrigation systems are allowed and must cover a small distribution area.
 - (j) A potable water supply spigot must be available on the exterior of the residence.
- (17) Edible and Non-Edible Hemp Irrigation
- (a) Application rates or other measures shall be employed to minimize ponding or runoff from the area approved for application and use and prevent irrigation in excess of agronomic rate. Application rates must be controlled to ensure that associated pollutants do not pass through the root zone of the plants to be irrigated (e.g. automated irrigation schedule, rain shutoff devices, application at evapotranspiration rates adjusted for efficiency, daily inspections, or other means).
 - (b) Comply with the educational requirements in section 84.10(A)(3) and:
 - i. Educate Users and cultivators that produce and hand washing with potable water is required after harvesting produce, irrigating with reclaimed water and interacting with soils irrigated with reclaimed water. If hand washing with potable water is not available, hand sanitizer containing at least 60% alcohol must be used.
 - ii. Each individual required to receive this education must affirm with a signature that the training was received. These training records must be available on site or easily assessable for the Division and/or Treater for review.
 - (c) Comply with the minimum Signage Requirements in section 84.10(A)(4) and inform on either the same sign or different signs that crops are irrigated with reclaimed water. One of the following frequency and distance requirements must also be met:
 - i. For Sites under three acres, signs of at least 8.5 x 11" must be placed on portions of the perimeter within public view. For Sites over three acres but smaller than 25 acres, signs of at least 8.5 x 11" must be placed at no greater than 500 feet apart on any portions of the perimeter within public view. Distance and locations of signage must be described via map or description in the UASMP and the User Authorization for the Site.

- ii. A sign of at least 2 x 1' must be placed at the main point of entry to the Site that also states that hands should be washed with potable water after coming into contact with irrigated crops or soils and/or irrigation of crops, and produce must be washed with potable water after harvest.
- (d) A manual or display must be onsite at all times that describe what reclaimed water is, the Implementation Requirements required by the UASMP and the User Authorization, and irrigation practices that will prevent irrigation in excess of agronomic rate and minimize ponding or runoff of reclaimed water. This must be accessible to all visitors, trained workers and Users.
- (e) Irrigation of sprouts is prohibited where the sprout is the food crop, including but not limited to bean sprouts, alfalfa sprouts, and hemp clones (**EXCEPTION: NON-EDIBLE HEMP IRRIGATION**).
- (f) Harvesting of crops in areas where irrigation is occurring and making the soil and/or plant wet is prohibited. Public access in areas where irrigation is occurring and making the soil and/or plants wet is prohibited.
- (g) Flood and sheet irrigation are prohibited.
- (h) Ensure that direct and windblown spray and other means of human exposure from irrigation systems will be confined to the areas designated and approved in the User Authorization.
- (i) A Site Manager is required. Responsibilities and authority for Site Managers are:
 - i. Ensure an accurate UASMP and User Authorization are onsite or easily accessible, and when required per section 84.9(E)(5), submit UASMP modifications to amend the User Authorization to the Treater and Division.
 - ii. Maintain accurate records of Cultivators, Trained Workers and other individuals that use reclaimed water on the authorized Site who have been educated per 84.10(B)(17)(b).
 - iii. Ensure all Cultivators, Trained Workers, Visitors and other individuals that use reclaimed water on the authorized Site are educated about reclaimed water per the education and training requirements in sections 84.6(F)(4) and 84.10(A)(3) and 84.10(B)(17)(b).
 - iv. Ensure all Cultivators, Trained Workers and other individuals that use reclaimed water on the authorized Site are in compliance with the applicable Implementation Requirements in section 84.10 and the requirements in the UASMP and User Authorization.
 - v. Implement appropriate procedures and actions to minimize the occurrence of violations, and obtain compliance with the requirements of the UASMP and User Authorization. Implement sanctions for recalcitrant and repetitive violations that includes but is not limited to denial of water use or banning individuals from the Site.
 - vi. Inspect Site prior to the first of reclaimed water at the Site each calendar year.
 - vii. Routine inspections of at least one per month are required during the irrigation season.
 - viii. Report violations to the Treater and the Division and keep violations documented with the location information.

- (j) Potable water supply or hand sanitizer containing at least 60% alcohol must be readily available for Users, Visitors and Trained Workers to sanitize hands after any interaction with landscapes or agricultural crops that have been irrigated with reclaimed water. If the Site is not located within a reasonable distance from lavatories/sinks, hand sanitizer or a portable hand washing station may be used and:
 - i. Unused water from portable hand washing stations must be disposed of in an area whereby it will not come into contact with crops, soils or infiltration into soils near crops. The disposal must not create an unpermitted point source discharge to a water of the state.
 - ii. The Site Manager (for Non-Commercially Processed Food Crop Growing Operations) is responsible for ensuring that the portable hand washing station contains potable water.
- (k) If using Category 1 reclaimed water, restrict access to landscaped areas either by:
 - i. Irrigating only during periods approved in the User Authorization so as to strictly minimize public contact with reclaimed water, or
 - ii. Installing barriers to prevent public access to the Site, as approved in the User Authorization, restricting irrigation to times when the barriers are in place, and ceasing irrigation at least one hour prior to the barriers being totally or partially removed.

(18) Toilet and Urinal Flushing

- (a) Reclaimed water may be used for toilet and urinal flushing provided that the User adopts and follows best management practices (BMPs) to minimize growth of and trained worker exposure to Legionella and other premise plumbing opportunistic pathogens. The User or the Treater (person) must be responsible for monitoring disinfection at the point of compliance and operation and maintenance of the chlorine boosting system or the alternative disinfection method. This person must be identified in the UASMP. BMPs shall be specified in a site-specific operation and maintenance plan as described in section 84.10(B)(18)(f), and shall include at least one of the following:
 - i. Maintenance of a minimum 0.2 mg/L of free chlorine disinfectant or 0.5 mg/L of monochloramine residual if ammonia is present in premise plumbing. The disinfection residual shall be measured at a location at a distance of no greater than 50 feet from the location of use at the distal end or a location that represents the oldest water age within the reclaimed water premise plumbing system. This may require chlorine "boosting" at the point that reclaimed water enters a structure. The monitoring frequency will be no less frequent than once (grab samples) per week. If the disinfectant residual is not in compliance with this requirement, the system must perform operations and maintenance and return all premise plumbing to a minimum 0.2 mg/L disinfection residual for free chlorine or 0.5 mg/L disinfection residual for monochloramine within 24 hours. Exact monitoring locations, and other compliance terms, will be identified in the site specific operation and maintenance plan submitted as part of the UASMP. The system must maintain records of all sampling, locations, and corrective operations for review by the Treater or Division upon request.

- ii. An alternative disinfection method as approved by the Division with equivalent protection against premise plumbing pathogens as set forth in section 84.10(B)(18)(a)(i) above. The effectiveness of an alternative disinfection method may be verified by monitoring. The monitoring plan and any requirements for implementation of any Division approved alternative disinfection method must be included in the UASMP and User Authorization.
 - iii. Where reclaimed water is used for indoor non-potable uses within a building where plumbing fixtures are accessible by the general public, a monitoring location for disinfection residual at a distance no greater than 50 feet from the location of use at the distal end or a location that represents the oldest water age within the reclaimed water premise plumbing system may be used as an alternate point of compliance for disinfection residual.
- (b) To minimize the risk of unintended cross connections, plumbing modifications and repairs shall only be conducted by licensed plumbers.
 - (c) Signage shall indicate that all plumbing modifications can only be done by authorized personnel.
 - (d) Toilet and urinal installations must be conducted in accordance with article 155 of title 12 (concerning plumbers) and rules promulgated pursuant to that article.
 - (e) Reclaimed water shall not be used if it is stored in an outdoor storage facility exposed to the open atmosphere after treatment.
 - (f) The User must include an operations and maintenance plan to be kept on Site that reflects current conditions.
 - (g) Users receiving reclaimed water for use within an occupied premise, must include a backup potable water connection capable of supplying potable water to fixtures for flushing via an air gap should the reclaimed water treatment system fail or the reclaimed water is found to be non-compliant or insufficient in volume.
 - (h) A Certified Cross-Connection Control Technician shall complete a survey prior to initial operation of the system to detect uncontrolled cross connections. Inspections or tests must be conducted at intervals thereafter as mandated in the User Authorization. The User must maintain a current diagram of the structure's potable, reclaimed water, and wastewater plumbing.

(C) Reclaimed Water Land Application Discharges

- (1) Reclaimed water shall not be used in a manner that results in a land application discharge, unless
 - (a) The land application discharge is authorized by a CDPS permit;
 - (b) The land application discharge is exempted from CDPS permitting in accordance with Regulation 61.14(1)(b); or
 - (c) The land application discharge is occurring under the provisions of, and in compliance with, a User or Treater Authorization issued pursuant to this Regulation 84 for a use identified in Table B, below, and therefore exempted from CDPS discharge permitting in accordance with Regulation 61.14(1)(a)(v). Table B identifies authorized uses of reclaimed water that have land application allowances and which are required to minimize and/or strictly prohibit the discharge of reclaimed water to waters of the state.

Table B: Authorized Reclaimed Water Uses and Land Application Allowances and Prohibitions

Land Application Status	Authorized Uses	Regulatory Reference(s)
Land application allowed when the design and operation of the system will result in complete evapotranspiration of reclaimed water	Landscape Irrigation, Agricultural Irrigation, and Fire Protection	Regulation 61.14(1)(b)
Land application allowed at agronomic rate (as defined in Regulation 84)	Landscape Irrigation and Agricultural Irrigation Uses	Regulation 84.10(B)(6-8) and 84.10(B)(13-17)
All land application prohibited	Industrial, Commercial and Toilet and Urinal Flushing	Regulation 84.10(B)(1-5), 84.10(B)(9-11), and 84.10(B)(18)

84.11 MONITORING, RECORD KEEPING AND REPORTING

- (A) Treaters and Users operating pursuant to a Treater or User Authorization shall be subject to such monitoring, record keeping, and reporting requirements as may be reasonably required by the Division to ensure compliance with the requirements of this regulation, and the Treater or User Authorization, including, but not limited to the following:
 - (1) For Treaters: the quality of reclaimed water produced and delivered at the point(s) of compliance, inspections of a representative number and type of User sites to determine User compliance, and self-certifications in section 84.9(A)(8) submitted to the Treater by Users.
 - (2) For each User, the total volume of reclaimed water used per year. For Landscape Irrigation Users and Agricultural Irrigation Users, each location with the associated acreage where reclaimed water was applied.
 - (3) For each User using Category 1 reclaimed water, confirmation that reclaimed water was used only during authorized use times (if applicable).
- (B) Treaters shall provide an annual report to the Division for the previous year, by March 31st, that includes the following:
 - (1) Information demonstrating the Treater’s compliance with the reclaimed water standards, including applicable treatment requirements described in section 84.7, 84.8, 84.9 and for localized systems, 84.16 of this regulation.
 - (2) Confirmation that the Treater conducted inspections pursuant to section 84.11(A)(1) above.
 - (3) Violations of this regulation by Users pursuant to section 84.11(C)(1) and (2), below.
 - (4) A certification statement by the Treater as per section 84.14 below regarding the information provided by the treater in subsections (1) and (2) above.

- (5) Information supplied by Users to the Treater demonstrating compliance with the conditions applicable to each specific User included in the notice of authorization.
 - (6) Certification statements from each User as per section 84.14 below regarding the information provided in subsection (5) above.
- (C) The Treater and Users shall report any violations as follows:
- (1) Violations of this regulation and/or Authorizations at their respective facilities in writing to the Division, within thirty days of becoming aware of the violation. Where the Treater finds violations by a User, the thirty day period for reporting is waived for a period of up to thirty additional days, if the Treater is working with the User to resolve the violation. If the violation is resolved, no separate notice to the Division is required except that the violation is to be reported in the treater's annual report. If the violation is continuing after a total of sixty days from the time the Treater became aware of the violation, the Treater shall report the violation to the Division within five working days. Nothing in this section precludes a User from reporting violations by a Treater to the Division.
 - (2) For more serious violations (including non-permitted discharges to surface waters, uncontrolled cross-connections, exceedances of the reclaimed water standards for E. coli, turbidity, secondary standards, continuous proper operations and maintenance of treatment systems while producing reclaimed water, the Treater and/or User Authorization conditions of the site location and design approvals, or other violations posing an immediate threat to public health or the environment): orally to the Division within 24 hours of becoming aware of the violation, followed up by a written report within five working days. The written report shall contain a description of the noncompliance, including exact dates and times; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

84.12 VARIANCES

The Division may grant a variance from any provision of this regulation as set forth below:

- (A) With respect to the E.coli standards in section 84.7, a variance may only be granted from the "235/100 ml single sample maximum" standard. The Division may grant this variance when the treater or the user demonstrates that the benefits to public health or the environment that will be created by compliance with the E. coli standards in section 84.7 do not bear a reasonable relationship to the costs required to achieve compliance.
- (B) With respect to a use that is not listed in Table A of section 84.10, the Division may grant a variance in a Treater Authorization (and subsequent User Authorization(s)) to authorize the use and identify any necessary requirements when the following requirements are met:
 - (1) The division finds that:
 - (a) Another state or federal governing agency provides oversight and water quality regulations that are equivalent to or surpass the public and environmental health protections that are or would be included in Regulation 84; OR
 - (b) The Division has determined that the variance results in no additional risk to public health or the environment and existing reclaimed water category(ies), Implementation Requirements and, if needed, new site-specific Implementation Requirements can be used to protect public health and the environment.

- (2) Public notice of the draft variance is provided on the division's web page and the public has the opportunity to provide comment for at least 30 days.
 - (3) If, after considering public comments, the division still finds that the variance meets the criteria in 84.12(B)(b), the variance is included on the next Commission agenda following the close of public comments.
 - (4) Prior to that Commission meeting, the Commission has been provided with the variance request, the division's findings on the variance request, and any public comments.
 - (5) At that meeting, the Commission takes no action on the variance or, after holding an adjudicatory hearing pursuant to 5 CCR 1002-21, affirms the issuance of the variance or affirms a modified variance.
- (C) With respect to all other provisions of this regulation, the Division may grant a variance in a particular case where the Treater or the User demonstrates that the benefits to public health or the environment that will be created by compliance with the subject provision do not bear a reasonable relationship to the costs required to achieve compliance.

84.13 ENFORCEMENT

Violations of this regulation by Treaters and Users shall be subject to enforcement by the Division pursuant to Part 6 of the CWQCA. A Treater shall not be subject to enforcement based solely on a violation by a User. A Treater is required by this regulation to develop and implement a reuse system management plan that meets the requirements of section 84.6(A)(6) to ensure User compliance with this regulation, and may be subject to enforcement for violations associated with failure to implement this program based on evidence that may include evidence of violations by User. A User shall not be subject to enforcement for a violation by a Treater; a Treater shall be solely responsible for its compliance with the terms and conditions imposed upon treaters. However, if a User was aware of the violation and did not report it as required in subsection 84.11(C), the User may be subject to an enforcement action for failure to report the violation.

84.14 CERTIFICATION

Persons who are required to make submittals pursuant to subsections 84.6(A)(7) and 84.11(B)(6) of this regulation, shall include the following certification statement:

"I certify, under penalty of law, that the information I am providing in this submittal is true, accurate, and correct. This determination has been made under my direction and supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."

84.15 PROPOSALS TO AUTHORIZE USES

- (A) The Commission may consider proposals to authorize additional uses that are not listed in Table A of section 84.10 and are not eligible for a variance per section 84.12(B) on a triennial basis using the following factors:
- (1) The approximate quantity of potable water that will be saved by implementing the proposed use;
 - (2) Whether, when implemented with the accompanying Implementation Requirements, the use will be protective of public health and the environment;

- (3) The resources needed by treaters and the division to provide a reasonable assurance of compliance with required Implementation Requirements and other Regulation 84 requirements.
- (B) The Commission also retains the discretion to consider proposals to authorize additional uses more frequently when potential savings to potable water supplies are so great that action is needed more quickly.

84.16 ADDITIONAL REQUIREMENTS FOR LOCALIZED RECLAIMED WATER TREATMENT SYSTEMS

- (A) Reclaimed water treated by localized reclaimed water treatment systems must comply with the standards and requirements in this regulation (sections 84.1 through 84.15) and in this section 84.16.
- (B) Field Verification and Commissioning Report and Inspection. For localized reclaimed water treatment systems, prior to supplying reclaimed water for use, the Treater must verify that the system is operational and meets reliability requirements of the log removal targets in section 84.16(D)(1) below. Following completion of field verification and commissioning, the Treater shall provide the Division a field verification and commissioning report and an operations and monitoring plan. The field verification and commissioning report will confirm that the treatment system has been installed and is operating in accordance with the approved design criteria in section 84.16(D)(1) below. The operations and monitoring plan will define the frequency and locations for monitoring, data storage, and reporting. The Division may conduct an inspection of the localized reclaimed water treatment system to confirm that the unit treatment processes have been installed in conformance with the approved design and are in operation in accordance with operations and monitoring plan.
- (C) Division Review and Issuance of Treater Authorization. The Division will review the field verification and commissioning report and operations and monitoring plan for localized reclaimed water treatment systems in addition to the Treater Application and conduct the requirements as described in 84.6(B).
- (D) The Treater must properly operate and maintain all required treatment systems when producing reclaimed water in accordance with this regulation, the Treater Authorization and the site location and design approvals. In addition to the factors to be considered and approved by the Division under Regulation #22, localized reclaimed water treatment systems are subject to the following additional design requirements for treatment.
 - (1) The Treater must properly operate a multi-barrier treatment approach using filtration and disinfection following secondary treatment while producing reclaimed water that reliably achieves all of the logarithmic (“log”) reduction targets for pathogens set forth in Table B below. If a Treater conducts its own microbial risk assessment, the Treater may request approval from the Division to use alternative log reduction targets based upon the Treater’s microbial risk assessment.
 - (a) Reclaimed water produced from localized systems for Category 1 uses must meet the design requirements based on a microbial risk assessment using a risk target no less stringent than 10^{-2} infections per person per year only for Enteric Viruses as set forth in Table B below.
 - (b) Reclaimed water produced from localized systems for Category 2 uses must meet the design requirements based on a microbial risk assessment using a risk target no less stringent than 10^{-2} infections per person per year as set forth in Table B below.

- (c) Reclaimed water produced from localized systems for Category 3 uses must meet the design requirements based on a microbial risk assessment using a risk target no less stringent than 10^{-4} infections per person per year as set forth in Table B below.

Table C: Localized System Log Removal Targets for Treatment Design

	Enteric Viruses	Parasitic Protozoa	Enteric Bacteria
Log ₁₀ Reduction Target (10 ⁻²) Category 1	6.0	-	-
Log ₁₀ Reduction Target (10 ⁻²) Category 2	6.0	5.0	4.0
Log ₁₀ Reduction Target (10 ⁻⁴) Category 3	8.5	7.0	6.0

- (2) The Division will develop policy defining credits for the log reduction of pathogens through various treatment processes.
- (3) The localized system design requirements will be based on the assumption that the wastewater does not receive meaningful inputs from industrial or other diluting sources.
- (E) Localized System Monitoring Requirements:
- (1) Reclaimed water produced from localized systems must meet the standards for the category of reclaimed water in section 84.7 for the approved use. Compliance with the standards in section 84.7 shall be verified by the monitoring requirements in section 84.16(C)(2) and (3) below.
- (2) Localized reclaimed water treatment systems must be continuously monitored for appropriate process control parameters to demonstrate that systems designed to comply with pathogenic microorganism control are functioning properly. The choice of the type of continuous monitoring technologies to be utilized will be tailored for an individual system and will be included in an operations and monitoring plan. Examples of acceptable forms of continuous monitoring for localized system process control are identified in Table C below:

Table D: Acceptable Surrogate Parameters for Localized Systems

Surrogate Parameter	Surrogate Monitoring Point	Purpose
Chlorine residual	Post-chlorination at a representative location for treatment	Confirm control of opportunistic pathogens
Continuous turbidity or particle size distribution	Post-filtration at a representative location for treatment	Confirm operation of filtration system; can be an indicator of pathogen breakthrough

Pressure decay test ¹	Membrane filtration unit	Measures membrane integrity
Electrical conductivity or tracer spike test; total organic carbon or UV absorbance (254 nanometers)	Reverse osmosis or nanofiltration unit	Can be related to pathogen breakthrough
Continuous color, ultraviolet light absorbance (UVA) or transmittance (UVT), and/or pH	Prior to disinfection or ozonation	Can indicate conditions that inhibit pathogen removal in disinfection or ozonation steps
Residual ozone, or oxidation-reduction potential	Ozonated water	Can be correlated to pathogen removal
Continuous ultraviolet (UV) intensity	UV-treated water	Confirm sufficient dose of UV for pathogen inactivation

- (3) The Division shall adopt a policy identifying other acceptable monitoring technologies for localized system treatment processes and means to approve additional monitoring techniques. The operations and monitoring plan shall include a tailored quality assurance plan specific to the continuous monitoring equipment in place. The quality assurance plan may include analysis of periodic grab samples for additional quality assurance of data collected via continuous monitoring, with parameters measured being consistent with those measured via continuous monitoring.
- (F) The Treater must return any recycled spent filter backwash water, thickener supernatant, or liquids from the dewatering process to a location within the treatment process that is before the filtration technology or an alternative Department-approved location.
- (1) For conventional or direct filtration, the location of return must be prior to the coagulant feed location.
- (2) For all other filtration technologies, the location of return must be prior to the filtration process and approved by the Division.
- (G) Localized reclaimed water treatment systems shall include a flow meter on the localized reclaimed water treatment system and a flow meter on the potable make-up water pipeline to the distribution system.
- (H) Localized reclaimed water treatment systems must be equipped with features that result in a controlled and non-hazardous automatic shutdown of the process in the event of a malfunction. Localized reclaimed water treatment systems must maintain overflow connections to an approved and permitted domestic wastewater treatment works to allow for disposal of off-specification treated reclaimed water or to allow disposal of untreated wastewater during maintenance of the treatment system. Overflow connections will include an approved cross connection control device or method.
- (I) NOAs for use of reclaimed water from localized systems may include requirements for limitations on contributions from non-domestic sources as necessary to prevent pass through, interference, or impacts on public health or the environment from those sources.

¹This test can be used and monitored on a frequency to be determined by the Treater and approved by the Division.

(J) Additional Implementation Requirements for Localized Systems

- (1) Protocol to switch to potable water and redirect reclaimed water to the sanitary sewer system no later than 12 hours after receipt of the results of any water quality test sample that does not meet the water quality requirements of the Treater Authorization or indication of a process malfunction based on continuous monitoring. Systems required to redirect reclaimed water to the sanitary sewer may resume normal operation after the Division receives a letter explaining why the performance was compromised and what actions were taken to prevent it from reoccurring, and three (3) consecutive days of data showing compliance, and the Division issues an approval to resume operations.
- (2) An affidavit by the User attesting to the employment of a certified operator or a service contract with a certified operator, who meets the requirements of Regulation 100.
- (3) An enforceable legal agreement defining the roles and responsibilities of the User and Treater.
- (4) If required, the User shall identify the percentage contributions from each wastewater input to the localized system and the location of the input, and any limitations on contributions from non-domestic sources as necessary to prevent pass through, interference, or impacts on public health or the environment from those sources.

84.17 - 84.20 Reserved