

314 CMR: DIVISION OF WATER POLLUTION CONTROL

314 CMR 20.00: RECLAIMED WATER PERMIT PROGRAM AND STANDARDS

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20.01: Purpose and Authority

Pursuant to M.G.L. c. 21, §§ 26, 27, and 43, the Department promulgates 314 CMR 20.00 to establish a program to regulate and permit reclaimed water systems. 314 CMR 20.00 also establish requirements for the use, sale, distribution, and offering for use, sale, and distribution of reclaimed water.

20.02: Definitions

As used in 314 CMR 20.00, the following words have the following meaning:

Aquifer - a geological formation, group of formations or part of a formation that is capable of yielding a significant amount of water to a well or spring.

Best Management Practices or BMPs - schedules of activities, prohibitions of practices, maintenance procedures and other management practices to prevent or reduce the discharge of pollutants to waters of the Commonwealth. BMPs include treatment requirements, operating procedures, structures, devices and/or practices to control plant site runoff, spillage, or leaks, sludge or waste disposal or drainage from raw material storage.

Bypass - the diversion of wastes from any portion of a treatment works.

Cross Connection - any actual or potential physical connection or arrangement between a pipe conveying potable water from a public water system and any non-potable water supply piping arrangement or equipment, including, but not limited to, waste pipe, soil pipe, sewer, drain or other sources of potable water not approved by the Department as a source for a public water system. For purposes of 314 CMR 20.00, a cross connection shall also include a physical connection between the reclaimed water system and any interior or exterior pipes conveying reclaimed water and a potable water system and any interior or exterior pipes conveying water for drinking, domestic or culinary purposes including pipes conveying water from a private water supply well.

Department - the Massachusetts Department of Environmental Protection.

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Discharge or Discharge of Pollutants - any addition of any pollutant or combination of pollutants to waters of the Commonwealth from any source, including, but not limited to, discharges from surface runoff which are collected or channeled by man, discharges through pipes, sewers, or other conveyances owned by a state, municipality or other person, which do not lead to POTWs, and discharges through pipes or other conveyances leading into privately owned wastewater treatment facilities. This term does not include an addition of pollutants by any indirect discharger.

Effluent - discharge of pollutants into the environment whether or not treated.

Effluent Limitation or Effluent Limit - any requirement, restriction, or standard imposed by the Department on quantities, discharge rates, and concentrations of pollutants discharged from point sources into waters of the Commonwealth, to a publicly owned treatment works, or to a reclaimed water distribution system so that so that it may be used as reclaimed water in accordance with 314 CMR 20.00.

Environmental Protection Agency or EPA - the United States Environmental Protection Agency.

Facility or Facilities - any and all devices, processes and properties real or personal used in the collection, pumping, transmission, storage, treatment, disposal, recycling, reclamation or reuse of water-borne pollutants, but not including any works receiving a hazardous waste from off the site of the works for the purpose of treatment, storage or disposal, or any works for the distribution or use of reclaimed water in accordance with 314 CMR 20.00 and a Service and Use Agreement approved by the Department, that are not located on the same site as the devices and processes used for wastewater treatment and that are not under the direct ownership or control of the permittee.

Federal Act - the Federal Water Pollution Control Act (FWPCA), currently known as the Clean Water Act, 33 U.S.C. § 1251 *et seq.*

Greywater - Any putrescible wastewater discharged from domestic activities, including, but not limited to, washing machines, sinks, showers, bath tubs, dishwashers, or other source except toilets, urinals and any drains equipped with garbage grinders.

Ground Water - water below the land surface in a saturated zone, including perched ground water.

Ground Water Travel Time or Ground Water Time of Travel - the time it takes a particle of water to flow through an aquifer from one point to another point of lower hydraulic gradient.

Indirect Discharger - a discharger introducing pollutants to a treatment works.

Industrial Waste - any liquid, gaseous, or solid waste substance or a combination thereof resulting from any process of industry, manufacturing, trade, or business or from the development or recovery of any natural resources.

Interim Wellhead Protection Area (IWPA) - an interim wellhead protection area as defined in 310 CMR 22.02. Generally this is a ½ mile radius from the well or well field for sources whose approved pumping rate is 100,000 gallons per day or greater. For smaller sources, the radius in feet is determined by multiplying the approved pumping rate in gallons per minute by 32 and adding 400.

Land Uses with Higher Potential Pollutant Loads - the following land uses are land uses with higher potential pollutant loads: land uses identified in 310 CMR 22.20B(2); 310 CMR 22.20C(2)(a) through (k) and (m), 310 CMR 22.21(2)(a)1. through 8., and 310 CMR 22.21(2)(b)1. through 6., areas within a site that are regulated by an individual National Pollutant Discharge Elimination System (NPDES) stormwater permit or the NPDES Multi-Sector General Permit; auto fueling facilities (gas stations); exterior fleet storage areas; exterior vehicle service and equipment cleaning areas, marinas and boatyards; parking lots with high-intensity use; confined disposal facilities and disposal sites.

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Local Government Unit - a town, city, district, commission, agency, authority, board or other instrumentality of the Commonwealth or any of its political subdivisions including a regional government unit.

Massachusetts Surface Water Quality Standards - the Massachusetts Surface Water Quality Standards (314 CMR 4.00).

Milligrams Per Liter or mg/l - the weight in milligrams of any specific substance or substances contained in one liter of solution.

Nephelometric Turbidity Unit (NTU) - measurement of turbidity as measured by the ratio of intensity of light scattered by the sample to the intensity of incident light as measured by method 2130 B in *Standard Methods for the Examination of Water and Wastewater*.

On-site Subsurface Sewage Disposal System - a system or series of systems for the treatment or disposal of sanitary sewage below the ground in accordance with 310 CMR 15.000.

Permit - an authorization issued pursuant to M.G.L. c. 21, § 43 and 314 CMR 2.00, 3.00, 5.00, 7.00 or 20.00 to implement the requirements of M.G.L. c. 21, §§ 26 through 53, the Clean Water Act, 33 U.S.C. § 1251 *et seq.* and the NPDES regulations, 40 CFR Part 122.

Person - any agency or political subdivision of the Commonwealth, the Federal government, any public or private corporation or authority, individual, partnership or association, or other entity, including any officer of a public or private agency or organization, upon whom a duty may be imposed by or pursuant to any provisions of M.G.L. c. 21, §§ 26 through 53.

Pollutant - any element or property of sewage, agricultural, industrial or commercial waste, runoff, leachate, heated effluent, or other matter, in whatever form and whether originating at a point or non point source, which is or may be discharged, drained or otherwise introduced into any sewerage system, treatment works or waters of the Commonwealth.

Potable Waters - water from any source that has been approved by the Department for human consumption.

Potable Water System - a system for conveying potable water so that it may be used.

Pretreatment - the reduction of the amount of pollutants, the elimination of pollutants, or the alteration of the nature of pollutants' properties in wastewater prior to or in lieu of discharging or otherwise introducing such pollutants into a POTW.

Private Water Supply Area - an area that is served by private wells and where in the opinion of the Department it is not reasonable to connect to a public water system or where approval to connect to the public water system cannot be obtained.

Privately Owned Reclaimed Water System - a privately owned treatment works that treats sewage so that it may be reclaimed, recycled or reused in accordance with 314 CMR 20.00. A privately owned reclaimed water system may include a reclaimed water distribution system.

Processed Food Crop - any crop that, prior to sale to the public or others, undergoes chemical or physical commercial processing sufficient to kill pathogens.

Publicly Owned Treatment Works or POTW - any device or system used in the treatment and disposal (including recycling and reclamation) of municipal sewage or industrial wastes of a liquid nature, which is owned by a local government unit. A POTW includes any sewers, pipes, or other conveyances only if they convey wastewater to a POTW providing treatment.

Reclaimed Water - wastewater that has been treated so that it is suitable for beneficial reuse in accordance with 314 CMR 20.00.

20.02: continued

Reclaimed Water Distribution System - a system that distributes reclaimed water so that it may be reused in accordance with 314 CMR 20.00.

Reclaimed Water System - a treatment works that includes facilities for treating wastewater so that it may be beneficially reused in accordance with 314 CMR 20.00.

Recreational Impoundment - a man-made impoundment of reclaimed water for fishing, boating and other non-body contact recreational uses.

Residential Uses or Residential Developments - apartment buildings, townhouses, condominiums, cooperatives, single family and or multi-family homes including manufactured homes, and rooming and boarding houses. Residential uses do not include the use of property for the activities listed in the following Standard Industrial Classification Codes: 7011, hotels; 7032, sporting and recreational camps; 7033, recreational vehicle parks and camp sites; 7041, organizational hotels and lodging on a membership basis; 8051-8059, nursing and personal care facilities; 8062-8069, hospitals; and 8361, residential care facilities.

Reuse Site - a site where reclaimed water is being used.

Satellite Reclaimed Water System - a system for the distribution, use, sale, offering for distribution, sale, and use of reclaimed water in accordance with 314 CMR 20.00 that does not include any facilities for wastewater treatment.

Sewage - the water-carried human or animal wastes from residences, buildings, industrial establishments or other places together with such ground water infiltration and surface water as may be present.

Sewer System - pipelines or conduits, pumping stations, force mains, and all other structures, devices, appurtenances, and facilities used for collecting and conveying wastes to a site or works for treatment or disposal.

Soil Absorption System - a system of trenches, galleries, chambers, pits, fields or beds or any other disposal area approved in writing by the Department, together with effluent distribution lines and aggregate, which receives effluent from a treatment works.

Stormwater - stormwater runoff, snowmelt runoff, surface runoff, and drainage.

Treatment Works - any and all devices, processes and properties, real or personal, used in the collection, pumping, transmission, storage, treatment, disposal, recycling, reclamation or reuse of waterborne pollutants, but not including any works receiving a hazardous waste for the purpose of treatment, storage or disposal or any works for the distribution or use of reclaimed water in accordance with 314 CMR 20.00 and a Service and Use Agreement approved by the Department, that are not located on the same site as the devices and processes used for wastewater treatment, and are not under the direct ownership or control of the permittee.

Uncontaminated Water - water which does not contain dredge spoil, solid waste, incinerator residue, garbage, sewage, sludge, munitions, chemical wastes, biological waste materials, radioactive materials, wrecked or discarded equipment, cellar dirt, industrial, municipal or agricultural waste, or any other material upon which discharge could cause or contribute to a violation of the Massachusetts Surface Water Quality Standards or interfere with the actual or potential use of ground water as a source of potable water.

Wastewater Sewage, Industrial Waste, Other Wastes or any Combination of the Three. Water from the washing of vehicles, machinery, materials, products, equipment and/or buildings with detergents or other cleaning agents that is part of the ordinary operations of a commercial or industrial enterprise or a local government unit is wastewater.

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Waters of the Commonwealth - all waters within the jurisdiction of the Commonwealth, including, without limitation, rivers, streams, lakes, ponds, springs, impoundments, estuaries, wetlands, coastal waters, ground waters and vernal pools. Wetlands constructed for the sole purpose of wastewater or stormwater management and lined basins constructed for the sole purpose of storing reclaimed water so that it can be reused are not considered to be waters of the Commonwealth.

Zone I - the protective radius required around a public water supply well or wellfield, as defined in 310 CMR 22.02. For public water supply system wells with approved yields of 100,000 gallons per day or greater, the protective radius is 400 feet. Tubular well fields require a 250-foot protective radius. Protective radii for all other public water system wells are determined by the following equation: Zone I radius in feet = $[150 \times \log \text{ of pumping rate in gpd}] - 350$.

Zone A - the land between a surface water source and the upper boundary of the bank as defined in 310 CMR 22.02, to include the land within a 400-foot lateral distance from the upper boundary of a bank of a Class A surface water source as defined in 314 CMR 4.05(3)(a), and the land within a 200-foot lateral distance from the upper boundary of the bank of a tributary or associated surface water body.

Zone II - the area of an aquifer that contributes water to a well under the most severe pumping and recharge conditions that can realistically be anticipated as defined in 310 CMR 22.00.

20.03: Permit Requirements for Reclaimed Water Systems

(1) Except as otherwise provided in 314 CMR 20.03 and 20.07, no person shall construct, install, modify, operate or maintain a reclaimed water system and use, sell, distribute or offer for use, sale or distribution the reclaimed water produced by said system, without a currently valid permit issued by the Department pursuant to 314 CMR 3.00, 314 CMR 5.00 or 314 CMR 20.00 and a Reuse Management Plan approved by the Department. The construction, installation, operation, and maintenance of a treatment works that treats wastewater so that it may be discharged to the ground in accordance with 314 CMR 5.00 and/or used as reclaimed water requires a permit issued by the Department pursuant to 314 CMR 5.00. The construction, installation, operation and maintenance of a treatment works that treats wastewater so that it may be discharged to a surface water in accordance with 314 CMR 3.00 and/or used as reclaimed water requires a permit issued by the Department pursuant to 314 CMR 3.00. All other treatment works that treat wastewater so that it may be used as reclaimed water require a permit issued by the Department pursuant to 314 CMR 20.00. Any person who proposes to construct, install, modify, operate, or maintain a reclaimed water system and use, sell, distribute or offer for use, sale or distribution the reclaimed water produced by said system may obtain a permit by submitting a Reuse Management Plan and the appropriate forms, in accordance with 314 CMR 2.00 and 314, CMR 3.00, 314 CMR 5.00, or 314 CMR 20.00, whichever is applicable. If the applicant proposes to sell or distribute the reclaimed water for use by other parties or offer the reclaimed water for use, sale, or distribution by other parties, the application shall include a Service and Use Agreement. The application shall also include all information required by 314 CMR 20.11 through 314 CMR 20.15.

(2) A Reuse Management Plan is a plan that includes a description of the proposed reclaimed water volume, the proposed class of the reclaimed water, a description of the reclaimed water distribution system, and the location of each reuse site. For each reuse site, the Reuse Management Plan shall specify the party responsible for managing the use, the proposed reuse volume, the nature of the proposed reuse, and the means by which the reclaimed water will be distributed and used. For each reuse site, the Reuse Management Plan shall also describe the procedures for ensuring compliance with all applicable requirements of 314 CMR 20.00 and the Massachusetts Uniform Plumbing Code, 248 CMR 10.00, including, without limitation, the procedures for informing the public that reclaimed water is being used as provided in 314 CMR 20.04. The Reuse Management Plan shall also describe the procedures for implementing at each reuse site a cross connection control inspection and testing program that contains all the components of a cross connection program established pursuant to 310 CMR 22.22 and that

20.03: continued

ensures compliance with the Massachusetts Uniform Plumbing Code, 248 CMR 10.00, at each reuse site. The Reuse Management Plan shall also detail the procedures for ensuring that a registered cross connection prevention device or cross connection control method that meets the requirements of 310 CMR 22.22 and the Massachusetts Uniform Plumbing Code, 248 CMR 10.00, be provided at all potable water system connections and all connections to pipes conveying water used for drinking, domestic, or culinary purposes that are located at reuse sites.

(3) A Service and Use Agreement is an agreement between the entity or person who has a reclaimed water system permit issued by the Department pursuant to 314 CMR 20.00, 314 CMR 3.00, or 314 CMR 5.00 and any other entity or person(s) who use, sell, distribute or offer for use, sale or distribution the reclaimed water produced by said system. The Service and Use Agreement shall identify the class of the reclaimed water, the use of the reclaimed water, and the reuse site(s). The Service and Use Agreement shall provide that the use of the reclaimed water shall comply with 314 CMR 20.00, the relevant provisions of the applicable permit, the approved Reuse Management Plan and the Massachusetts Uniform Plumbing Code 248 CMR 10.00. The Service and Use Agreement shall further provide that all equipment required for the use and/or distribution of the reclaimed water shall be properly operated and maintained. The Service and Use Agreement shall include a condition granting the permittee and the Department the right to inspect any area where reclaimed water is being used, for the purpose of assessing compliance with 314 CMR 20.00. Except as otherwise determined by the Department for industrial uses of reclaimed water where there is no risk of human exposure, the Service and Use Agreement shall provide for the termination of the use and/or distribution of the reclaimed water, if the reclaimed water is used and/or distributed in a manner that violates 314 CMR 20.00, the permit, or the approved Reuse Management Plan. The Service and Use Agreement shall require that the public at each reuse site be notified in accordance with 314 CMR 20.04 that reclaimed water is being used and that a cross connection control device or cross connection control method that meets the requirements of 310 CMR 22.22 and the Massachusetts Uniform Plumbing Code, 248 CMR 10.00, be installed and maintained at all potable water system connections and all connections to pipes conveying water for drinking, domestic, and culinary purposes that are located at each reuse site.

(4) Notwithstanding the provisions of 314 CMR 20.03(1), a person may discharge reclaimed water within a Zone II, Interim Wellhead Protection Area or a Private Water Supply Area in accordance with 314 CMR 5.00 and a ground water discharge permit issued by the Department, and thereby use reclaimed water to recharge an aquifer, without a Reuse Management Plan approved by the Department.

(5) Notwithstanding the provisions of 314 CMR 20.03(1), a person may use reclaimed water for irrigation by means of a subsurface soil absorption system approved by the Department in accordance with 314 CMR 5.00 and a ground water discharge permit issued by the Department, without a Reuse Management Plan approved by the Department.

(6) Except as provided in 314 CMR 20.03(6)(a) and (b), all permits issued by the Department pursuant to 314 CMR 3.00, 314 CMR 5.00 or 314 CMR 20.00, authorizing the construction, installation, modification, operation and maintenance of a reclaimed water system and the use, sale, distribution or offering for use, sale or distribution of the reclaimed water system shall establish requirements for the treatment, distribution, and/or use of the reclaimed water in accordance with 314 CMR 20.00 including, without limitation, the conditions set forth in 314 CMR 20.18 and 314 CMR 20.19.

(a) The Department may renew a ground water discharge permit issued by the Department that authorized a reclaimed water system prior to March 20, 2009. Such renewal permit may have requirements for the operation and maintenance of the reclaimed water system, and the treatment, use, sale, or distribution of the reclaimed water produced by said system, and/or the offering of said reclaimed water for use, sale or distribution based on the Department's Interim Guidelines on Reclaimed Water effective January 3, 2000, rather than 314 CMR 20.00. The Department may modify any ground water discharge permit that has requirements based on the Department's Interim Guidelines on Reclaimed Water to include additional conditions in accordance with 314 CMR 20.00 and/or 314 CMR 5.00 when the ground water discharge permit is renewed or at any other time that the Department determines such additional conditions are necessary for the protection of the public health or the environment.

20.03: continued

(b) A reclaimed water system that was authorized in writing by the Department by means other than a ground water discharge permit may have requirements for the operation and maintenance of the reclaimed water system, and the treatment, use, sale, or distribution of the reclaimed water produced by said system and/or the offering of said reclaimed water for use, sale or distribution based on the Department's written authorization. On or before September 20, 2009, the person operating the reclaimed water system shall apply for a reclaimed water system permit in accordance with 314 CMR 20.03. In response to this application, the Department may issue a permit that has requirements for the operation and maintenance of the reclaimed water system, and the treatment, use, sale, or distribution of the reclaimed water produced by said system and/or the offering of said reclaimed water for use, sale or distribution based on the Department's written authorization. The Department may modify any reclaimed water system permit that has requirements based on the Department's authorization issued prior to the effective date of the regulations to include additional conditions in accordance with 314 CMR 20.00 when the reclaimed water system permit is renewed or at any other time, that the Department determines such additional conditions are necessary for the protection of the public health or the environment.

20.04: Public Notice Requirements for Reclaimed Water

(1) All areas at a reuse site that are accessible to the public, such as reclaimed water valves, storage facilities, and outlets, shall be posted with signs that are visible to the public clearly communicating that the water is not safe for drinking. The signage shall be colored purple with white or black lettering and shall include the following wording: "NOTICE: RECLAIMED WATER - DO NOT DRINK". An example of such a sign is included in 314 CMR 20.20: *Appendix A*. Signs shall be in English and any additional locally employed language.

(2) All reclaimed water plumbing and out-of-sight fixtures shall be color-coded purple to identify the source of the water as being reclaimed water.

(a) All reclaimed water piping and appurtenances shall be colored purple and embossed or integrally stamped or marked: "NOTICE: RECLAIMED WATER - DO NOT DRINK". The warning shall be stamped on opposite sides of the pipe and repeated every three feet or less.

(b) Other pipe and construction warning markings may be acceptable to the Department provided the colors and messages are consistent with 314 CMR 20.04(2)(a).

(3) The permittee shall comply with 314 CMR 20.04(1) and (2) at all reuse sites under the direct control of the permittee. For sites not under the direct control of the permittee, the Service and Use Agreement shall require compliance with 314 CMR 20.04(1) and (2), and the permittee shall enforce this requirement.

(4) A person with reclaimed water piping and appurtenances that were installed prior to March 20, 2009 and do not meet the requirements of 314 CMR 20.04(2) may request a waiver from these requirements on the ground that it is not practicable to comply, because the pipes are not reasonably accessible.

20.05: Additional Requirements for Reclaimed Water Systems

A reclaimed water system shall comply with all applicable requirements of the Massachusetts Uniform Plumbing Code, 248 CMR 10.00. There shall be no cross connections between a reclaimed water system, a potable water system, and all pipes conveying water for drinking, domestic and culinary purposes. Hose bibs shall not be used on any portions of a reclaimed water system that are accessible to the public. Only quick couplers that are different from those used on the potable water system and the pipes used for conveying water for drinking, domestic and culinary purposes shall be used on the portions of a reclaimed water system that are accessible to the public.

20.06: Requirements for the Use, Sale, Distribution or Offering for Use, Sale or Distribution of Reclaimed Water

(1) No person may use, sell, distribute or offer for use, sale, or distribution reclaimed water produced by a reclaimed water system operated by another party without a permit, unless said use, sale and distribution and/or offering for use, sale, or distribution complies with 314 CMR 20.00, a Reuse Management Plan approved by the Department, and a Service and Use Agreement approved by the Department.

(2) Except as otherwise determined by the Department when approving a Reuse Management Plan, reclaimed water may be beneficially used only for the following purposes: irrigation, a source of water for recreational use, industrial or commercial cooling or air conditioning, toilet and urinal flushing, agricultural use, the creation of wetlands, commercial laundries, carwashes, industrial boiler feed, silviculture, snowmaking, fire protection, dust control, soil compaction, street cleaning, and aquifer recharge. Reclaimed water may be used for irrigation by means of a subsurface soil absorption system approved by the Department pursuant to 314 CMR 5.00 or by discharging reclaimed water to the ground within 100 feet of a well used for irrigation in accordance with a permit issued by the Department pursuant to 314 CMR 5.00. Reclaimed water may be used for aquifer recharge by discharging reclaimed water to the ground within the Zone II or Interim Wellhead Protection Area of a public water system or a Private Water Supply Area. in accordance with a permit issued by the Department pursuant to 314 CMR 5.00.

(3) Reclaimed water shall not be used or distributed within the Zone I of a public water supply well, the Zone A of a surface water source for a public water system, or within 100 feet of a private water supply well.

(4) Reclaimed water shall not be used or distributed in a manner that will cause or contribute to violations of the Massachusetts Surface Water Quality Standards, or impair the use of the ground water as an actual or potential source of potable water..

(5) Reclaimed water shall not be used or distributed in a manner that causes the water quality of any public source of potable water or private source of water used for drinking, domestic or culinary purposes to violate the standards set forth in the Drinking Water Regulations of Massachusetts, 310 CMR 22.00.

(6) Any person who uses or distributes reclaimed water shall comply with all applicable requirements of the Massachusetts Uniform Plumbing Code, 248 CMR 10.00.

(7) The Department may request any person to provide information as the Department may reasonably require to determine whether that person is subject to M.G.L. c. 21, §§ 26 through 53 or 314 CMR 20.00. Any person who uses, sells, or distributes reclaimed water or offers reclaimed water for use, sale or distribution shall allow the Department to inspect any area where reclaimed water has been or is being used, sold, distributed or offered for use, sale, or distribution, for the purpose of assessing compliance with 314 CMR 20.00.

20.07: Activities not Requiring a Permit Under 314 CMR 20.00, 314 CMR 3.00, or 314 CMR 5.00

The following activities do not require a permit under 314 CMR 20.00, 314 CMR 3.00 or 314 CMR 5.00:

(1) The construction, installation, modification, operation, and maintenance of an on-site subsurface sewage disposal system that is constructed, installed, operated and maintained in accordance with 310 CMR 15.000, including without limitation, an on-site subsurface sewage disposal system that provides for the reclamation, recycling or reuse of greywater, an alternative system that has a soil absorption system that provides drip irrigation, a system that provides aquifer recharge by discharging effluent within a Zone II, Interim Wellhead Protection Area, or a Private Water Supply Area, or a system that discharges effluent to a soil absorption system located within 100 feet of an irrigation well;

20.07: continued

(2) The construction, installation, modification, operation, and maintenance of a satellite reclaimed water system, provided that the satellite reclaimed water system is constructed, installed, modified, operated and maintained in accordance with 314 CMR 20.00, a Reuse Management Plan approved by the Department, and a Service and Use Agreement approved by the Department;

(3) The construction, installation, modification, operation, and maintenance of a system that manages stormwater so that it may be used for irrigation provided that the stormwater is protected from exposure to any land uses with higher potential pollutant loads; and

(4) The construction, installation, modification, operation, and maintenance of a system that manages uncontaminated water so that it may be beneficially used, including, without limitation, a system that uses uncontaminated runoff from non-metal roofs for toilet flushing in accordance with the requirements of the Massachusetts Uniform Plumbing Code, 248 CMR 10.00.

20.08: Effect of a Permit

Issuance of a reclaimed water system permit by the Department pursuant to 314 CMR 20.00 shall be deemed to allow, to the extent specified in the permit and 314 CMR 20.00, the permittee to construct, install, modify, operate and maintain a reclaimed water system in accordance with the permit and 314 CMR 20.00 and to use, sell, distribute, and offer for use, sale or distribution the reclaimed water produced by said reclaimed water system in accordance with the permit, an approved Reuse Management Plan, and 314 CMR 20.00. Issuance of a reclaimed water system permit by the Department pursuant to 314 CMR 5.00 shall have the effect specified in 314 CMR 5.07. Issuance of a reclaimed water system permit by the Department pursuant to 314 CMR 3.00 shall have the effect specified in 314 CMR 3.08. The issuance of a reclaimed water system permit pursuant to 314 CMR 3.00, 314 CMR 5.00 or 20.00 shall not be deemed to authorize any injury to persons or property or invasion of other private rights, nor does it relieve the permittee of its obligation to comply with any other applicable Federal, State and local laws and regulations.

20.09: Restrictions on the Issuance of a Permit

(1) The Department shall not issue a permit for the use of stormwater that has come into contact with any land uses with higher potential pollutant loads.

(2) The Department shall not issue a permit under 314 CMR 3.00, 314 CMR 5.00 or 314 CMR 20.00 authorizing the use of reclaimed water in a manner that will cause or contribute to violations of the Massachusetts Surface Water Quality Standards or that will cause the water quality of a private source of water used for drinking, domestic, or culinary purposes or a public source of potable water to violate the standards set forth in the Drinking Water Regulations of Massachusetts, 310 CMR 22.00.

(3) Except as otherwise provided in 314 CMR 20.03(6)(a) and (b), the Department shall not issue a permit under 314 CMR 3.00, 314 CMR 5.00 or 20.00 authorizing the outside use of reclaimed water within the Zone I of a public ground water source of potable water or the six-month ground water travel time to such source, whichever is larger.

(4) Except as otherwise provided in 314 CMR 20.03(6)(a) and (b), the Department shall not issue a permit under 314 CMR 3.00, 314 CMR 5.00 or 20.00 authorizing the outside use of reclaimed water within the Zone A of a public surface water source of potable water, or within 100 feet of a private drinking water well.

20.10: Application for a Permit for a Reclaimed Water System

(1) Duty to apply. Any person required to obtain a permit for a reclaimed water system issued pursuant to 314 CMR 20.00 shall complete and submit the appropriate form(s) in accordance with 314 CMR 20.03(1), unless otherwise provided in 314 CMR 20.07.

20.10: continued

(2) Who Must Apply. The owner of an existing treatment works who proposes to operate a reclaimed water system and use, sell, distribute or offer for use, sale or distribution the reclaimed water produced by said system, and any person who proposes to construct, install, modify, operate or maintain a reclaimed water system, shall apply for a permit, unless otherwise provided in 314 CMR 20.07. If the reclaimed water system treats wastewater so that it may be used as reclaimed water and/or discharged to the ground, the applicant shall apply for a permit issued by the Department pursuant to 314 CMR 5.00 by following the procedures set forth in 314 CMR 5.09 and 314 CMR 5.09A. If the reclaimed water system treats wastewater so that it may be used as reclaimed water and/or discharged to a surface water the applicant shall apply for a permit issued by the Department pursuant to 314 CMR 3.00 by following the procedures set forth in 314 CMR 314 CMR 3.10. As set forth in 314 CMR 20.03, all other applicants shall apply for a permit issued by the Department pursuant to 314 CMR 20.00. Applicants seeking a permit for a reclaimed water system that requires a permit issued by the Department pursuant to 314 CMR 20.00 shall follow the procedures and submit the information required by 314 CMR 20.10 through 314 CMR 20.15.

(3) Time to Apply. Any person who is required to apply for a reclaimed water system permit issued by the Department pursuant to 314 CMR 20.00 and who does not have a currently effective permit shall submit an application at least 180 days before any activity requiring said permit is to commence, unless permission for a later date has been granted by the Department in writing. To avoid delay, persons proposing to construct, install, modify, operate or maintain a reclaimed water system requiring a permit issued by the Department pursuant to 314 CMR 20.00 are encouraged to submit their applications well in advance of the 180 day requirement.

Any person with a currently effective reclaimed water system permit issued by the Department pursuant to 314 CMR 20.00 shall submit an application for a renewal permit at least 180 days before the expiration date of the existing permit unless permission for a later date has been granted by the Department.

(4) Completeness. The Department shall not issue a permit for a reclaimed water system pursuant to 314 CMR 20.00 before receiving a complete application as required under 314 CMR 2.03(2).

20.11: Required Submissions for Reclaimed Water Permit Applications

All applications for a permit to construct, install, modify, operate or maintain a reclaimed water system in accordance with 314 CMR 20.00 shall include an Engineering Report, a Reuse Management Plan, and, if the applicant proposes that the reclaimed water be used by one or more persons other than the permittee, Service and Use Agreement(s). For permit renewals and modifications, the applicant may update existing documents. All documents other than the Service and Use Agreement(s) shall be completed in accordance with relevant Department design guidelines and shall be prepared, stamped and signed by a Massachusetts Registered Professional Engineer with a concentration in civil, sanitary or environmental engineering, and shall be accompanied by a Certification Statement that the documents have been prepared in accordance with Department standards and signed by the Massachusetts Registered Professional Engineer. The documents shall be consistent with 314 CMR 20.00. If reclaimed water is proposed to be used within the Zone II or Interim Wellhead Protection Area of a ground water source of potable water for a public water system, the applicant shall notify the public water system in writing by certified mail, and include a copy of said notice with the application.

20.12: The Engineering Report

(1) At a minimum, the Engineering Report shall contain a detailed description of the treatment works, including the wastewater treatment technology to be employed, the concentration of pollutants in the reclaimed water that is to be produced by the treatment works, and the proposed classification of the reclaimed water. The description shall include information on the sources of water to be treated, flows and loads, number and size of unit processes, appurtenant facilities and a preliminary layout. The Engineering Report shall also provide documentation, including without limitation, the results of any pilot studies that show that the proposed technology will meet the effluent limits applicable to the proposed classification. The Engineering Report shall include a monitoring plan and a schematic that identifies the proposed locations for monitoring to assess compliance with the applicable requirements.

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- (2) At a minimum, the Engineering Report shall document that:
- (a) The wastewater treatment facilities have been designed in accordance with the latest edition of TR-16: *Guidelines for the Design of Wastewater Treatment Facilities* prepared by the New England Interstate Water Pollution Control Commission and other applicable Department guidelines.
 - (b) To meet the EPA Class I Reliability Standards, the wastewater treatment facilities have been designed to include the following components:
 1. Two independent and separate sources of power, with the backup source sufficient to operate all vital components during peak flow conditions, together with critical lighting and ventilation;
 2. Unit redundancy;
 3. Additional storage or bypass to a discharge site as required by the Department pursuant to 314 CMR 20.12(3) and 314 CMR 20.12(5); and
 4. Sufficient inventory of spare equipment and parts to minimize the time period that treatment plant operations are off-line.
 - (c) The wastewater treatment facilities have been designed in accordance with the requirements of the Massachusetts Uniform State Plumbing Code, 248 CMR 10.00.
- (3) Except as otherwise provided in 314 CMR 20.12(4) and 314 CMR 20.12(5), a new or expanded reclaimed water system shall be designed and constructed so that the average daily flow may be discharged to a reserve soil absorption system or to a wastewater collection system for transport to other treatment or disposal facilities. Except as otherwise provided in 314 CMR 20.12(4) and 314 CMR 20.12(5), the Engineering Report shall document compliance with this requirement.
- (4) An applicant may propose, and the Department may permit, a new reclaimed water system with a soil absorption system that does not meet the requirements of 314 CMR 20.12(3), provided the Engineering Report contains sufficient information to demonstrate to the Department's satisfaction that the proposed use of reclaimed water will benefit the overall water balance in a watershed or subwatershed without creating an unreasonable risk to the public health or the environment.
- (5) An applicant may propose and the Department may permit an expansion of an existing reclaimed water system that includes a soil absorption system that does not meet the requirements of 314 CMR 20.12(3) provided the Engineering Report contains sufficient information to demonstrate to the satisfaction of the Department that the applicant exercised best efforts to provide a soil absorption system that meets the requirements of 314 CMR 20.12(3) and that use of the reclaimed water system with the proposed soil absorption system will not create an unreasonable risk to the public health or the environment.
- (6) If the proposed reclaimed water system is a POTW, the Engineering Report shall document that the public owned treatment works has a pretreatment program that:
- (a) meets the requirements of the Federal Act, M.G.L. c. 21, §§ 26 through 53, including, without limitation, 314 CMR 12.00; and
 - (b) is adequate to ensure that the reclaimed water produced by the POTW meets the effluent limits associated with the proposed use and classification of the reclaimed water.

20.13: Requirements for Use of Reclaimed Water for Irrigation

- (1) Except as otherwise provided in 314 CMR 20.13(3), an application for a reclaimed water system that treats wastewater so that it may be used for irrigation shall include a public education program and an implementation schedule that provides for annual reporting on the implementation of the program. The education program shall be designed to inform users, residents and plumbing contractors and inspectors who deal with irrigation about the need to:
- (a) Prohibit cross connections between the reclaimed water system, the potable water, system and the pipes carrying water for drinking, domestic, and culinary purposes;
 - (b) Clearly and distinctly identify the potable water distribution lines and plumbing carrying water for drinking, domestic and culinary purposes to differentiate them from the reclaimed water distribution lines and plumbing;

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- (c) Avoid contact with and minimize ponding or runoff of reclaimed water; and
- (d) Comply with all other applicable requirements governing the use of reclaimed water for irrigation.

(2) The Engineering Report for a reclaimed water system that is designed to produce reclaimed water for irrigation shall document that the irrigation system has been designed to avoid any surface ponding, to ensure that spray mist or other runoff does not enter buildings, dwellings, decks, garages, driveways, roads, designated outdoor eating areas or food handling facilities, and to prevent any contact between reclaimed water spray, mist or runoff and a drinking water fountain.

(3) The requirements of 314 CMR 20.13(1) and 314 CMR 20.13(2) shall not apply to a reclaimed water system that provides reclaimed water for irrigation by means of a subsurface soil absorption system approved by the Department pursuant to 314 CMR 5.00.

20.14: Requirements for Privately Owned Reclaimed Water Systems

(1) A person proposing a privately owned reclaimed water system that requires a permit issued by the Department pursuant to 314 CMR 20.00 is eligible for said permit, provided that the applicant submits sufficient information with the permit application to demonstrate to the Department's satisfaction that:

(a) A single entity comprised of all stakeholders is responsible for the operation of the reclaimed water system in compliance with 314 CMR 20.00 and the permit. For purposes of this requirement, the term stakeholders shall include all persons who propose to have their sewage treated by the reclaimed water system. Stakeholders may also include any persons who propose to use, sell, distribute, or offer for use, sale, or distribution the reclaimed water produced by the reclaimed water system in accordance with 314 CMR 20.00.

(b) The entity will not change its organizational structure, or sell, assign or transfer the reclaimed water system, without the prior written approval of the Department.

(c) The entity owns or controls the land on which the privately owned reclaimed water system is located and owns or controls the land or has easements that provide access to said land, the wastewater collection system, the reclaimed water distribution system and the land ten feet on each side of the wastewater collection system and the reclaimed water distribution system.

(d) If the privately owned wastewater treatment facility treats wastewater generated by activities that are owned or controlled by persons other than the single responsible entity, the applicant shall also demonstrate that:

1. All stakeholders share in the financial and operational responsibilities for complying with the requirements of 314 CMR 20.00 and the permit.

2. The entity responsible for the operation of the reclaimed water system in accordance with 314 CMR 20.00 and the permit shall have the authority to institute a user charge system sufficient to generate adequate revenue and to enforce such assessments against users in a manner equivalent to a municipal fee, tax or betterment assessment. The user charge system may apply to users whose sewage is treated by reclaimed water system for treatment and consumers who use, sell, distribute, or offer for use, sale or distribution the effluent produced by the reclaimed water system as reclaimed water in accordance with 314 CMR 20.00.

(e) In lieu of making the demonstration required by 314 CMR 20.14(1)(a) through (d), an applicant may identify all persons who own, control or have a substantial interest in the reclaimed water system, any activity resulting in the discharge of pollutants to the reclaimed water system, the land where the reclaimed water system is located and the land where the reclaimed water is used.. In that event, the Department may require that any party who owns or controls the reclaimed water system, an activity resulting in the discharge of pollutants to the reclaimed system, the land where the reclaimed water system is located, and/or the land where the reclaimed water is used shall be a permittee who is jointly and severally responsible for the operation of the reclaimed water system in compliance with the permit and 314 CMR 20.00, if it determines that including said person as a permittee is a necessary or appropriate means of protecting the public health or the environment and/or ensuring that the reclaimed water system operates in compliance with the permit and 314 CMR 20.00.

20.14: continued

(2) A person proposing a privately owned reclaimed water system that treats wastewater other than or in addition to sewage and that requires a permit issued by the Department pursuant to 314 CMR 20.00, 314 CMR 3.00, or 314 CMR 5.00 is eligible for said permit provided that the applicant demonstrates to the Department's satisfaction that:

Considering the constituents in the wastewater, the proposed use of the reclaimed water, and the risk of human exposure, the issuance of a permit authorizing the use of reclaimed water will not interfere with the actual use of the groundwater as a source of potable water, or cause or contribute to a violation of the Massachusetts Surface Water Quality Standards or otherwise pose a threat to the public health, welfare, safety or the environment.

20.15: Signatories to Permit Applications, Reports and Other Submittals

(1) All applications for a reclaimed water system permit issued by the Department pursuant to 314 CMR 5.00 shall be signed in accordance with 314 CMR 5.14. All applications for a reclaimed water system permit issued by the Department pursuant to 314 CMR 20.00 shall be signed as follows:

- (a) For a corporation or limited liability corporation: a president, secretary, treasurer, or vice president of the corporation in charge of a principal business function and duly authorized by its Board of Directors, or any other person who performs similar policy or decision-making functions for the corporation or to whom authority to sign such documents has been assigned or delegated in accordance with corporate procedures;
- (b) For a partnership or limited partnership, by a general partner;
- (c) For a sole proprietorship by the proprietor;
- (d) For a trust: by the trustee; or
- (e) For a municipality, other local government unit, or instrumentality or political subdivision of the State or Federal government: by a principal executive officer, ranking elected official or other person with legal authority to sign such documents.

(2) Reports. All reports and other information required by 314 CMR 20.00, or a reclaimed water system permit issued by the Department pursuant to 314 CMR 20.00, and other information requested by the Department shall be signed by a person described in 314 CMR 20.15(1), or by a duly authorized representative of that person. A person is a duly authorized representative only if:

- (a) The authorization is made in writing by a person described in 314 CMR 20.15(1); and
- (b) The written authorization is submitted to the Department.

(3) Certification. Any person signing a document under 314 CMR 20.15(1) or (2) shall make the following certification:

"I [name] attest under the pains and penalties of perjury that I have personally examined and am familiar with the information contained in this document and all attachments, and that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my diligent inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information contained in this submittal is, to the best of my knowledge and belief, true, accurate, and complete. I am authorized to make this attestation on behalf of this permittee. I am aware that there are significant penalties for submitting false, inaccurate or incomplete information, including, but not limited to, the possibility of fine and imprisonment for knowing violations."

20.16: Continuation of an Expiring Permit that was Issued by the Department Pursuant to 314 CMR 20.00

(1) The conditions of a reclaimed water system permit issued by the Department pursuant to 314 CMR 5.00 continue in force beyond the expiration date as provided in 314 CMR 5.08.

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(2) The conditions of a reclaimed water system permit issued by the Department pursuant to 314 CMR 20.00 continue in force beyond the expiration date pursuant to M.G.L. c. 30A, § 13, if:

- (a) The permittee has made a complete and timely application for a permit renewal or for a new permit pursuant to 314 CMR 20.10; and
- (b) The Department does not renew the permit, issue a new permit, deny the application, or modify or revoke the permit on or before the expiration date of the expiring permit.

(3) Permits issued by the Department pursuant to 314 CMR 20.00 and continued under 314 CMR 20.16 shall remain fully effective and enforceable until the effective date of a permit renewal or new permit.

20.17: Special Permit Conditions

Special Conditions. Except as otherwise provided in 314 CMR 20.17(5), and 314 CMR 20.17(7), each permit for a reclaimed water system issued by the Department pursuant to 314 CMR 3.00, 314 CMR 5.00 or 314 CMR 20.00 shall identify the class of the reclaimed water and specify effluent limits, and authorized uses in accordance with 314 CMR 20.17. The effluent limits set forth in 314 CMR 20.17 apply only to effluent that is used as reclaimed water. The permit shall assign the reclaimed water produced by the reclaimed water system to one of the classes listed below, based upon the level of treatment and the concentration of the pollutants. The classification shall limit how the reclaimed water may be used. If more than one use is proposed, the permit shall provide that reclaimed water meet the effluent limits associated with the most stringent classification. As more fully set out below, the classes are Class A, Class B, and Class C.

(1) Class A. Class A reclaimed water is reclaimed water that at all times meets or exceeds the effluent limits in 314 CMR 20.17 (1)(b).

(a) Uses. Class A reclaimed water may be used for any activity for which Class B reclaimed water or Class C reclaimed water may be used as set forth in 314 CMR 20.17(2) and (3). Class A reclaimed water may be used for the following additional activities:

1. Irrigation. Class A reclaimed water may be used for irrigation at locations where individual members of the public are likely to come into contact with the reclaimed water, including, without limitation:

- a. Golf courses;
- b. Parks and playgrounds;
- c. Landscaping around schools, colleges, and universities;
- d. Landscaping around residential and mixed-use developments;
- e. Athletic fields;
- f. Cemeteries;
- g. Highway rest areas; and
- h. Non-residential developments, such as office complexes, public buildings, hotels, motels, and commercial malls.

2. Cooling Water. Class A reclaimed water may be used for industrial or commercial cooling or air conditioning where aerosols or other mists are created, including, without limitation, cooling towers, evaporative condensers, or spray mechanisms. When a cooling system uses Class A reclaimed water in conjunction with an air conditioning facility that utilizes a cooling tower or otherwise creates a mist that may come into contact with employees or members of the public, the cooling system shall comply with the following:

- a. drift eliminator shall be used whenever the cooling system is in operation.
- b. Chlorine or other biocide shall be used to treat the cooling system recirculating water to minimize the growth of LEGIONELLA and other microorganisms.

3. Toilet and Urinal Flushing. Class A reclaimed water may be used for toilet and/or urinal flushing in commercial, institutional, and industrial facilities and buildings, including hotels and motels. Class A reclaimed water may also be used for toilet and/or urinal flushing in barracks, jails, prisons, reformatories, and residential developments other than single family homes, town houses, and two- and three-family homes where the residents have access to the plumbing facilities for repairs or modification. All facilities using Class A reclaimed water for toilet and/or urinal flushing shall comply with the Massachusetts Uniform State Plumbing Code, 248 CMR 10.00.

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4. Agricultural Use. Class A reclaimed water may be used for food crop irrigation where there is contact between the reclaimed water and the edible portion of the crop.
 5. Industrial Process Water. Class A reclaimed water may be used as industrial process water where inhalation or contact is possible.
 6. Commercial Laundries and Carwashes. Class A reclaimed water may be used by commercial laundries and carwashes.
 7. Snowmaking. Class A reclaimed water may be used for snowmaking.
 8. Fire Protection. Class A reclaimed water may be used for fire protection.
 9. Creation of Wetlands and Recreational Impoundments. Class A reclaimed water may be used to create a new wetland or recreational impoundment. Discharge of treated wastewater to an existing surface water or wetland requires a Surface Water Discharge Permit issued by the Department pursuant to 314 CMR 3.00 and does not involve the reuse of reclaimed water in accordance with 314 CMR 20.00.
- (b) Effluent Limits. The following effluent limits apply to all Class A reclaimed water. The compliance point(s) shall be after the final treatment process and prior to the point of discharge:

Effluent Limits

pH = 6.5-8.5
 BOD < 10 mg/l
 TSS < 5 mg/l
 Turbidity < average of 2 NTU within a 24-hour period, cannot exceed five NTU more than 5% of the time within a 24-hour period, and cannot exceed ten NTU at any time.
 Total Nitrogen < 10 mg/l
 Median of no detectable fecal coliform/100 ml over continuous seven-day sampling periods, not to exceed 14/100 ml in any one sample
 Other parameters as specified by the Department

On a case-by-case basis, the Department may establish a limit on phosphorus and/or establish a limit on total nitrogen that is more stringent than ten mg/l in order to maintain or achieve compliance with the Massachusetts Surface Water Quality Standards and/or to protect the actual or potential use of the ground water as a source of potable water. On a case-by-case basis, the Department may establish a limit on total nitrogen that is less stringent than ten mg/l, if the use of the reclaimed water does not involve a discharge to the ground surface or the ground water or in circumstances such as irrigation where the nutrient value of the reclaimed water is proposed to be used and the reclaimed water meets the effluent limit of ten mg/l before it is discharged to a water of the Commonwealth.

(2) Class B. Class B reclaimed water is reclaimed water that at all times meets or exceeds the effluent limits in 314 CMR 20.17(2)(b).

(a) Uses. Class B reclaimed water may be used for any activity for which Class C reclaimed water may be used as set forth in 314 CMR 20.17(3). Class B reclaimed water may be used for the following additional activities:

1. Irrigation. Class B reclaimed water may be used for irrigation at locations where individual members of the public are not likely to come into contact with the reclaimed water, including, without limitation, the following:
 - a. Ornamental nursery stock and sod farms where access by the general public is restricted; and
 - b. Landscaped areas associated with highways, other than highway rest areas, including, without limitation, median strips and shoulders.
2. Cooling Water. Class B reclaimed water may be used for industrial or commercial cooling or air conditioning where aerosols or other mist are not created.
3. Agricultural Use. Class B reclaimed water may be used to provide irrigation for the following agricultural uses:
 - a. Class B reclaimed water may be used for irrigation on land used as pasture for milking animals; and

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- b. Class B reclaimed water may be used for irrigation of unprocessed food crops where there is no contact between the reclaimed water and the edible portion of the crop.
- 4. Dust Control. Class B reclaimed water may be used for dust control.
- 5. Soil Compaction. Class B reclaimed water may be used for soil compaction.
- 6. Mixing Concrete and Washing Aggregate. Class B reclaimed water may be used to mix and wash aggregate.
- 7. Street Cleaning. Class B reclaimed water may be used for street cleaning.
- (b) Effluent Limits. The following effluent limits apply to all Class B reclaimed water. The compliance point(s) shall be after the final treatment process and prior to the point of discharge:

Effluent Limits

pH = 6.5-8.5
 BOD < 30 mg/l
 TSS < 10 mg/l
 Total Nitrogen < 10 mg/l
 Median of 14 detectable fecal coliform/100 ml over continuous 7-day sampling periods, not to exceed 100/100 ml in any one sample
 Other parameters as specified by the Department

- 1. On a case-by-case basis, the Department may establish a limit on phosphorus and/or establish a limit on total nitrogen that is more stringent than ten mg/l in order to maintain or achieve compliance with the Massachusetts Surface Water Quality Standards and/or to protect the actual or potential use of the ground water as a source of potable water. On a case-by-case basis, the Department may establish a limit on total nitrogen that is less stringent than ten mg/l if the reclaimed water use does not involve a discharge to the ground surface or the ground water, or in circumstances such as irrigation where the nutrient value of the reclaimed water is proposed to be used and the reclaimed water meets the effluent limit of ten mg/l before it is discharged to a water of the Commonwealth.
- 2. Class C. Class C reclaimed water is reclaimed water that at all times meets or exceeds the effluent limits set forth in 314 CMR 20.17(3)(b).
 - a. Uses. Class C reclaimed water may be used for the following activities:
 - i. Agricultural Use. Class C reclaimed water may be used for orchard and vineyard irrigation where there is no contact between the reclaimed water and the edible portion of the crop, and for processed food crops that, prior to sale to the public or others, undergo chemical or physical commercial processing sufficient to kill pathogens.
 - b. Industrial Process Water. Class C reclaimed water may be used as industrial process water in a closed system where there is no worker contact.
 - c. Industrial Boiler Feed. Class C reclaimed water may be used to feed an industrial boiler.
 - d. Silviculture. Class C reclaimed water may be used for silviculture.
 - (b) Effluent Limits. The following effluent limits apply to all Class C reclaimed water. The compliance point(s) shall be after the final treatment process and prior to the point of discharge:

Effluent Limits

pH = 6.5-8.5
 BOD < 30 mg/l
 TSS < 30 mg/l
 Total Nitrogen < 10 mg/l
 Median of 200 detectable fecal coliform/100 ml
 Other parameters as specified by the Department

20.17: continued

On a case-by-case basis, the Department may establish a limit on phosphorus and/or establish a limit on total nitrogen that is more stringent than ten mg/l in order to achieve or maintain compliance with the Massachusetts Surface Water Quality Standards and/or to protect the actual or potential use of the ground water as a source of potable water. On a case-by-case basis, the Department may establish a limit on total nitrogen that is less stringent than ten mg/l if the reclaimed water use does not involve a discharge to the ground surface or the ground water, or in circumstances such as irrigation where the nutrient value of the reclaimed water is proposed to be utilized, and the effluent limit of ten mg/l is met before it is discharged to the ground water.

(4) Special Operational Conditions.

(a) Except as provided in 314 CMR 20.17(4)(b) and (c), the permittee shall maintain a chlorine residual of at least 0.5 mg/l in the reclaimed water during conveyance from the wastewater treatment facilities to each reuse site. For reuse sites that are not under the control of the permittee, the Service and Use Agreement shall provide the permittee with sufficient access to the reclaimed water distribution system and the reuse site to ensure compliance with this requirement.

(b) Maintenance of a chlorine residual in accordance with 314 CMR 20.17(4)(a) is not required in reclaimed water impoundments and storage basins.

(c) The Department may waive the chlorine residual requirement set forth in 314 CMR 20.17(4)(a), if the Department determines that another method of disinfection has been provided that adequately protects the public health and the environment,

(5) Special Conditions for Use of Reclaimed Water for Aquifer Recharge by Discharging Reclaimed Water Within a Zone II, Interim Wellhead Protection Area, or Private Water Supply Area. A permit issued by the Department pursuant to 314 CMR 5.00 authorizing the use of reclaimed water for aquifer recharge by allowing the discharge of reclaimed water to the ground within a Zone II, Interim Wellhead Protection Area, or Private Water Supply Area shall not assign the reclaimed water to a class. Instead, the permit shall require that the reclaimed water meet effluent limits established in accordance with 314 CMR 5.10.

(6) Special Conditions for the Outside Use of Reclaimed Water Within a Zone II, Interim Wellhead Protection Area, or Private Water Supply Area. A permit issued by the Department pursuant to 314 CMR 3.00, 314 CMR 5.00 or 314 CMR 20.00 authorizing the outside use of reclaimed water within a Zone II, Interim Wellhead Protection Area, or Private Water Supply shall meet the more stringent of the effluent limits established in accordance with 314 CMR 5.10 and the effluent limits set forth in 314 CMR 20.17 for the particular outside use and the class associated with that use. Outside uses of reclaimed water include snowmaking, fire protection, dust control, street cleaning, soil compaction, mixing concrete, washing concrete and irrigation other than irrigation by means of a soil absorption system approved by the Department in accordance with 314 CMR 5.00.

(7) Special Conditions for Use of Reclaimed Water for Irrigation by Means of a Soil Absorption System Approved by the Department Pursuant to 314 CMR 5.00. A permit issued by the Department pursuant to 314 CMR 5.00 authorizing the use of reclaimed water for irrigation by means of a soil absorption system approved by the Department in accordance with 314 CMR 5.00 shall not assign the reclaimed water to a class. Instead, the permit shall require the reclaimed water to meet effluent limits established in accordance with 314 CMR 5.10.

(8) Special Conditions for Use of Reclaimed Water for Irrigation by Means of a Discharge to the Ground Within 100 Feet of an Irrigation Well. A permit issued by the Department pursuant to 314 CMR 5.00 authorizing the use of reclaimed water for irrigation by means of a discharge to the ground within 100 feet of an irrigation well shall require the reclaimed water to meet the more stringent of the effluent limits established in accordance with 314 CMR 5.10 and the effluent limits established in accordance with 314 CMR 20.17 for the particular irrigation use and the class associated with that use.

(9) Special Conditions for Reclaimed Water Used For Irrigation. Except as otherwise provided in 314 CMR 20.17(9), a permit that authorizes the use of reclaimed water for irrigation shall include the following additional conditions:

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- (a) The permittee shall develop and implement a public education program as approved by the Department in accordance with the schedule approved by the Department.
- (b) The permittee shall not use reclaimed water, other than Class A reclaimed water, for spray irrigation within 100 feet of any building or residence, or 50 feet if a hedge buffer is used.
- (c) The permittee shall not spray reclaimed water on paved or impermeable areas.
- (d) The permittee shall not use reclaimed water, other than Class A reclaimed water, for spray irrigation within 100 feet of a place where public exposure could be similar to a park, playground or school yard.

The conditions set forth above shall not apply to a permit issued pursuant to 314 CMR 5.00 that authorizes the use of reclaimed water for irrigation by means of a subsurface soil absorption system approved by the Department.

(10) Other Special Conditions. The Department shall establish special permit conditions, as required on a case-by-case basis, to provide and assure compliance with the applicable requirements of the Massachusetts Clean Waters Act, M.G.L. c. 21, §§ 26 through 53, the Federal Act, 31 U.S.C. § 1251 *et seq.* At a minimum, all reclaimed water system permits shall contain limits that are adequate to assure and maintain compliance with the Massachusetts Surface Water Quality Standards, to protect surface waters for their existing and designated uses, and/or the ground waters of the Commonwealth as an actual or potential source of potable water and to assure compliance with pertinent provisions of state and federal law. The Department may include in a reclaimed water system permit issued by the Department pursuant to 314 CMR 20.00, 314 CMR 3.00, or 314 CMR 5.00 additional effluent and monitoring requirements, including, without limitation, effluent limits and monitoring requirements for contaminants that as of date March 20, 2009 are not regulated by the Drinking Water Regulations of Massachusetts, 310 CMR 22.00. The Department may also require the implementation of specific source control and pollution prevention measures and other best management practices aimed at protecting water quality, the public health and the environment.

20.18: General Permit Conditions

- (1) The following reclaimed water system permits issued by the Department pursuant to 314 CMR 5.00 shall have the general permit conditions set forth in 314 CMR 5.19: permits that authorize the discharge of treated wastewater within a Zone II, Interim Wellhead Protection Area, or Private Water Supply Area, and thus permit the use of reclaimed water for aquifer recharge, and permits that authorize the use of reclaimed water for irrigation by means of a subsurface soil absorption system approved by the Department.
- (2) All other reclaimed water systems issued by the Department pursuant to 314 CMR 5.00 and all reclaimed water system permits issued by the Department pursuant to 314 CMR 3.00, 314 CMR 20.00 shall have the conditions set forth in 314 CMR 20.18(2)(a) through (p).
 - (a) Beginning on the effective date and lasting through the expiration of the permit, the permittee is authorized to use, sell, distribute, and offer for use, sale, or distribution reclaimed water only in accordance with the permit, 314 CMR 20.00, the Massachusetts Uniform Plumbing Code, 248 CMR 10.00, and a Reuse Management Plan approved by the Department.
 - (b) The use, sale, distribution, or offering for use, sale, or distribution of reclaimed water other than as expressly authorized by the permit, 314 CMR 20.00, and a Reuse Management Plan approved by the Department, is prohibited.
 - (c) The permittee shall at all times operate and maintain the facilities used to produce, and/or distribute reclaimed water in accordance with the permit, 314 CMR 20.00, the approved Operations and Maintenance Plan, the approved Reuse Management Plan, 314 CMR 12.00, 257 CMR 2.00, and 314 CMR 20.00.
 - (d) In the event that the permittee proposes to reuse reclaimed water for a use at a reuse site, by a person, or for a purpose that is not identified in the approved Reuse Management Plan, and/or not authorized by this permit, the permittee shall notify the Department in writing of the proposed change and request modification of the permit. The permittee shall not commence the proposed use unless and until the permit has been modified and the use has been approved by the Department in writing.

20.18: continued

(e) The permittee shall give prior notice to the Department as soon as possible of any planned physical alterations or additions to the treatment works or any activity that could significantly change the nature or increase the quantity of pollutants in the reclaimed water. The permittee shall not make the proposed alteration, or construct the proposed addition, unless and until it is approved in writing by the Department.

(f) The permittee shall notify the Department of any non-compliance with the requirements of 314 CMR 20.00 that may endanger the public health or the environment within 24 hours from the time that the permittee became aware of the noncompliance. Said notice may be oral or by facsimile or email. A written submission shall also be submitted to the Department within five days of the time that the permittee became aware of the non-compliance. The written submission shall contain a description of the non-compliance, including exact dates and times, and, if the non-compliance has not been corrected, the anticipated time it is expected to continue and the steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

(g) The permittee shall allow the Department and its authorized representatives to enter upon the permittee's premises where an activity related to the production, use, sale, or distribution of the reclaimed water is located or conducted or where records required by the permit are kept. The Department shall have access to inspect and copy at reasonable times any records that must be kept by the permittee under the conditions of the permit, inspect at reasonable times any facilities, equipment, practices or operations regulated or required under the permit, and sample or monitor the reclaimed water at reasonable times for the purpose of determining compliance with the terms and conditions of the permit.

(h) There shall be no bypassing of untreated or partially treated wastewater to the reclaimed water distribution system or to any reuse site at any time. The reclaimed water produced by the reclaimed water system shall at all times meet the requirements of its classification and use, including, without limitation, the requirements set forth in 314 CMR 20.17. Reclaimed water that does not meet the requirements of its classification and use shall be diverted from the reclaimed water distribution system to an alternate discharge location, to a sewer system with a discharge at another location, or to storage facilities and managed in accordance with all applicable regulations.

(i) The permittee shall notify the Department by telephone, facsimile or email in accordance with 314 CMR 20.18(2)(f) within 24 hours of any time that the permittee discovers that the reclaimed water does not meet the requirements of its classification and use. Reclaimed water not meeting the requirements of its classification and use shall not be discharged to the reclaimed water distribution system or to any reuse site without the prior approval of the Department.

(j) At each reuse site, the public shall be notified that reclaimed water is being used and that the reclaimed water is not safe for drinking. This notification shall include the posting of signs of sufficient size to be clearly read at all reuse sites. For any reuse site that is under the direct control of the permittee, the permittee shall provide the required notice. For any reuse site not under the direct control of the permittee, this requirement shall be expressly included in a Service and Use Agreement. The Service and Use Agreement shall provide that the permittee shall enforce this requirement and that the Department has authority under 314 CMR 20.00 to enforce this requirement.

(k) The permittee shall develop and implement a cross connection control inspection and testing program that contains all the components of a cross connection program established pursuant to 310 CMR 22.22 and that ensures compliance with the Massachusetts Uniform Plumbing Code, 248 CMR 10.00, at each reuse site. A registered cross connection prevention device or cross connection control method that meets the requirements of 310 CMR 22.22 and the Massachusetts Uniform Plumbing Code, 248 CMR 10.00, shall be provided at all potable water system connections, and all connections to pipes conveying water for drinking, domestic and culinary purposes that are located at reuse sites.

(l) The permittee shall not distribute reclaimed water to a person, or offer reclaimed water for use, sale or distribution by another person, without a Service and Use Agreement between said person and the permittee that has been approved by the Department in writing. The permittee shall not distribute reclaimed water to a satellite reclaimed water system for further distribution by that system unless there is a Service and Use Agreement approved by the Department in writing between the owner of the satellite reclaimed water system and each user of the reclaimed water. The permittee shall submit all required Service and Use Agreements to the Department for its review and approval before they are signed.

20.18: continued

(m) Duty to Mitigate. The permittee shall take all reasonable steps to minimize or prevent any adverse impact on human health or the environment resulting from non-compliance with the permit or 314 CMR 20.00.

(n) Duty to Halt or Reduce Activity. Upon reduction, loss or failure of a component of the treatment works, the permittee shall control the production, use, sale and distribution of reclaimed water to the extent necessary to maintain compliance with its permit, the approved Reuse Management Plan and 314 CMR 20.00, until the affected component is restored or an alternative component is provided. It shall not be a defense to an enforcement action for a permittee to maintain that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with a condition of the permit, the approved Reuse Management Plan, and 314 CMR 20.00.

(o) Power Failure. In order to maintain compliance with all the terms and conditions of the permit, the permittee shall provide an alternative power source sufficient to operate the entire treatment works. In the event of the failure of the alternative power source, the permittee shall halt, reduce or otherwise control the production, use, sale or distribution of the reclaimed water upon the reduction, loss or failure of the primary source of power to the treatment works or any component thereof.

(p) Reclaimed water may not be used in a manner that will cause or contribute to a violation of the Massachusetts Surface Water Quality Standards or cause the water quality of any public or private water supply to violate the standards set forth in the Drinking Water Regulations of Massachusetts, 310 CMR 22.00.

(3) Additional General Conditions. The conditions set forth in 314 CMR 20.18(2)(a) through (k) apply to every reclaimed water system permit issued under 314 CMR 20.00 whether expressly incorporated therein.

(a) The permittee shall furnish to the Department within 21 days any information that the Department may request to determine whether cause exists for modifying, revoking, renewing or terminating the permit or to determine whether the permittee has complied with or is complying with all the terms and conditions of the permit.

(b) Nothing in the permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities or penalties to which the permittee is or may be subject to under any Federal or State law or regulation.

(c) Solids, sludges, filter backwash or other pollutants removed in the course of treatment or control of wastewaters shall be disposed of in a manner that is consistent with applicable Federal, State and local laws and regulations.

(d) Monitoring. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. Monitoring shall be conducted according to the latest edition of Standard Methods for the Examination of Water and Waterworks prepared by the American Public Health Association, American Waterworks Association, and the Water Environment Federation, the latest edition of Methods for Chemical Analysis of Water and Wastes prepared by EPA, the latest edition of Water Standards of the American Society for Testing Materials, or other test procedures specified in the permit or approved by the Department. Analyses of samples shall be conducted at a laboratory certified by the Department.

(e) Record Keeping. The permittee shall retain records of all monitoring information including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by the permit, and records of all data used to complete the application for the permit for a period of at least three years from the date of the sample, measurement, report or application. The period may be extended by request of the Department at any time. Records of monitoring information shall include the date, exact place and time of sampling or measurement, the individual who performed the sampling or measurement, the date analyses were performed, the individual who performed the analyses, the analytical techniques or methods used, and the results of such analyses.

(f) Monitoring results shall be reported at the intervals specified in the permit. If the permittee monitors any pollutant more frequently than required by the permit, the results of this monitoring shall be included in the calculation and reporting of the data required by the permit.

20.18: continued

(g) Except as otherwise provided, any permittee required to obtain a reclaimed water system permit issued by the Department pursuant to M.G.L.c. 21, § 42 and 314 CMR 20.00, shall be required annually to submit an annual compliance assurance fee in accordance with 310 CMR 4.00. The requirement to submit the annual compliance fee does not apply to any local government unit other than an authority

(h) The permittee shall submit to the Department for its review and approval an Operations and Maintenance Plan and Staffing Plan at least forty-five days prior to the date the reclaimed water system commences operation or the use of the reclaimed water commences, whichever first occurs. The Operation and Maintenance Plan shall document how the permittee intends to operate and maintain and staff the reclaimed water system in accordance with all applicable requirements including the permit, 314 CMR 20.00, 257 CMR 2.00, and 314 CMR 12.00. The Operation and Maintenance Plan shall include a preventative maintenance program to ensure that all equipment is kept in a reliable condition. The Operation and Maintenance Plan shall include a plan to staff the reclaimed water system, including, without limitation, 257 CMR 2.00. The Operation and Maintenance Plan shall also include an emergency contingency plan that establishes standard operating procedures that must be followed when the reclaimed water does not meet the applicable effluent limits.

(i) The permittee shall submit a revised Operation and Maintenance Plan whenever there are modifications to the reclaimed water system, the standard operating procedures for the system, or the staff of the reclaimed water system.

(j) The permittee shall not implement any changes to the reclaimed water system unless and until the Department approves the revised Operations and Maintenance Plan required by the permit.

(k) If the permittee intends to enter into a contract with a third party (the contract operator) for the operation and maintenance of the reclaimed water system, at least 45 days prior to the date the system commences operation, the permittee shall submit a draft unsigned contract to the Department for its review and approval. The contract shall provide that the contract operator shall operate and maintain the reclaimed water system in accordance with the approved Operation and Maintenance Plan and Staffing Plan, 314 CMR 20.00, 314 CMR 12.00, and 257 CMR 2.00. The permittee shall not execute the contract and authorize the contract operator to commence operation of the reclaimed water system unless and until the Department has approved the contract.

20.19: Modification, Transfer, Suspension, Revocation and Renewal of Reclaimed Water System Permits Issued by the Department Pursuant to 314 CMR 20.00

(1) The Department may modify, suspend, or revoke any outstanding reclaimed water system permit issued by the Department pursuant to 314 CMR 5.00 in accordance with 314 CMR 5.12. The Department may modify, suspend, or revoke any outstanding reclaimed water system permit issued by the Department pursuant to 314 CMR 3.00 in accordance with 314 CMR 3.13. The Department may modify, suspend or revoke any outstanding reclaimed water system permit issued by the Department pursuant to 314 CMR 20.00, in whole or in part, for cause including, but not limited to, violation of any permit term, obtaining a permit by misrepresentation, or failure to disclose fully all relevant facts, or any change in or discovery of conditions that calls for reduction or discontinuance of the authorized activity. The Department may also modify a reclaimed water system permit issued by the Department pursuant to 314 CMR 20.00 at the request of the permittee upon a showing, satisfactory to the Department that the requested modification is appropriate in view of circumstances for which the permittee is not at fault.

(2) The modification, except for minor modification, suspension, revocation or renewal of a reclaimed water system permit, issued by the Department pursuant to 314 CMR 20.00, shall be processed in accordance with the provisions of 314 CMR 2.10.

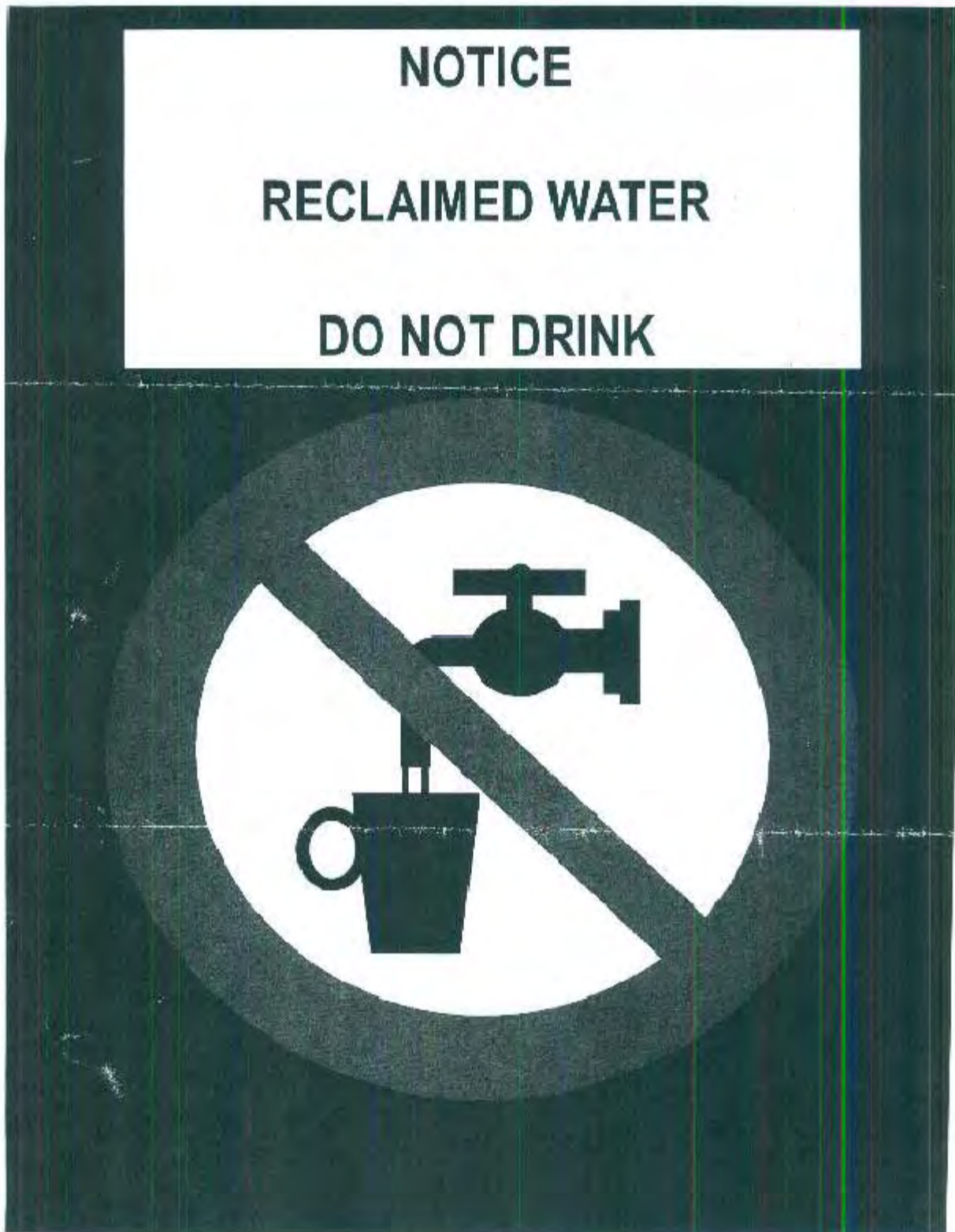
(3) Minor Modifications, Including Transfer of Permits. Upon the consent of the permittee, the Department may make the following modifications to a reclaimed water system issued by the Department pursuant to 314 CMR 20.00 without following the procedures of 314 CMR 2.00:

20.19: continued

- (a) Correction of typographical errors;
- (b) Change in the monitoring provisions to require more frequent monitoring or reporting by the permittee or to require monitoring for additional pollutants or monitoring at additional monitoring locations;
- (c) Transfer the Permit to a new permittee if:
 - 1. The Department receives written notice of the transfer from the current permittee of the transfer at least 30 days in advance of the proposed transfer date;
 - 2. The notice includes a written agreement between the existing and proposed new permittee which includes a specific date for transfer of the permit and the proposed transferee's assumption of responsibility for compliance with the permit, and any allocation of liability and financial responsibility between them, including, without limitation, assumption of the existing permittee's responsibility under the Reuse Management Plan and all Service and Use Agreements; and
 - 3. The Department approves the transfer in writing. The transfer shall take effect on the date the transfer is approved by the Department.

20.20: Appendix A

"DO NOT DRINK SIGN"



REGULATORY AUTHORITY

314 CMR 20.00: M.G.L. c. 21, §§ 26 through 53.

NON-TEXT PAGE