

7-21-23 Includes redline changes from official Title 5 version for Natural Resource Nitrogen Sensitive Areas amendments, incorporating changes at draft stage and since the public comment period to final

310 CMR 15.000: THE STATE ENVIRONMENTAL CODE, TITLE 5: STANDARD REQUIREMENTS FOR THE SITING, CONSTRUCTION, INSPECTION, UPGRADE AND EXPANSION OF ON-SITE SEWAGE TREATMENT AND DISPOSAL SYSTEMS AND FOR THE TRANSPORT AND DISPOSAL OF SEPTAGE

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SUBPART C: DESIGN, CONSTRUCTION, REPAIR, AND REPLACEMENT OF ON-SITE SEWAGE DISPOSAL SYSTEMS

15.201: Type of System

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15.213: Construction in Velocity Zones and Floodways

15.214: ~~Nitrogen Loading Limitations~~ [Designation of Nitrogen Sensitive Areas](#)

15.215: ~~Designation of Nitrogen Sensitive Areas~~ [Nitrogen Loading Limitations](#)

15.216: Aggregate Determinations of Flows and Nitrogen Loadings

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SUBPART A: GENERAL PROVISIONS AND ENFORCEMENT

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15.002: Definitions

For the purposes of 310 CMR 15.000, the following terms shall have the following meanings, unless the context clearly requires otherwise. Terms expressed in the singular shall be construed to incorporate the plural, and vice versa, unless the context otherwise requires.

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Alternative Systems - Systems designed to provide or enhance on site sewage disposal which either do not contain all of the components of an on site disposal system constructed in accordance with 310 CMR 15.100 through 15.255 or which contain components in addition to those specified in 310 CMR 15.100 through 15.255 and which are proposed to the Local Approving Authority and/or the Department, or an agent authorized by the Department, for remedial, pilot, provisional, or general use approval pursuant to 310 CMR 15.280 through 15.289.

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Bedroom - A room providing privacy, intended primarily for sleeping and consisting of all of the following:

- (a) floor space of no less than 70 square feet;

- (b) for new construction, a ceiling height of no less than seven feet three inches;
- (c) for existing houses and for mobile homes, a ceiling height of no less than seven feet zero inches;
- (d) an electrical service and ventilation; and
- (e) at least one window.

Living rooms, dining rooms, kitchens, halls, bathrooms, unfinished cellars and unheated storage areas over garages are not considered bedrooms. Single family dwellings shall be presumed to have at least three bedrooms. Where the total number of rooms for single family dwellings exceeds eight, not including bathrooms, hallways, unfinished cellars and unheated storage areas, the number of bedrooms presumed shall be calculated by dividing the total number of rooms by two then rounding down to the next lowest whole number. The applicant may design a system using design flows for a smaller number of bedrooms than are presumed in this definition by granting to the Approving Authority a deed restriction limiting the number of bedrooms to the smaller number.

Best Available Nitrogen Reducing Technology—(1) An alternative system certified by the Department for general use pursuant to 310 CMR 15.288 which has the lowest effluent Total Nitrogen performance value when the Disposal System Construction Permit application is filed; (2) an alternative system granted provisional approval by the Department pursuant to 310 CMR 15.286; or (3) an alternative system approved by the Department for piloting pursuant to 310 CMR 15.285, provided that for an alternative system granted provisional approval or an alternative system approved for piloting such system has a Total Nitrogen performance value less than or equal to the lowest alternative system certified by the Department for general use pursuant to 310 CMR 15.288 when the Disposal System Construction Permit application is filed for either system.

Best Available Nitrogen Reducing Technology –

(a) An alternative system(s) which has a Total Nitrogen effluent performance value of 10 mg/L or less and is certified by the Department for general use pursuant to 310 CMR 15.288 when the Disposal System Construction Permit application is filed and has been approved for the type and design flow of the facility where it is to be used; or

(b) If no such alternative system(s) meeting 10 mg/L or less has received general use approval at the time the Disposal System Construction Permit application is filed, then an alternative system(s) with the lowest Total Nitrogen effluent performance value certified by the Department for general use when the Disposal System Construction Permit application is filed and has been approved for the type and design flow of the facility where it is to be used; or

(c) An alternative system(s) granted provisional approval by the Department pursuant to 310 CMR 15.286 or an alternative system(s) approved by the Department for piloting pursuant to 310 CMR 15.285; provided that for an alternative system(s) granted provisional approval or an alternative system(s) approved for piloting such system(s) is approved for the type and design flow of the facility and has a Total Nitrogen performance value less than or equal to 10 mg/L; or, if no system(s) with a Total Nitrogen performance value less than or equal to 10 mg/L has received general use approval, then a system(s) with a Total Nitrogen effluent performance value less than or

equal to the lowest alternative system(s) certified by the Department for general use pursuant to 310 CMR 15.288 when the Disposal System Construction Permit application is filed.

Biological Mat - A layer composed of microorganisms and organic material located below a soil absorption system which forms on the infiltrative surface of soil and which provides biological treatment of septic tank effluent.

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Emergency Repair - The repair of a system which is necessary to prevent sewage backup into a building, surface breakout of sewage, or to alleviate an imminent danger to public health, safety or the environment in accordance with 310 CMR 15.353.

Environmental Justice (EJ) Population –

(a) A Neighborhood that meets one or more of the following criteria:

1. the annual median household income is not more than 65% of the statewide annual median household income;
2. minorities comprise 40% or more of the population;
3. 25% or more of households lack English language proficiency;
4. minorities comprise 25% or more of the population and the annual median household income of the municipality in which the neighborhood is located does not exceed 150% of the statewide annual median household income; or

(b) a geographic portion of a Neighborhood designated by the Secretary as an Environmental Justice Population pursuant to M.G.L. c. 30, § 62; provided, however, that a Neighborhood or a geographic portion of a Neighborhood that the Secretary has determined shall not be designated an Environmental Justice Population pursuant to M.G.L. c. 30, § 62 shall not be considered an Environmental Justice Population under 310 CMR 15.000.

EPA - The United States Environmental Protection Agency.

Equalization Basin – A watertight tank or basin of sufficient size that has the capacity to store at a minimum the proposed daily design flows for the facility.

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Local Upgrade Approval - An approval granted by the Approving Authority allowing the owner or operator of an existing ~~nonconforming~~ system, including a nonconforming system, ~~or an existing~~ to perform an upgrade of that ~~nonconforming~~ system to the maximum feasible extent, all in accordance with the provisions of 310 CMR 15.401 through 15.405.

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Maintenance - All activities required to assure the effective and continuous operation and performance of an on-site system including, but not limited to, solids and scum removal from the

septic tank, grease trap, dosing chamber or pump chamber and, re-leveling the distribution box, but not including a system upgrade.

Massachusetts Estuary Project Report or MEP Report – A technical report produced by the Massachusetts Estuaries Project that has been accepted by the Department and was created to: determine current nitrogen loads to estuaries; evaluate reductions that would be necessary to support healthy ecosystems based on a linked model to evaluate nitrogen inputs to estuaries; and provide technical guidance to support appropriate wastewater, watershed, and embayment management techniques to reduce nitrogen loading.

Mobile Home - A single transportable structure on a chassis designed to be used, with or without a permanent foundation, as a dwelling. The support system of a mobile home is constructed so that the mobile home may be moved from time to time.

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Nitrogen Sensitive Area - An area of land and/or natural resource area so designated by the Department in accordance with 310 CMR 15.214~~5~~.

Nonconforming System - Any system which is not in full compliance with the standards and requirements of 310 CMR 15.000 and for which a variance or local upgrade approval has not been obtained. Nonconforming systems include, but are not limited to, cesspools, privies, failed systems, and systems with a design flow above 10,000 gpd.

Notice of Intent and Application Period – The two-year period that begins on the effective date of a Nitrogen Sensitive Area designation pursuant to 310 CMR 15.214(1)(b).

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Saturated Zone - Any portion of the earth below the land surface where available openings (pore, fissure, joint or solution cavity) are filled with water.

Scientific Evaluation – A watershed assessment that is accepted by the Department because it is scientifically rigorous and based upon information, data, modeling, and analyses that could be used to: (a) delineate the watershed, (b) develop and implement an EPA-approved TMDL, and (c) develop and implement wastewater and nutrient management plans to satisfy the TMDL; and which produces, at a minimum, the following:

1. quantitative and qualitative assessments of the nutrient related health of the waterbodies being assessed;
2. identification of all controllable and uncontrollable nutrient sources and their respective contributions to the waterbodies for the present day and the next 20 years, including any projected buildout;
3. nutrient threshold concentrations that must be achieved to comply with 314 CMR 4.00: *Massachusetts Surface Water Quality Standards* to support the ecosystem and restore and maintain indicator habitats, such as eel grass and benthic species, associated with nitrogen impacts;
4. analyses of watershed nutrient loading reductions that will be necessary to achieve at least the minimum nutrient threshold concentrations in the waterbody and restore and maintain

[the indicator habitats; and](#)

[5. site-specific, calibrated, watershed-waterbody model\(s\) that can be used to simulate the efficacy of strategies towards restoration and maintenance of the waterbodies.](#)

[A TMDL is not required to complete the Scientific Evaluation.](#)

Scum - A mass of light solids, such as hair, grease, oils and soaps, floating on the surface of the wastewater in a septic tank.

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Title 5 of the State Environmental Code, 310 CMR 15.000 - The Department's regulation for the siting, construction, inspection, upgrade and expansion of on-site sewage treatment and disposal systems and for the transport and disposal of septage.

Total Maximum Daily Load or TMDL – [The sum of a receiving water's individual waste load allocations and load allocations and natural background, which, together with a margin of safety that takes into account any lack of knowledge concerning the relationship between effluent limitations and water quality, represents the maximum amount of a pollutant that a waterbody can receive and still meet water quality standards in all seasons.](#)

Training Contact Hours (TCH) – The hours of training a person has had prior to the renewal of either a soil evaluator or system inspector approval. Each seminar, workshop, training course, or college course will have a specific training hour value as rated by the Department or an agent authorized by the Department.

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Upgrade - The modification of one or more components of an on-site system or the design and construction of a new on-site system which is intended to bring [an existing system, including](#) a nonconforming system into conformance with 310 CMR 15.000. An emergency repair is not an upgrade.

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Watershed - Any region or area measured in a horizontal topographic divide which directs water runoff from precipitation, normally by gravity, into a stream, a body of impounded surface water, or a coastal embayment, or any region or area measured by a groundwater divide which directs groundwater into a stream, a body of impounded surface water, or a coastal embayment.

Watershed Permit – [A permit issued by the Department pursuant to 314 CMR 21.00: Massachusetts Watershed Permit Regulations, including the Pleasant Bay Watershed Permit \(Permit No. 001-0\) that was issued August 3, 2018, by the Department prior to the promulgation of 314 CMR 21.00.](#)

Water Supply Well - Any public or private source of groundwater used for human consumption, including but not limited to, a source approved for such use by the local Board of Health or the Department in accordance with M.G.L. c. 111, § 122A or 310 CMR 22.00: *Drinking Water*.

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NOTE TO REVIEWERS: MassDEP is not proposing any changes to the remainder of Subpart A. These provisions have been omitted.

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SUBPART B: SITING OF SYSTEMS

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NOTE TO REVIEWERS: MassDEP is not proposing any changes to Sections 15.100 through 15.106. These provisions have been omitted.

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15.107: Hydrogeologic Properties

(1) The hydrogeologic properties of the proposed disposal area shall be identified and recorded on the evaluation form with respect to the following:

- (a) estimated direction of ground-water flow;
- (b) high ground-water elevation;
- (c) estimated depth to bedrock if a factor in design of proposed system, or actual depth if encountered during deep observation hole tests;
- (d) depth of unsaturated zone, including any perched water tables;
- (e) drainage classification of dominant soil type as defined by NRCS;
- (f) lateral distance to surface water and wetland delineation;
- (g) location of every water supply, public and private,
 - 1. within 400 feet of the proposed system location in the case of surface water supplies and gravel packed public water supply wells,
 - 2. within 250 feet of the proposed system location in the case of tubular public water supply wells, and
 - 3. within 150 feet of the proposed system location in the case of private water supply wells;
- (h) approximate safe yield or design capacity of every public water supply, if information is available; and
- (i) identification of proposed disposal area in relation to the location of nitrogen sensitive areas designated pursuant to 310 CMR 15.21~~4~~5.

(2) When observation wells are appropriate or necessary to determine the hydrogeologic properties of a site or region, such as direction of ground-water flow, perched ground-water tables and seasonal ground-water elevation fluctuations, the general guide for the proper use and installation of ground-water observation wells provided in Department guidance shall be followed.

SUBPART C: DESIGN, CONSTRUCTION, REPAIR, AND REPLACEMENT OF

ON-SITE SEWAGE DISPOSAL SYSTEMS

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15.202: Use of Recirculating Sand Filters

(1) A recirculating sand filter ("RSF") or equivalent alternative technology approved by the Department in accordance with 310 CMR 15.280 through 15.288 is a required component of all systems designed to serve a facility or facilities with a design flow of 2,000 gpd or more to be located in a Nitrogen Sensitive Area, [as designated in 310 CMR 15.214\(1\)\(a\)](#), provided that such RSF shall not be required for a facility for which subdivision approval has been obtained to construct dwellings with a cumulative total design flow of 2,000 gpd or greater if a disposal system construction permit to construct a system with a total design flow of less than 2,000 gpd in full compliance with 310 CMR 15.000 on each of the subdivision lots to be served by a system is obtained and such separate subdivision lots are to be conveyed to independent owners.

(2) A recirculating sand filter or equivalent alternative technology approved by the Department in accordance with 310 CMR 15.280 through 15.288, may be used to enhance nitrogen removal in systems [in Nitrogen Sensitive Areas designated pursuant to 310 CMR 15.214\(1\)\(a\)](#), in accordance with 310 CMR 15.217 (Systems with Enhanced Nitrogen Removal)

(3) Recirculating sand filters designed and approved in accordance with Department guidance are certified for general use.

(4) Recirculating sand filters or equivalent alternative technology shall meet the following requirements:

(a) effluent discharge concentrations shall meet or exceed secondary treatment standards of 30 mg/L BOD[5] and 30 mg/L TSS. The effluent pH range shall be 6.0 to 9.0.

(b) total nitrogen concentration in the effluent shall not exceed 25 mg/L.

(c) system owners shall have effluent quality monitored quarterly for systems serving a facility with a design flow of less than 2,000 gallons per day, and both influent and effluent quality monitored quarterly for systems serving a facility with a design flow of 2,000 gallons per day or greater, for BOD[5], TSS, pH and total nitrogen, unless otherwise required or approved by the Department. Unless otherwise required by the Department, the system owner shall submit all monitoring results to the local Approving Authority and the Department by January 31<st> of each year for monitoring conducted during the previous calendar year.

(d) recirculating sand filter systems shall contain all components of a standard on-site system and be capable of functioning as a conventional system. Any departures from this provision require written approval from the Department.

(e) the system owner shall notify the local Approving Authority of any system failure within 24 hours of detection of such failure.

(f) pressure distribution, in accordance with 310 CMR 15.254, is required for all systems serving a facility with a design flow of 2,000 gallons per day or greater. Pressure distribution systems shall be designed in accordance with Department guidance.

(g) for systems serving a facility with a design flow of 2,000 gpd or greater, the separation from high groundwater as required under 310 CMR 15.212 shall be calculated after adding the effect of groundwater mounding to the high groundwater elevation as determined pursuant to 310 CMR 15.103(3).

(h) by January 31<st> of each year, unless otherwise determined by the Department, the system must be inspected at least annually by a Massachusetts certified operator of an appropriate grade to operate the system, unless the Department has approved in writing a reduction in frequency of inspection or the facility is subject to a Department approved comprehensive local plan of on-site system inspection, the system owner shall submit a certification by the system operator to the local Approving Authority and the Department for the previous calendar year stating that the system and its components are functioning as designed and were inspected in accordance with the Department's approval.

(i) an operation and maintenance manual shall be prepared by the system designer or a Massachusetts Registered Professional Engineer and submitted as part of the application.

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15.214: Nitrogen Loading Limitations

- ~~(1) No system serving new construction in Nitrogen Sensitive Areas designated in 310 CMR 15.215 shall be designed to receive or shall receive more than 440 gallons of design flow per day per acre except as set forth at 310 CMR 15.216 (aggregate flows) or 15.217 (enhanced nitrogen removal).~~
- ~~(2) No system serving new construction in areas where the use of both on-site systems and drinking water supply wells is proposed to serve the facility shall be designed to receive or shall receive more than 440 gallons of design flow per day per acre from residential uses except as set forth at 310 CMR 15.216 (aggregate flows) or 15.217 (enhanced nitrogen removal).~~
- ~~(3) It shall be the duty of the owner of the system or proposed system to ascertain whether or not the facility to be constructed will be in a nitrogen sensitive area. The Department will prepare and make available at locations generally accessible to the public maps portraying designated nitrogen sensitive areas within the Commonwealth.~~

Nitrogen Loading Limitations Designation of Nitrogen Sensitive Areas

(1) The following areas have been determined by the Department to be particularly sensitive to the discharge of pollutants from on-site sewage disposal systems and are therefore designated Nitrogen Sensitive Areas:

(a) Public and Private Water Supply Protection Areas:

1. Department-approved Zone IIs for wells or wellfields used by public water systems as defined in 310 CMR 22.02 and, in the absence of a Department-approved Zone II, the Interim Wellhead Protection Area (IWPA) for a public water system's well or wellfield as defined in 310 CMR 22.02; and

~~1.2. a~~Any areas ~~facility served by~~ where the use of both ~~an~~-on-site systems and ~~a~~-wells that ~~are~~s not regulated as ~~a~~-public water supplies under 310 CMR 22.00: *Drinking Water* serve facilities.

(b) Natural ~~R~~Resource ~~A~~Areas:

~~1.~~~~1.~~ any watershed to an embayment or sub-embayment that on **July 7, 2023** ~~[effective date of the regulations]~~ is the subject of a nitrogen Total Maximum Daily Load (TMDL) approved by the EPA and an Area Wide Water Quality Management Plan approved by the EPA for Cape Cod in 2015 pursuant to Section 208 of the Federal Clean Water Act, 33 U.S.C. § 1251 *et. Seq.* (“208 Plan”), addressing nitrogen pollution. For any such watershed that is subject to an approved nitrogen TMDL and an approved 208 Plan as of **July 7, 2023** ~~[effective date of the regulations]~~, the effective date of designation is **July 7, 2023** ~~[effective date of regulations]~~. A Nitrogen Sensitive Area designation for watersheds subject to the 208 Plan that receive an EPA-approved TMDL after **July 7, 2023** becomes effective on the date EPA approves the TMDL.

~~1.~~~~2.~~ any watershed to an embayment or sub-embayment subject to the 208 Plan as of **July 7, 2023** that the Department designates as a Nitrogen Sensitive Area after a public review process based on:

a. ~~a~~ nitrogen TMDL approved by the EPA pursuant to the Federal Clean Water Act;

~~a~~b. a Massachusetts Estuary Project Report demonstrating nitrogen impacts;
or

~~e~~b. a Scientific Evaluation demonstrating nitrogen impacts. Nitrogen impacts include but are not limited to: ~~(1)~~-nitrogen related eutrophication; ~~(2)~~-nitrogen related adverse ecological and habitat impacts; ~~(3)~~-nitrogen concentrations that would cause or contribute to impairment of existing or designated uses pursuant to 314 CMR 4.00: *Massachusetts Surface Water Quality Standards*; or ~~(4)~~-nitrogen concentrations that exceed site-specific criteria developed by the Department pursuant to 314 CMR 4.00: *Massachusetts Surface Water Quality Standards*. The Department may accept a Scientific Evaluation commenced prior to July 7, 2023. If the Scientific Evaluation will not be conducted by or on behalf of the Department, a scope of work for the proposed Scientific Evaluation shall be submitted to the Department for its review and approval before the evaluation commences, by:

- i. submitting a draft scope of work for the Scientific Evaluation in accordance with the Department's guidelines;
- ii. within 21 days of submitting the draft scope of work to the Department, placing a public notice in the *Environmental Monitor* that the draft scope of work has been submitted to the Department for review and approval;
- iii. conducting a joint pre-scoping meeting with the Department and appropriate representatives of the municipalities within the evaluation area to discuss the proposed scope of work and set a timeline for routine update meetings; and
- i-iv. submitting to the Department a copy of the public notice published in the *Environmental Monitor*; a proposed final scope of work for Department review; and a proposed plan and website to provide periodic informational updates regarding the Scientific Evaluation process to the community(ies) that may be affected.

(2) A public review process shall precede a final Nitrogen Sensitive Area designation pursuant to 310 CMR 15.214(1)(b)2. and shall include, at a minimum, the following:

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(a) Public Notice. The Department shall provide public notice of its intent to formally designate the Nitrogen Sensitive Area. Public notice shall afford a public comment period of at least 60 days after the date of publication in the *Environmental Monitor*. The Department may elect to extend the public comment period. If the Department provides such an extension, the Department shall post notice thereof on the Department's website and provide electronic copies of the notice to anyone who requests it.

(b) The Department shall publish public notice of the intended designation in the *Environmental Monitor* and in a local or regional newspaper with the largest readership distribution both online and in hardcopy, if hardcopy exists, within the area that may be affected by the designation. The Department will request that notice be published in the local town or city hall and on the website of the community or communities that may be affected. The Department will also post notice on the Department's webpage. In municipalities with Environmental Justice Populations where the preceding method for publishing public notice does not specifically serve the Environmental Justice Population(s), public notice shall be provided by the Department to at least one additional news organization that primarily serves the Environmental Justice Population(s) within the area that may be affected by the designation. The public notice shall be translated into other languages that are prevalent in areas with persons of limited English proficiency.

(c) The Department shall send a copy of the public notice to the chief municipal elected official and the Board of Health of any municipality that may be affected by the intended designation.

(d) The public notice shall contain the following minimum information and any additional information the Department deems appropriate:

1. identification of the watershed or sub-watershed to be addressed by the intended designation;
2. a link to a website that includes a detailed factual and scientific basis and regulatory rationale explaining how the watershed satisfies the criteria for the intended designation under 310 CMR 15.214(1)(b)2.; and
3. the time within which the public may comment or request a public hearing.

(e) Public Hearings. If the Department determines a public hearing to be in the public interest, then the Department shall schedule and conduct such hearing in a community within the area that may be affected by the designation. Public notice of the public hearing shall be published in the same manner as the public notice for the public comment period. When a public hearing is held, the public comment period shall be extended to the conclusion of the public hearing or such later date as may be established by the Department.

(f) Determination. After the conclusion of the public comment period, the Department may issue or deny a final designation, which will be published on the Department's website. The effective date of the designation shall be the date of issuance and the requirements of 310 CMR 15.215 take effect upon that date.

(g) Appeals. Any person aggrieved by a Department final determination to designate a Nitrogen Sensitive Area pursuant to 310 CMR 15.214(1)(b)2.a. or b. ~~or c.~~ and who also participated in the public comment period or public hearing may request an adjudicatory hearing in accordance with 310 CMR 1.00: *Adjudicatory Proceedings* and M.G.L. c. 30A within 21 days of the designation's issuance but only with respect to whether there is a sufficient factual or scientific basis for the Nitrogen Sensitive Area designation under 310 CMR 15.214(1)(b)2.a. or b. ~~or c.~~ Participating in the public comment period or public hearing means verbally commenting during the public hearing or submitting written information to the Department prior to close of the public comment period.

15.215: Designation of Nitrogen Sensitive Areas

~~The following areas have been determined by the Department to be particularly sensitive to the discharge of pollutants from on-site sewage disposal systems and are therefore designated nitrogen sensitive. The necessity of providing increased treatment of pollutants and reduction in nutrients discharged from on-site sewage disposal systems, including nitrogen, nitrogen as nitrate, phosphorous and pathogens in these areas warrants the imposition of the loading restrictions set forth in 310 CMR 15.214.~~

~~Interim Wellhead Protection Areas and Department approved Zone IIs of public water supplies;~~

~~Nitrogen sensitive embayments or other areas which are designated as nitrogen sensitive for purposes of 310 CMR 15.000 shall be mapped based on scientific evaluations of the affected water body and adopted through parallel public processes pursuant to both 310 CMR 15.000 and 314 CMR 4.00: *Massachusetts Surface Water Quality Standards*.~~

15.215: Nitrogen Loading Limitations

The necessity of providing increased treatment of pollutants and reduction in nutrients discharged from on-site sewage disposal systems, in areas designated as nitrogen sensitive areas warrants the imposition of the following nitrogen loading limitations:

(1) Public and Private Water Supply Protection Areas: No facility owner for New Construction in Nitrogen Sensitive Areas designated in 310 CMR 15.214(1)(a) shall install a system designed to receive or allow a system to receive more than 440 gallons of design flow per day per acre except as set forth in 310 CMR 15.202 (use of recirculating sand filters), 310 CMR 15.216 (aggregate flows) or 15.217 (enhanced nitrogen removal).

(2) Natural Resource Areas:

Any system serving New Construction or an existing facility in a Nitrogen Sensitive Area designated pursuant to 310 CMR 15.214(1)(b) on or after **July 7, 2023** ~~effective date of the regulations~~ shall incorporate Best Available Nitrogen Reducing Technology, as follows:

- (a) Existing Systems. The owner of a system serving, or approved to serve, an existing facility ~~with a Certificate of Compliance~~ as of the effective date of the Nitrogen Sensitive Area designation shall upgrade the system pursuant to 310 CMR 15.401 through 15.405 to incorporate the Best Available Nitrogen Reducing Technology within five years of the date on which the Notice of Intent and Application Period ends ~~of the effective date of the designation~~ unless:

1. Except as otherwise provided in 310 CMR 15.215(2)(c)4. and 314 CMR 21.12(5), a Notice of Intent, a Watershed Permit application, or a *De Minimis* Nitrogen Load Exemption application is filed for the area during the Notice of Intent and Application Period pursuant to 310 CMR 15.215(2)(c), 314 CMR 21.03: *Application for a Watershed Permit*, or 314 CMR 21.12: *De Minimis Nitrogen Load Exemption*, respectively; or

2. The Nitrogen Sensitive Area is subject to a *De Minimis* Nitrogen Load Exemption and the facility is within the area covered by the exemption; or

3. The Nitrogen Sensitive Area is subject to a Watershed Permit, and the facility is within the area covered by the permit, and:

- a. The Watershed Permit to which the Nitrogen Sensitive Area is subject specifies that the five-year upgrade requirement has been suspended ~~modified or waived~~ on the basis of permit conditions that ensure at least equivalent nitrogen reductions within the schedule included in the Watershed Permit; or, for Watershed Permits issued before promulgation of 314 CMR 21.00: *Massachusetts Watershed Permit Regulations*, the ~~five-year~~ upgrade requirement is ~~waived~~ suspended for each permittee's watershed area, unless and until the permit is revoked or terminated, in which case 310 CMR 15.215(2)(d) shall go into effect for ~~apply to~~ each system in the watershed area of each permittee to whom the revocation or termination is applicable; and
- b. The watershed permittee(s) is in compliance with the terms and conditions of the permit.

~~(b) The filing of a notice of intent to obtain a Watershed Permit within 18 months of a Nitrogen Sensitive Area designation under 310 CMR 15.214(1)(b) by a party who could otherwise apply for such permit under 314 CMR 21.00 will pause the five-year time period in which individual system upgrades would otherwise be required until a Watershed Permit is obtained. The notice of intent shall be filed on a form provided by the Department and shall include a proposed schedule for the filing of a Watershed Permit application. (It is not necessary to file a notice of intent in order to apply for or receive a Watershed Permit.) The party or parties seeking the permit shall demonstrate they are making reasonable progress towards receipt of the Watershed Permit within 5 years from designation. If the parties fail to demonstrate reasonable progress, then the Department may terminate the pause of the five-year time period and the remaining balance of the five-year time period will begin running from when it was paused by the filing of the notice of intent. Within seven days of filing a notice of intent or issuance of a Department determination to terminate a pause in the 5-year upgrade requirement, the party who filed the notice of intent must publish notice of its filing and any subsequent Department determination to terminate the 5-year pause in the forthcoming Environmental Monitor.~~

~~(e)(b) New Construction. Beginning six months after~~As of the effective date of the Nitrogen Sensitive Area designation any systems serving New Construction shall incorporate Best Available Nitrogen Reducing Technology. The Department will~~may~~waive-suspend this requirement only if:

1. Except as otherwise provided in 310 CMR 15.215(2)(c)4. And 314 CMR 21.12(5), a Notice of Intent, a Watershed Permit application, or a De Minimus Nitrogen Load Exemption application is filed for the area during the Notice of Intent and Application Period pursuant to 310 CMR 15.215(2)(c), 314 CMR 21.03: *Application for a*

Watershed Permit, or 314 CMR 21.12: De Minimis Nitrogen Load Exemption, respectively; or

2. The Nitrogen Sensitive Area is subject to a De Minimis Nitrogen Load Exemption and the facility is within the area covered by the exemption; or

3. The Nitrogen Sensitive Area is ~~the~~ subject to ~~of~~ a Watershed Permit and the New Construction is within the area covered by the permit and:

a. The Watershed Permit to which the Nitrogen Sensitive Area is subject specifies that the Best Available Nitrogen Reducing Technology incorporation requirement has been suspended ~~modified or waived~~ on the basis of permit conditions that ensure nitrogen reductions will be sufficient to offset future additional nitrogen loads from newly constructed on-site systems; and

a.b. The watershed permittee(s) is in compliance with the terms and conditions of the Watershed Permit.

(d)(c) Notice of Intent and Application Period.

1. The filing of an application for a Watershed Permit or a De Minimis Nitrogen Load Exemption or a Notice of Intent to apply for a Watershed Permit during the Notice of Intent and Application Period by a party who could otherwise apply for such permit under 314 CMR 21.00: Massachusetts Watershed Permit Regulations will prevent commencement of the five-year time period in which Title 5 system upgrades would otherwise be required under 310 CMR 15.215(2)(a).

2. An application for a Watershed Permit or De Minimis Nitrogen Load exemption shall be filed pursuant to 314 CMR 21.03 or 21.12, respectively. A Notice of Intent shall be filed on a form provided by the Department and shall include a proposed schedule with sufficient milestones to be approved by the Department for the filing of a Watershed Permit application and issuance of the permit as soon as practicable but not later than seven years from the applicable Nitrogen Sensitive Area designation under 310 CMR 15.214(1)(b).

3. Within twenty-eight days of filing a Notice of Intent, a Watershed Permit application, or De Minimis Nitrogen Load Exemption application, the party who filed such notice or application must publish notice of its filing and any suspension of the Title 5 upgrade and New Construction requirements under 310 CMR 15.215(2)(a) and (b): in the forthcoming *Environmental Monitor*; on the party's official website; in the town hall where similar notices are published; and in a local or regional newspaper with the largest readership distribution within the area that may be affected by the Title 5 upgrade and New Construction requirements in 310 CMR 15.215(2)(a) and (b). In municipalities with Environmental Justice Populations where the preceding method for publishing public notice does not specifically serve the Environmental Justice Population(s), the party who filed the Notice of Intent or Watershed Permit application must publish the preceding notice in at least one

additional news organization that primarily serves the Environmental Justice Population(s) within the area that may be affected by the designation. The public notice shall be translated into other languages that are prevalent in areas with persons of limited English proficiency.

4. A party's failure to comply with deadlines in a Watershed Permit application schedule in a Notice of Intent approved under 310 CMR 15.215(2)(c)2. will commence the New Construction requirements and five-year time period for mandatory upgrades to existing systems under 310 CMR 15.215(2)(a) and (b) upon issuance of notice from the Department to the noncompliant party. Within 28 days of issuing that notice to the noncompliant party, the Department shall publish notice in accordance with the notice publication provisions in 310 CMR 15.215(2)(c)3. that the Title 5 upgrade and New Construction requirements under 310 CMR 15.215(2)(a) and (b) have been invoked.

(e)(d) Termination or Revocation of Watershed Permit or *De Minimis* Nitrogen Load Exemption. If a *De Minimis* Nitrogen Load Exemption or a Watershed Permit is terminated or revoked pursuant to 314 CMR 21.00: *Massachusetts Watershed Permit Regulations* for one or more permittees to the permit, any owner of an existing system or a system to serve New Construction in the designated Nitrogen Sensitive Area pertaining either to each permittee whose permit status is terminated or revoked or to the area that was covered by the *De Minimis* Nitrogen Load Exemption, as applicable, shall incorporate Best Available Nitrogen Reducing Technology, as follows:

1. For existing systems or those with a Disposal System Construction Permit for installation as of the date of the Watershed Permit or *De Minimis* Nitrogen Load Exemption termination or revocation, within five years of from the date when the Notice of Intent and Application Period would have otherwise ended by its own terms effective date of the designation or within two years from of the date of termination or revocation of the Watershed Permit or *De Minimis* Nitrogen Load Exemption (as applicable), whichever is longer.

2. New systems installed after the effective date of the Watershed Permit or *De Minimis* Nitrogen Load Exemption termination or revocation shall incorporate Best Available Nitrogen Reducing Technology.

(f)(e) Notwithstanding 310 CMR 15.215(2)(a) through (d), the Department may extend any time limit contained in 310 CMR 15.215 for good cause, including but not limited to an insufficient supply of necessary equipment or materials or unavailability of contractors if the site conditions at an existing facility preclude the incorporation of Best Available Nitrogen Reducing Technology, then the owner shall upgrade the system or incorporate alternative technology in full compliance with 310 CMR 15.000 to the maximum extent feasible in accordance with 310 CMR 15.404.

(f) Facility owners that install Best Available Nitrogen Reducing Technology pursuant to 310 CMR 15.215(2) shall not be required to upgrade to subsequent Best Available Nitrogen Reducing Technology unless the Approving Authority determines that: the system has

failed and is required to be upgraded; there is an alteration to or change in use of the facility that is determined to be New Construction; or the system is failing to protect the public health, safety, and the environment.

(g) The Department will maintain and publish a list on its website of Best Available Nitrogen Reducing Technologies and nitrogen reducing technologies that have received general, provisional, or piloting approval pursuant to 310 CMR 15.285 through 15.288. The Department may allow the use of technologies that do not meet the Best Available Nitrogen Reducing Technology definition in the event of significant supply or market limitations. The Department may prohibit the use of a technology as Best Available Nitrogen Reducing Technology based on a technology's noncompliance with the performance standards established in the technology's approval.

(h) Facility owners that upgraded their system within ~~the~~10 years prior to the effective date of the Nitrogen Sensitive Area designation ~~[effective date of the regulations]~~ with Department-approved nitrogen removing technology are exempt from the individual system upgrade requirements in 310 CMR 15.215(2)(a) unless the Approving Authority determines that: the system has failed and is required to be upgraded; there is an alteration to or change in use of the facility that is determined to be New Construction; or the system is failing to protect the public health, safety, and the environment.

(i) A facility owner of a ~~large~~ system(s), which pursuant to 310 CMR 15.006 serves an existing facility with a design flow of 10,000 gpd or greater but less than 15,000 gpd, shall upgrade the system(s) pursuant to 310 CMR 15.304 when the facility is in a location designated as a Nitrogen Sensitive Area pursuant to 310 CMR 15.214.

(3) The owner of a system serving New Construction in a Nitrogen Sensitive Area designated in both 310 CMR 15.214(1)(a) and (1)(b) shall comply with the requirements of ~~both~~ 310 CMR 15.215(1) ~~and~~ (2).

(4) The owner of a system or proposed system shall ascertain whether the facility is in a designated Nitrogen Sensitive Area. The Department will prepare and make available on the Department's website maps portraying designated Nitrogen Sensitive Areas within the Commonwealth. Prior to any transfer of title for property where the facility is located, the transferor shall disclose to the transferee and Board of Health whether the facility is subject to an upgrade requiring Best Available Nitrogen Reducing Technology pursuant to 310 CMR 15.215.

15.216: Aggregate Determinations of Flows and Nitrogen Loadings

(1) The 440 gallons per day per acre nitrogen loading limitation imposed by 310 CMR 15.214 ~~215~~ (1) may be calculated in the aggregate by using nitrogen credit land in accordance with an approved Nitrogen Aggregation Plan or Community Aggregation Plan. Applicants proposing systems to be located within a community or region covered by a Community Aggregation Plan approved by the Department shall calculate aggregate determinations of flows and nitrogen loadings in accordance with the Plan and the Department's Guidelines for Title 5 Aggregation of Flows and Nitrogen Loading. All other applicants seeking aggregate determination of flows and nitrogen loading shall prepare a Facility Aggregation Plan in

accordance with 310 CMR 15.216 and the Department's Guidelines for Title 5 Aggregation of Flows and Nitrogen Loading.

(2) To qualify as Nitrogen Credit Land, the land must:

- (a) be within the same Nitrogen Sensitive Area as the facility if the facility is in a Nitrogen Sensitive Area;
- (b) be within the same subdivision in an area where the use of both on-site systems and drinking water wells are proposed to serve the facility;
- (c) not have any manmade sources of nitrogen, including, but not limited to, wastewater discharges and nitrogen based fertilizer located thereon;
- (d) not be used for raising, breeding or keeping of animals;
- (e) be pervious;
- (f) be outside of Zone As, Velocity Zones and Regulatory Floodways;
- (g) not be covered by any surface water body including, but not limited to, a river, stream, lake, pond, or ocean;
- (h) not be currently designated as nitrogen credit land; and
- (i) meet the criteria set forth in the Department's Guidelines for Title 5 Aggregation of Flows and Nitrogen Loading.

(3) Land located within a Zone I of a public water supply well may be used as nitrogen credit land unless the well is determined to be at risk in accordance with the Department's "Guidelines for Title 5 Aggregation of Flows and Nitrogen Loading" or the proposed design flow is 2,000 gallons per day or greater.

(4) Community Aggregation Plans.

(a) A city or town may seek Department approval for aggregate determination of flows and nitrogen loading across a region wide area such as, but not limited to, a Zone II of a public water supply well. Department approval of a Community Aggregation Plan may authorize the local Approving Authority to approve site specific facility aggregation plans in accordance with the approved Community Aggregation Plan.

(b) The Department may approve a Community Aggregation Plan provided that the following conditions are met:

- 1. the local Approving Authority has approved the Plan;
- 2. the Plan contains a mechanism to protect surface and ground water supplies within the community or region from pollutant and nitrogen loading and a proposed mechanism for implementing the Plan;
- 3. the Plan meets the criteria in the Department's "Guidelines for Title 5 Aggregation of Flows and Nitrogen Loading;"
- 4. for areas that include a Zone II, the Plan includes a nitrate loading analysis and nitrate management plan as specified in 310 CMR 22.21(2)(d); and
- 5. any other conditions that the Department deems appropriate.

(5) Facility Aggregation Plans. The Approving Authority may approve a Facility Aggregation Plan provided that the following conditions are met:

- (a) The proposed facility meets the criteria in the Department's Guidelines for Title 5 Aggregation of Flows and Nitrogen Loading,
- (b) the design flow of 440 gallons per day per acre equivalency across the facility and other land areas for which nitrogen credit is sought, but not necessarily on every individual acre, will be met through recorded land use restrictions that restrict nitrogen

loading on facility land and nitrogen credit land. These land use restrictions must be substantially identical to those contained in the Department's Guidelines for Title 5 Aggregation of Flows and Nitrogen Loading, run in perpetuity, be approved by the respective land owners, run to the benefit of the municipality acting by and through the Local Approving Authority and, in the case of nitrogen credit land, also run to the benefit of the facility land. The applicant shall record or register such restrictions and easements in the appropriate Registry of Deeds or Land Registration Office within 30 days of approval of the plan; and

(c) any other conditions that the Approving Authority deems appropriate.

15.217: Systems with Enhanced Nitrogen Removal

(1) The nitrogen loading limitations established in 310 CMR 15.214~~215~~15(1) shall not apply to discharge of an effluent meeting the federal Safe Drinking Water Act nitrate standard of 10 ppm through either an approved alternative system or a treatment works with a groundwater discharge permit issued pursuant to 314 CMR 5.00: *Ground Water Discharge Permit Program*.

(2) For systems located in a Nitrogen Sensitive Area designated pursuant to 310 CMR 15.214(1)(a), An increase in calculated allowable nutrient loading per acre may be allowed with the use of a technology approved for enhanced nutrient removal pursuant to either the piloting, provisional or general use certification provisions in 310 CMR 15.281 through 15.288 as illustrated by the following example: Recirculating Sand Filter 550 gpd/acre.

(3) In the event that the Department determines that a system approved for enhanced nutrient removal using a technology approved by the Department on a piloting or provisional basis pursuant to 310 CMR 15.285 and 15.286 respectively is not performing in accordance with the approval, the Department or the Local Approving Authority may require the system owner to instead use an enhanced nutrient removal technology that has been certified for general use by the Department. The increased design flow allowed reflects the nutrient removal performance of the approved technology compared to a standard system otherwise described in 310 CMR 15.100 through 15.255. A system receiving a design flow credit for enhanced nutrient removal pursuant to 310 CMR 15.217 must still comply with the requirements of 310 CMR 15.100 through 15.293 with respect to system siting and design; the credit does not affect any other siting or design requirement.

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15.220: Preparation of Plans and Specifications

The plans and specifications for every on-site system shall be prepared as follows:

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- (4) Every plan for a system shall be of suitable scale (one inch = 40 feet or fewer for plot plans and one inch = 20 feet or fewer for details of system components) and shall include depiction of:
- (a) the legal boundaries of the facility to be served;
 - (b) the holder and location of any easements appurtenant to or which could impact the system;
 - (c) the location of all dwelling(s) and building(s) existing and proposed on the facility and identification of those to be served by the system;
 - (d) the location of existing or proposed impervious areas, including driveways and parking areas;
 - (e) location and dimensions of the system (including reserve area);
 - (f) system design calculations, including design daily sewage flow, septic tank capacity (required and provided); soil absorption system capacity (required and provided); and whether system is designed for garbage grinder;
 - (g) North arrow and existing and proposed contours;
 - (h) location and log of deep observation hole tests including the date of test, existing grade elevations marked on each test, and the names of the representative of the Approving Authority and soil evaluator;
 - (i) location and results of percolation tests including the date of test and the names of the representative of the Approving Authority and soil evaluator;
 - (j) name and approval date of the Soil Evaluator of record;
 - (k) location of every water supply, public and private,
 - 1. within 400 feet of the proposed system location in the case of surface water supplies and gravel packed public water supply wells,
 - 2. within 250 feet of the proposed system location in the case of tubular public water supply wells, and
 - 3. within 150 feet of the proposed system location in the case of private water supply wells;
 - (l) any surface waters of the Commonwealth, Zone As, rivers, bordering vegetated wetlands, salt marshes, inland or coastal banks, regulatory floodway, velocity zone, surface water supplies, tributaries to surface water supplies, certified vernal pools, private water supplies or suction lines, gravel packed or tubular public water supply wells, and subsurface drains located up to 100 feet beyond the setback distances in 310 CMR 15.211, any leaching catch basins and dry wells located up to 25 feet beyond the setback distances in 310 CMR 15.211; and the location of any nitrogen sensitive area identified in 310 CMR 15.~~215~~214 within which any portion of the facility or the proposed system is located as well as any nitrogen sensitive area up to 100 feet beyond any property line of the facility.
 - (m) location of water lines and other subsurface utilities on the facility;
 - (n) observed and adjusted ground-water elevation in the vicinity of the system;
 - (o) a complete profile of the system;
 - (p) a note on the plan listing all variances to the provisions of 310 CMR 15.000 sought in conjunction with the plan;
 - (q) the location and elevation of one benchmark within 50 to 75 feet of the system components which is not subject to dislocation or loss during construction on the facility;
 - (r) when pressure distribution or dosing is proposed, complete design and specifications of the distribution system proposed including but not limited to dosing chamber capacity

(required and provided), pump curves and specifications, number of dosing cycles and depth per cycle;

(s) when a Recirculating Sand Filter or equivalent alternative technology is required or proposed, a complete plan and specifications for the system, including a hydraulic profile;

(t) a locus plan to show the location of the facility including the nearest existing street;

(u) the street number and lot number, if any, and the tax map number and lot number, if any, of the facility; and

(v) the materials of construction and the specifications of the system.

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NOTE TO REVIEWERS: MassDEP is not proposing any changes to Sections 15.221 through 15.260. These provisions have been omitted.

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15.262: Greywater Systems

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(9) Greywater systems for new construction or increases in flows to existing systems within nitrogen sensitive areas as defined in 310 CMR 15.~~215-214~~ must comply with the nitrogen loading limitations in accordance with 310 CMR 15.~~214~~215.

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NOTE TO REVIEWERS: MassDEP is not proposing any changes to Sections 15.280 through 15.292. These provisions have been omitted.

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SUBPART D: INSPECTION AND MAINTENANCE OF SYSTEMS

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NOTE TO REVIEWERS: MassDEP is not proposing any changes to Sections 15.300 through 15.303. These provisions have been omitted.

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15.304: Large Systems which Fail to Protect or which Threaten Public Health and Safety and the Environment

(1) A system serving a facility with a design flow of 10,000 gpd or greater but less than 15,000 gpd is failing to protect public health, safety and the environment if any of the conditions identified in 310 CMR 15.303(1) are present, as documented by inspection by an approved

System Inspector, or determined by the Local Approving Authority or the Department. Any such system shall be upgraded in accordance with the timeframes of 310 CMR 15.305(1) and the standards of 310 CMR 15.404 and 15.405; provided, that the Department shall be the Approving Authority for all such upgrades.

(2) A system serving a facility with a design flow of 10,000 gpd or greater but less than 15,000 gpd is a significant threat to public health, safety and the environment if any of the following conditions are present, as documented by inspection by an approved System Inspector, or as determined by the Local Approving Authority or the Department:

(a) the system is located within 400 feet of a surface water supply or within 200 feet of a tributary to a surface water supply; or

(b) the system is located within a nitrogen sensitive area as designated pursuant to 310 CMR 15.215214;

(c) The owner or operator of any such system shall bring the system and the facility into compliance with the groundwater permit program requirements of 314 CMR 5.00: *Ground Water Discharge Permit Program*, including the obligation to obtain a groundwater discharge permit, within the time required by 310 CMR 15.305(2), unless the Department determines after consideration of the factors set forth in 310 CMR 15.304(3) that this requirement would be manifestly unjust, considering all the relevant facts and circumstances of the individual case, and the owner or operator has established that a level of environmental protection that is at least equivalent to that provided by 314 CMR 5.00: *Ground Water Discharge Permit Program* can be achieved without strict application of this requirement.

(3) (a) In determining whether enforcement of the requirement set forth at 310 CMR 15.304(2) would be manifestly unjust, the Department shall include at a minimum the following considerations:

1. The owners of any such system for which permit applications were filed after May 9, 1994, or anywhere new construction occurred after March 31, 1995, shall be deemed to have had knowledge that a groundwater discharge permit would likely be required for such system pursuant to 310 CMR 15.304(2), and to have had a reasonable opportunity to make arrangements to come into compliance within the timeframes of 310 CMR 15.305(2);

2. The costs of preparing the demonstrations and implementing control measures required by 310 CMR 15.304 shall be compared to the costs of compliance with the requirement to obtain a groundwater discharge permit; and

3. Any other relevant factor.

(b) In determining whether the applicant can provide the same degree of environmental protection as required by 310 CMR 15.304(2), the Department shall require at a minimum, the following:

1. inspection reports for the system as required by 310 CMR 15.301;

2. an assessment of the groundwater flow at the site, including but not limited to direction and rate of groundwater flow, assessment of saturated flow conditions and concentrations of nitrate and other pollutants associated with the system;

3. an assessment of water quality of relevant surface water supply, groundwater supply, or nitrogen sensitive areas;
4. a proposed design and engineering plans for upgrade of the system, prepared by a Massachusetts Registered Professional Engineer, that will, at a minimum,
 - a. satisfy the requirements of 310 CMR 15.202 (recirculating sand filter or equivalent alternative technology);
 - b. satisfy the nitrogen loading requirements of 310 CMR 15.214215; and
 - c. ensure that the standards applicable to groundwater discharge permits pursuant to 314 CMR 5.00: *Ground Water Discharge Permit Program* are met at the property line and at the point the discharge from the facility reaches any surface water or water supply well.
5. a proposed maintenance, monitoring, and reporting plan that will ensure proper functioning of the upgraded system, and detection of any malfunction or failure to attain required discharge quality before discharges from the system leave the property; and
6. if size and use of the facility is relevant to the demonstration that an equal level of environmental protection has been provided, appropriate use restrictions shall be granted and recorded in the chain of title for the property served by the system in the Registry of Deeds or Land Registration Office, as applicable, to ensure that such conditions are not changed.

(c) An applicant for a determination pursuant to 310 CMR 15.304(3) shall file a request for such determination not less than two years prior to the date by which the owner would otherwise be required to obtain the groundwater discharge permit pursuant to 310 CMR 15.305(2).

(d) In making any determination pursuant to 310 CMR 15.304(3), the Department shall impose such conditions as it determines appropriate to ensure protection of public health, safety, welfare and the environment. At a minimum, such conditions shall include upgrade of the system to the standards described in 310 CMR 15.304(3)(b)4., and a maintenance, monitoring and reporting plan as described in 310 CMR 15.304(3)(b)5.

(4) Any system serving a facility with a design flow of 10,000 gpd or greater but less than 15,000 gpd shall be upgraded upon the order of the Department or the Local Approving Authority when a specific circumstance exists by which the system threatens public health, safety, welfare or the environment or causes or threatens to cause damage to property or creates a nuisance as determined by the Local Approving Authority or the Department. Where necessary to protect public health, safety, welfare and the environment, the Department or the Local Approving Authority may require the owner to install a recirculating sand filter or equivalent alternative technology in accordance with 310 CMR 15.202 or to obtain a groundwater discharge permit in accordance with 314 CMR 5.00.

(5) A cesspool serving a facility with a design flow of 10,000 gpd or greater but less than 15,000 gpd is failing to protect public health, safety, welfare and the environment. The owner of such Facility is required, pursuant to 310 CMR 27.04(4), to notify the Department's Underground Injection Control Program 30 days prior to upgrading the cesspool and to complete the upgrade of the cesspool by April 5, 2005.

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SUBPART E: PROCEDURES FOR SEEKING AND RECEIVING LOCAL UPGRADE
APPROVALS AND VARIANCES FROM THE PROVISIONS OF SUBPARTS B AND C OF
310 CMR 15.000

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15.402: Use of Local Upgrade Approvals or Variances

(1) Local Upgrade Approvals may be granted by Local Approving Authorities without review by the Department for a required or voluntary upgrade of existing systems, including failed or nonconforming systems, with design flows below 10,000 gpd and, or for existing systems required to be upgraded to Best Available Nitrogen Reducing Technology pursuant to 310 CMR 15.215(2)(a)subject to the nitrogen loading limitations in, in accordance with the terms and provisions of 310 CMR 15.402 through 15.405. Upgrade Approvals for required or voluntary upgrade of systems with design flows of 10,000 gpd or greater but less than 15,000 gpd which are failing to protect or are a significant threat to public health, and safety, welfare and the environment as set forth in 310 CMR 15.304 shall be approved by the Department.

(2) Proposals for new construction or for increase in flow to an existing system other than in full compliance with 310 CMR 15.100 through 15.293 must seek and obtain a variance from the Approving Authority in accordance with the terms and conditions of 310 CMR 15.410 through 15.417.

15.403: Local Upgrade Approvals

(1) The owner or operator may upgrade an existing system, including: a failed or nonconforming system with design flows below 10,000 gpd (systems which trigger failure criteria set forth at 310 CMR 15.303); ~~or~~ systems with design flows of 10,000 gpd or greater but less than 15,000 gpd which fail to protect public health, safety, welfare and the environment (large systems set forth at 310 CMR 15.304(1)); and existing systems required to be upgraded to Best Available Nitrogen Reducing Technology pursuant to 310 CMR 15.215(2)(a); all pursuant to a local upgrade approval in accordance with the standards and requirements of 310 CMR 15.404 and 15.405 without obtaining variances. Local upgrade approvals for any system serving a facility owned by an agency of the Commonwealth or the federal government or systems with design flows of 10,000 gpd or greater but less than 15,000 shall be granted by the Department applying the same standards. The application for a local upgrade approval shall be made using a form approved by the Department. Notification to abutters shall be provided pursuant to the process in 310 CMR 15.411(1)(b), as required by 310 CMR 15.405(2), where the application is for reduction in the setback from a property line or from a private water supply well.

(2) Local Upgrade approvals shall not be granted for upgrade proposals which include the addition of new design flows to a cesspool or privy or for the addition of new design flows above the existing approved capacity of a system constructed in accordance with the provisions of 310 CMR 15.000 or the 1978 Code.

(3) System upgrades which cannot be performed in accordance with 310 CMR 15.404 and 15.405 require a variance from the provisions of 310 CMR 15.000, which shall be processed in accordance with 310 CMR 15.410 through 15.417.

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15.404: Maximum Feasible Compliance - Approvals for Upgrades

(1) Goal of full compliance. Wherever feasible, existing systems, including failed or nonconforming systems (other than systems threatening public health, safety, welfare or the environment as described in 310 CMR 15.304(2)) and existing systems required to be upgraded to Best Available Nitrogen Reducing Technology pursuant to 310 CMR 15.215(2)(a), shall be brought into full compliance through installation of one or more of the following:

- (a) an upgraded system which is in full compliance with 310 CMR 15.100 through 15.293;
- (b) an alternative system which has been approved for such use pursuant to 310 CMR 15.284 (remedial use), 15.285 (piloting), 15.286 (provisional approval), or 15.288 (certification for general use);
- (c) an RSF or equivalent alternative technology where the system is located in a Nitrogen Sensitive Area and has a design flow of 2000 gpd or greater in accordance with 310 CMR 15.202(1);
- (d) where proposed by the owner or operator, a shared system which has been approved for such use pursuant to 310 CMR 15.290 and 15.291; or
- (e) connection to a sewer system.

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15.405: Contents of Local Upgrade Approval

(1) In granting local upgrade approvals pursuant to 310 CMR 15.404(23) where full compliance as defined in 310 CMR 15.404(1) is not feasible, the Approving Authority shall consider the impact of the proposed system and shall vary to the least degree necessary the requirements of 310 CMR 15.100 through 15.293 so as to allow for both the best feasible upgrade within the borders of the lot, and have the least effect on public health, safety, welfare and the environment. Under a local upgrade approval, the Approving Authority is allowed to diverge from the goal of full compliance only to the extent necessary to achieve a feasible upgrade and may allow divergence only from those provisions, and to the extent, as specified in 310 CMR 15.404(23) and 15.405(1). In determining whether full compliance is feasible, the Approving Authority should appropriately consider not only physical possibility as dictated by the conditions of the site, but also the economic feasibility of the upgrade costs. The Approving Authority should emphasize protection of water resources and treatment of the sanitary sewage. Absent conditions which would result in a different outcome based on best professional judgment, the options set forth below should be considered in the order in which they appear with 310 CMR 15.405(1)(a) being the first option to be considered and rejected or adopted and 310 CMR 15.405(1)(k) being the last option to be considered and rejected or adopted:

- (a) Reduction of system location setbacks otherwise established in 310 CMR 15.211 for property lines provided that the system is within the property lines, a survey of the property line is required if a component is to be placed within five feet of the property line, and no such

reduction shall result in the soil absorption system being located less than ten feet from a soil absorption system on an abutting property;

(b) Reductions of system location setbacks from cellar wall, crawl space, swimming pool, or slab foundations; an increase in the maximum allowable depth of system components required by 310 CMR 15.221(7), from 36 inches to 72 inches below finish grade, provided that adequate venting and adequate access are provided and H-20 loading is provided for all system components; a decrease in the liquid depth of the septic tank required by 310 CMR 15.223(2) from four feet to three feet;

(c) Up to a 25% reduction in the required subsurface disposal area design requirements;

(d) Where upgrade is required pursuant to 310 CMR 15.303(1) because it is within Zone I of public well or within 100 feet of private well, relocation of the well. Any relocation of a public well shall be performed pursuant to 310 CMR 22.00: Drinking Water (water supply source approval);

(e) Reduction of system location setbacks from bordering vegetated wetlands;

(f) Reduction of system location setbacks from surface waters, salt marshes, inland and coastal banks, certified vernal pools in accordance with 310 CMR 15.211(1)[2], leaching catch basins, dry wells, or surface or subsurface drains other than those which discharge to surface water supplies or tributaries thereto;

(g) Reduction of system location setbacks from water supply lines, private water supply wells (but not within 50 feet of the well), tributaries to surface water supplies, surface water supplies, but not within 100 feet of the surface water supply or tributary thereto or open, surface or subsurface drains which discharge to surface water supplies or tributaries thereto;

(h) the Approving Authority may reduce the required four foot separation (in soils with a recorded percolation rate of more than two minutes per inch) or the required five foot separation (in soils with a recorded percolation rate of two minutes or less per inch) between the bottom of the soil absorption system and the high groundwater elevation only if all of the following conditions are met: 1. An approved Soil Evaluator who is a member or agent of the local Approving Authority determines the high groundwater elevation; 2. A minimum three foot separation (in soils with a recorded percolation rate of more than two minutes per inch) or a minimum four foot separation (in soils with a recorded percolation rate of two minutes or less per inch) between the bottom of the soil absorption system and the high groundwater elevation is maintained; 3. The system is a failed or non-conforming system serving an existing building with a design flow of less than 2,000 gpd; 4. No increase in design flow is allowed; 5. No reduction in required soil absorption system size or setbacks from public or private wells, bordering vegetated wetlands, surface waters, salt marshes, coastal banks, certified vernal pools, water supply lines, surface water supplies or tributaries to surface water supplies, or drains which discharge to surface water supplies or their tributaries, is allowed.

(i) A sieve analysis may be performed in accordance with Department guidance if a percolation test in accordance with 310 CMR 15.104 and 15.105 can not be performed as determined by the Approving Authority;

(j) Reduction of the requirement of a 12 inch separation between the inlet and outlet tees and high groundwater, provided that all boots or pipe joints are sealed with hydraulic cement or installed with watertight sleeves and the tank is proven watertight. Expandable foam spray is not an acceptable alternative for sealing pipe joints; or

(k) At least one deep hole has been performed in the proposed disposal area and it has been determined by the Approving Authority that the deep hole adequately characterizes the soils for the purpose of designing the soil absorption system.

(2) No application for a local upgrade approval in which the setback from property lines or a private water supply well is reduced shall be complete until the applicant has notified all abutters whose property or well is affected by certified mail at his/her own expense at least ten days before the Board of Health meeting at which the upgrade approval will be on the agenda. The notification shall reference the standards set forth in 310 CMR 15.402 through 15.405 and indicate the date, time and place where the upgrade approval will be discussed.

(3) If the ~~nonconforming~~ system cannot be upgraded in accordance with 310 CMR 15.404 and 15.405(1) the owner shall: (a) obtain a groundwater discharge permit pursuant to 314 CMR 5.00: Ground Water Discharge Permit Program; (b) apply to the Approving Authority to use a tight tank in accordance with the provisions of 310 CMR 15.260; (c) apply for a variance pursuant to 310 CMR 15.410 through 15.415; or (d) abandon the system in compliance with 310 CMR 15.354.

(4) Nothing in 310 CMR 15.405 shall authorize violation of M.G.L. c. 131, § 40 and 310 CMR 10.00: Wetlands Protection, or any other applicable provision of law.

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NOTE TO REVIEWERS: MassDEP is not proposing any changes to Subpart F or Appendix 1. These provisions have been omitted.