15A NCAC 02L .0101 is readopted as published in 36:08 NCR 601 as follows:

## SUBCHAPTER 2L - GROUNDWATER CLASSIFICATION AND STANDARDS

## SECTION .0100 - GENERAL CONSIDERATIONS

### 15A NCAC 02L .0101 ~~AUTHORIZATION~~PURPOSE

(a) N.C. General Statute 143-214.1 directs that the Commission develop and adopt after proper study a series of classifications and standards which will be appropriate for the purpose of classifying each of the waters of the ~~state~~ State in such a way as to promote the policy and purposes of the act. Pursuant to this statute, the ~~rules~~ Rules in Sections .0200 and .0300 of this Subchapter establish a series of classifications and water quality standards applicable to the groundwaters of the ~~state.~~State.

(b) ~~These~~ The ~~rules~~ Rules in Section .0100 of this Subchapter ~~are~~ shall ~~applicable~~ apply to all permitted and unpermitted activities or actions, intentional or accidental, ~~which~~ that contribute to the degradation of groundwater quality, regardless of any permit issued by a governmental agency authorizing such action or ~~activity~~ activity. ~~except an~~ An innocent landowner who is a bona fide purchaser of property which contains a source of groundwater contamination, who purchased such property without knowledge or a reasonable basis for knowing that groundwater contamination had occurred, or a person whose interest or ownership in the property is based or derived from a security interest in the property, shall not be considered a responsible party.

*History Note:* *Authority G.S. 143-214.1; 143-214.2; 143-215.3(a)(1); 143B-282;*
*Eff. June 10, 1979;*
*Amended Eff. August 1, 1989; July 1, 1988; September 1, 1984; December 30, 1983;*
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15A NCAC 02L .0102 is readopted as published in 36:08 NCR 601 with changes as follows:

**15A NCAC 02L .0102 DEFINITIONS**

The definition of any word or phrase used in ~~these~~ the Rules in this Subchapter shall be the same as given in G.S. 143-212 and G.S. 143-213 except that the following words and phrases shall have the following meanings:

(1) "Active remediation" means corrective action that includes active physical, biological, or chemical manipulation of groundwater or of the rock or soil media for the purpose of reducing the amount of contamination or minimizing the spread of contamination.

(2) "Anthropogenic" means of, relating to, or resulting from the influence of human beings on nature.

(3) "Background threshold values" mean statistically derived values of the concentrations of substances in environmental media not affected by site conditions, actions, or activities for use as a basis for compliance with the Rules in this Subchapter.

~~(1)~~(4) "Bedrock" means any consolidated rock encountered in the place in which it was formed or deposited and which cannot be readily excavated without the use of explosives or power equipment.

~~(2) "Commission" means the Environmental Management Commission as organized under G.S. 143B.~~

~~(3)~~(5) "Chief administrative officer" shall be, for the purposes of this Rule, the mayor, chairman of the county commissioners, the county manager, or the city manager who is responsible for environmental issues in their jurisdiction.

(6) "Compliance boundary" means a boundary around the ~~a~~ waste disposal area of a disposal system at and beyond which ~~groundwater quality~~ standards may not be exceeded and ~~only~~ applies to facilities which have received ~~a~~ an individual permit issued under the authority of G.S. ~~143-215.1 or G.S. 130A.~~[~~143-215.1,~~] 143-215.1, Article 9 of G.S. 130A, or Article 11 of G.S. 130A.

(7) "Compliance zone" means the area encompassed within the compliance boundary.

(8) "Constituent of interest" means any substance that is manmade or naturally occurring that is [~~or may be~~] associated with or influenced by site activities or actions and that is of interest to the protection of public health [~~and~~] or the environment.

~~(4)~~(9) "Contaminant" means any substance ~~occurring~~ that occurs in groundwater as a result of anthropogenic sources or activities in concentrations which exceed the ~~groundwater quality standards specified in Rule .0202 of this Subchapter.~~standards.

(10) "Control" means the ability to [~~direct, restrain,~~] physically, mechanically, or chemically influence sources of contamination and contaminant distribution.

~~(5)~~(11) "Corrective action plan" means a plan for controlling or eliminating sources of groundwater contamination or for restoring groundwater quality. ~~achieving groundwater quality restoration or both.~~

~~(6)~~(12) "Director" means Director of the Division of ~~Environmental Management~~ Water Resources or Waste Management or their delegate.

~~(7)~~(13) "Division" means the Division of ~~Environmental Management.~~Water Resources or Waste Management.

~~(8)~~(14) "Exposure pathway" means a course taken by a contaminant by way of a transport medium after its release to the environment.

~~(9)~~(15) "Free product" means a non-aqueous phase liquid which may be present within the saturated zone or in surface water.

~~(10)~~(16) "Fresh ~~groundwaters"~~waters" means those groundwaters having a chloride concentration equal to or less than 250 milligrams per liter.

~~(11)~~(17) "Groundwaters" means ~~those~~ waters occurring in the subsurface under saturated conditions.

~~(12)~~(18) "Hazardous substance" means any substance as defined by ~~Section 101(14) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA).~~42 U.S.C. 9601(14).

~~(13)~~(19) "Licensed geologist" means a person who has been ~~duly~~ licensed as a geologist in accordance with the requirements of G.S. 89E.

(20) "Licensed soil scientist" means a person who has been licensed as a soil scientist in accordance with the requirements of G.S. 89F.

~~(14)~~(21) "Natural ~~remediation"~~attenuation" means those natural processes acting to restore groundwater quality, including dilution, filtration, sorption, ion-exchange, chemical ~~transformation~~ transformation, and biodegradation.

(22) "Natural conditions or naturally occurring" means the physical, biological, [~~chemical~~]chemical, and radiological conditions which occur naturally and are not a result of anthropogenic sources or activities.

(23) "Person" shall be as defined in G.S. 130A-290(22).

(24) "Potable waters" means those waters suitable for drinking by humans.

~~(15)~~(25) "Practical Quantitation Limit" means the lowest concentration of a given material that can be reliably achieved ~~among laboratories~~ by a particular analytical technique operated within specified ~~limits of precision and accuracy by~~ parameters of a given analytical method during routine laboratory ~~analysis.~~ analysis while following all applicable state or federal quality assurance and quality control requirements.

~~(16) "Natural conditions" means the physical, biological, chemical and radiological conditions which occur naturally.~~

~~(17) "Potable waters" means those waters suitable for drinking by humans.~~

~~(18)~~(26) "Professional Engineer" means a person who has been ~~duly~~ registered and licensed as a professional engineer in accordance with the requirements of G.S. 89C.

~~(19)~~(27) "Receptor" ~~means any human, plant, animal, or structure which is, or has the potential to be, adversely effected by the release or migration of contaminants. Any well constructed for the purpose of monitoring groundwater and contaminant concentrations shall not be considered a~~

~~receptor.~~is as defined in G.S. 130A-309.201 and, for the purposes of this Rule, shall also include waters of the State as defined in G.S. 143-212(6).

~~(20)~~(28) "Review boundary" means a boundary around a permitted waste disposal ~~facility,~~area midway between a waste boundary and a compliance boundary at which groundwater monitoring ~~is~~ may be required.

~~(21) "Saline groundwaters" means those groundwaters having a chloride concentration of more than 250 mg/l.~~

~~(22)~~(29) "Saturated zone" means that part of the subsurface below the water table in which all the interconnected voids are filled with water under pressure at or greater than atmospheric. It does not include the capillary fringe.

(30) "Secretary" means the Secretary of the Department of Environmental Quality or [~~their~~]his or her delegate.

~~(23)~~(31) ~~"Standards"~~"Standard" or "standards" means groundwater quality standards as specified in Rule .0202 of this ~~Subchapter.~~Subchapter and any interim maximum allowable concentrations established by the Director per Rule .0202(c) of this Subchapter.

~~(24)~~(32) "Suitable for drinking" means a quality of water ~~which~~ that does not contain substances in concentrations which, either singularly or in ~~combination~~ combination, if ingested into the human body, may cause death, disease, behavioral abnormalities, congenital defects, genetic mutations, or result in an incremental lifetime cancer risk in excess of 1x10-6, or ~~render the water unacceptable~~ result in adverse effects to the consumer due to aesthetic qualities, including taste, ~~odor~~ odor, or appearance.

~~(25) "Time of travel" means the time required for contaminants in groundwater to move a unit distance.~~

~~(26)~~(33) "Waste boundary" means the perimeter of the permitted waste disposal area.

(34) "Waste disposal area" means that portion of a disposal system permitted under authority of G.S 143-215.1, Article 9 of G.S. 130A, or Article 11 of G.S. 130A whose purpose is the temporary or permanent disposal of waste.

~~(27)~~(35) "Water table" means the surface of the saturated zone below which all interconnected voids are filled with water and at which the pressure is atmospheric.

*History Note:* *Authority G.S. 143-214.1; 143-215; 143B-282;*
*Eff. June 10, 1979.*
*Amended Eff. October 1, 1993; August 1, 1989; July 1, 1988; March 1, 1985;*
*Readopted Eff. June 1, 2022.*

15A NCAC 02L .0103 is readopted as published in 36:08 NCR 603 with changes as follows:

**15A NCAC 02L .0103 POLICY**

(a) The rules established in this Subchapter are intended to maintain and preserve the quality of the groundwaters, prevent and abate pollution and contamination of the waters of the ~~state,~~ State, protect public health, and permit management of the groundwaters for their best usage.~~usage by the citizens of North Carolina.~~ It is the policy of the Commission that the best usage of the groundwaters of the ~~state~~ State is as a source of drinking water. These groundwaters generally are a potable source of drinking water without the necessity of significant treatment. It is the intent of these Rules to protect the overall high quality of North Carolina's groundwaters to the level established by the standards and to enhance and restore the quality of degraded groundwaters where feasible and necessary to protect human health and the environment, or to ensure their suitability as a future source of drinking water.

(b) ~~It is the intention of the Commission to protect all groundwaters to a level of quality at least as high as that required under the standards established in Rule .0202 of this Subchapter. In keeping with the policy of the Commission to protect, maintain, and enhance groundwater quality within the State of North Carolina, the~~ The Commission ~~will~~ shall not approve any disposal system subject to the provisions of G.S. 143-215.1 which would result ~~in:~~in any of the following:

(1) ~~the~~ The significant degradation of groundwaters which have existing quality that is better than the assigned standard, unless such degradation is found to be in the best interests of the ~~citizens of North Carolina~~public based upon the projected economic benefits of the facility and ~~a determination~~ that public health will be ~~protected, or~~protected.

(2) ~~a~~ A violation of a ~~groundwater quality~~ standard beyond a designated compliance ~~boundary, or~~boundary as a result of the permitted activities.

(3) ~~the~~ The impairment of existing groundwater uses or increased risk to ~~the~~ public health ~~or safety of the public~~ due to the operation of a ~~waste~~ disposal system.

(c) Violations of the standards resulting from groundwater withdrawals which are in compliance with water use permits issued pursuant to G.S. 143-215.15, shall not be subject to the corrective action requirements of Rule .0106 of this ~~Subchapter.~~Section.

(d) No person shall conduct or cause to be conducted, any activity which causes the concentration of any substance to exceed ~~that specified in Rule .0202 of this Subchapter,~~the standards, except as authorized by the rules of this Subchapter.

(e) Work that is within the scope of the practice of geology and engineering, performed pursuant to the requirements of this Subchapter, ~~which~~ that involves site assessment, the interpretation of ~~subsurface~~ geologic conditions, preparation of ~~conceptual~~ corrective action ~~plans~~ plans, or any work requiring detailed technical knowledge of site conditions which is submitted to the Director, shall be performed by persons, ~~firms~~ firms, or professional corporations who are ~~duly~~ licensed to offer geological or engineering services by the appropriate occupational licensing board or are exempted from such licensing by G.S. 89E-6. Work which involves design of remedial systems or specialized construction techniques shall be performed by persons, ~~firms~~ firms, or professional corporations who are ~~duly~~ licensed

to offer engineering services. Corporations that are authorized by law to perform engineering or geological services and are exempt from the Professional Corporation Act, G.S. 55B, may perform these services.

*History Note:* *Authority G.S. ~~143-214;~~ 143-214.1; 143-214.2; ~~143-215.3(e);~~ 143-215.3(a)(1); 143B-282;*
*Eff. June 10, 1979;*
*Amended Eff. August 1, 1989; July 1, 1988; September 1, 1984; December 30, 1983;*
*RRC Objection Eff. September 17, 1993, due to lack of necessity for Paragraph (e);*
*Amended Eff. November 4, 1993;*
*Readopted Eff. June 1, 2022.*

15A NCAC 02L .0104 is readopted as published in 36:08 NCR 603 with changes as follows:

**15A NCAC 02L .0104 RESTRICTED DESIGNATION ~~(RS)~~**

(a) The ~~RS designation~~restricted designation (RS) ~~serves as a warning~~means that groundwater ~~so designated~~ may not be suitable for use as a drinking water supply without treatment. ~~The designation is temporary and will be removed by the Director upon a determination that the quality of the groundwater so designated has been restored to the level of the applicable standards or when the groundwaters have been reclassified by the Commission. The Director is authorized to designate GA or GSA groundwaters as RS under any of the following circumstances:~~

~~(1) Where, as a result of man's activities, groundwaters have been contaminated and the Director has approved a corrective action plan, or termination of corrective action, that will not result in the immediate restoration of such groundwaters to the standards established under this Subchapter.~~

~~(2) Where a statutory variance has been granted as provided in Rule .0113 of this Subchapter.~~

(b) Upon application by a responsible party, [~~The~~] the Director is authorized to apply the RS to GA or GSA groundwaters, as defined under Rule .0201 of this Subchapter, under any of the following circumstances:

(1) For sites undergoing risk-based remediation per Rule .0106(i) of this Section.

(2) Areas of remaining contamination where the Secretary has approved the termination of an approved corrective action per Rule .0106(j) of this Section.

(3) Where a variance has been granted by the Commission as provided in Rule .0113 of this Section.

~~(b)~~(c) Groundwaters occurring within an area defined by a compliance boundary in a waste disposal permit are deemed ~~to be designated~~ RS.

~~(c)~~(d) The boundary of ~~a designated RS~~ the RS area ~~may be approximated in the absence of analytical data sufficient to define the dimension of the area. The boundary~~ shall be located ~~at least~~ 250 feet or greater ~~away~~ from the ~~predicted edge~~ boundary of the contaminant ~~plume,~~plume and shall include any areas into which the contamination is predicted through modeling or expected through professional judgment to migrate. [~~Predictive modeling may be used to supplement site-specific sample data in characterizing the current and predicted future extent of the plume.~~]

~~(d) In areas designated RS, the person responsible for groundwater contamination shall establish and implement a groundwater monitoring system sufficient to detect changes in groundwater quality within the RS designated area. Monitoring shall be quarterly for the first year and may be reduced to semi annually thereafter until the applicable standards have been achieved. If during the monitoring period, contaminant concentrations increase, additional remedial action or monitoring pursuant to these Rules may be required.~~

~~(e) The applicant for an RS designation shall also provide written verification that all property owners within and adjacent to the proposed RS area have been notified of the requested RS designation.~~

(e) Where the RS area crosses, intercepts, or adjoins surface waters, the RS shall not give the right to cause or contribute to an exceedance of the surface water standards established [~~under15A~~] under 15A NCAC 02B .0200.

(f) Application for RS. The person requesting a RS shall provide to the Director a plan that includes the following:

(1) The person's name, address, and phone number.

(2) The physical location of the of facility or site where the contamination originated.

(3) If applicable, a copy of the Secretary's approval for termination of corrective action or a variance granted by the Commission as provided in Rule .0113 of this Section.

(4) A summary of the site assessment and corrective actions including the results of any predictive modeling that estimates the time to return compliance for the RS area.

(5) Maps showing the current horizontal and vertical extent of any contamination and the areas where the contamination is predicted or expected to migrate including the current and predicted quantities of any contaminants and all current and potential future receptors within 1,500 feet of contamination.

(6) A map showing the proposed RS area including the county title number, county tax identification number, or the property tax book and page identifiers of the properties included within the proposed RS area.

(7) A plan for monitoring the groundwater quality within the RS area that includes the current or proposed wells to be monitored, the frequency of the monitoring, and the constituents of interest to be monitored.

(8) If the proposed RS area extends beyond the source property's boundary, a signed statement from each property owner agreeing to the proposed RS area on their property if required by [~~programmatic~~] statute.

(9) If the proposed RS area crosses, intercepts, or adjoins surface waters, a plan to ensure the surface water standards established under 15A NCAC 02B .0200 are not violated.

(g) The Director shall review [~~the proposed plan and~~] whether the proposed plan is protective of public health and the environment for receptors within the RS area and otherwise complies with requirements of this Rule. The Director may require a person who proposes a plan to supply any additional information not provided that is necessary to satisfy the requirements of Paragraph (f) of this Rule.

~~(f)~~(h) Prior to approving the proposed plan in Paragraph (f) of this Rule, ~~The~~ the Division shall provide public notice of the intent to designate any groundwater with RS ~~in accordance with the following requirements:~~as follows:

(1) ~~Notice shall be published~~[Publish] Provide notice at least 30 days prior to any proposed final action ~~in accordance with~~ ~~G.S. 143-215.4.~~ [G.S. 143-215.4] ~~In addition, notice shall be provided to all property owners identified pursuant to Paragraph (e) of this Rule and to the local County Health Director and the chief administrative officer of the political jurisdiction(s) in which the contamination occurs.~~[and provide such notice] to all property owners with signed statements per [~~Paragraph~~] Subparagraph (f)(8) of this Rule, to the local County Health Director, and the chief administrative officer of the jurisdiction(s) in which the contamination occurs.

(2) The notice shall contain the following information:

(A) ~~name,~~Name, address, and phone number of the agency issuing the public notice;

(B) A copy of the plan in Paragraph (f) of this Rule or where the plan can be obtained.

~~(B) the location and extent of the designated area;~~

~~(C) the county title number, county tax identification number, or the property tax book and page identifiers;~~

~~(D) a brief description of the action or actions which resulted in the degradation of groundwater in the area;~~

~~(E) actions or intended actions taken to restore groundwater quality;~~

~~(F) the significance of the RS designation;~~

~~(G)~~(C) ~~conditions~~ Conditions applicable to removal of the RS designation; and

~~(H)~~(D) ~~address~~ Address and phone number of a Division contact from whom interested parties may obtain further information.

(3) The Director shall consider all requests for a public hearing, and if he or she [~~they~~] ~~determines~~ determine that there is significant public ~~interest he~~ interest, he or she shall issue public notice and hold a public hearing in accordance with G.S 143-215.4(b) and Rule ~~.0113(e)~~.0113(e)(2) of this Section.

(4) ~~These~~ The requirements of this Paragraph shall not apply to groundwaters defined in Paragraph ~~(b)~~(c) of this Rule.

(i) The Director shall approve the plan if the proposal complies with [~~requirements~~] Paragraph (g) of this Rule. Upon making a determination, the Director shall provide specific findings to support their decision to approve or disapprove a proposed [~~plan~~] plan. [~~and may require a person who proposes a plan to supply any additional information not provided in Paragraph (f) of this Rule necessary to make their determination.~~]

(j) The process for recordation, application, and removal of an approved RS [~~area~~] shall be in accordance with G.S. 143B-279.10 or G.S. 143B-279.11. The land use restriction shall be that groundwater within the RS area may not be suitable for drinking without treatment.

(k) The RS shall also be removed if the groundwater within the RS is reclassified by the Commission per G.S. 143-214.1.

*History Note:* *Authority G.S. 143-214.1; 143-215.3(a)(1); ~~143B-282(2);~~143B-282(a)(2); 143B-279.9; 143B-279.10; 143B-279.11*
*Eff. June 10, 1979;*
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15A NCAC 02L .0106 is readopted as published in 36:08 NCR 605 with changes as follows:

**15A NCAC 02L .0106 INITIAL RESPONSE, SITE ASSESSMENT, AND CORRECTIVE ACTION**

(a) Where groundwater quality has been degraded, the ~~goal of any~~ required corrective action shall be restoration to the level of the standards, or as closely thereto as is economically and technologically feasible ~~as determined by the Department~~ in accordance with this Rule. The corrective action strategies addressed in this Rule can be through either active remediation in Paragraph (g), natural attenuation in Paragraph (h), or risk-based remediation in Paragraph (i). In all cases involving requests to the ~~Secretary, as defined in 15A NCAC 02C .0102,~~Secretary for approval of corrective action ~~plans,~~plans or termination of corrective action, the responsibility for providing all information required by this Rule lies with the person(s) making the request.

(b) Any person conducting or controlling an ~~activity~~ activity, permitted or unpermitted, that results in the discharge of a waste or hazardous substance or oil to the ground surface, vadose zone, or groundwaters of the ~~State, or in proximity thereto,~~State shall take action upon discovery to terminate and control the discharge, mitigate any hazards resulting from exposure to the ~~pollutants~~ contaminants, and ~~notify the Department, as defined in 15A NCAC 02C .0102, of the discharge.~~ follow the [~~steps~~]requirements in Paragraphs (c), (d), or (e) of this Rule.

(c) Any person conducting or controlling an activity that has not been permitted by the Department pursuant to G.S. 143-215.1, Article 9 of G.S. 130A, or Article 11 of G.S. 130A ~~and~~ that results in an increase in the concentration of a substance in excess of the standard, other than agricultural ~~operations,~~ operations defined under G.S. 106-581.1, ~~shall:~~shall take the following steps:

(1) ~~within~~ Within 24 hours of discovery of the violation, notify the Department of the activity that has resulted in the increase and the contaminant concentration ~~levels;~~levels, if known.

(2) ~~respond~~ Respond in accordance with Paragraph (f) of this ~~Rule;~~Rule.

~~(3) submit a report to the Secretary assessing the cause, significance, and extent of the violation; and~~

~~(4) implement an approved corrective action plan for restoration of groundwater quality in accordance with a schedule established by the Secretary. In establishing a schedule, the Secretary shall consider a schedule proposed by the person submitting the plan. A report shall be made to the Health Director of the county or counties in which the contamination occurs in accordance with the requirements of Rule .0114(a) in this Section.~~

(3) Implement a monitoring program in accordance with Rule .0110 of this Section.

(4) Submit a site assessment report to the Director in accordance with Rule .0111 of this Section.

(5) Submit a notification in accordance with the requirements of Rule .0114(a) of this Section.

(6) If required, submit a corrective action plan to the Director in accordance with Rule .0111 of this Section or pursue risk-based remediation per Paragraph (i) of this Rule. If a corrective action plan is submitted for active remediation or natural attenuation, then:

(A) Submit a notification in accordance with the requirements of Rule .0114(b) of this Section.

(B) Implement the corrective action plan upon its approval by the Secretary.

(C) Submit a notification in accordance with the requirements of Rule .0114(c) of this Section.

~~Any activity not permitted pursuant to G.S. 143-215.1 or G.S. 130A-294 shall, for the purpose of this Rule, be deemed not permitted by the Department and subject to the provisions of this Paragraph.~~

(d) For ~~Any~~ any person conducting or controlling an activity that is conducted under the authority of a permit ~~initially~~ issued by the Department ~~on or after December 30, 1983~~ pursuant to G.S. ~~143-215.1~~143-215.1, Article 9 of G.S. 130A, or Article 11 of G.S. 130A. ~~or G.S. 130A-294 and~~ that results in an increase in concentration of a substance in excess of the ~~standards:~~standards at or beyond the review boundary:

(1) ~~at or beyond a review boundary:~~ The Director may require, based on information including data trends, geologic and hydrogeologic conditions, and spacing between the review and compliance boundaries, that the person shall demonstrate, through predictive calculations or modeling, that one or more of the following ~~natural site conditions, facility design and operational controls~~ will prevent a violation of standards at the compliance ~~boundary.~~boundary:

(A) geologic or hydrogeologic conditions;

(B) facility design; or

(C) operational controls.

~~Alternately, the person may submit a plan for alteration of existing site conditions, facility design, or operational controls that will prevent a violation at the compliance boundary, and implement that plan upon its approval by the Secretary.~~

~~(2) at or beyond a compliance boundary: the person shall respond in accordance with Paragraph (f) of this Rule, assess the cause, significance and extent of the violation of standards and submit the results of the investigation, and a plan and proposed schedule for corrective action to the Secretary. The permittee shall implement the plan as approved by and in accordance with a schedule established by the Secretary. In establishing a schedule the Secretary shall consider any schedule proposed by the permittee, the scope of the project, the extent of contamination, and the corrective action being proposed.~~ If an exceedance of the standards is expected through professional judgment or predicted through modeling at or beyond the compliance boundary, the person may submit a plan for alteration of existing site conditions, facility design, or operational controls that will prevent a violation at the compliance boundary, and implement that plan upon its approval by the Director. In approving the plan, the Director shall consider geologic and hydrogeologic conditions, the nature and extent of the contamination, technical and economic feasibility, and public health impacts on all potential receptors should the contaminated plume reach them.

(e) For any person conducting or controlling an activity that is conducted under the authority of a permit issued by the Department pursuant to G.S. 143-215.1, Article 9 of G.S. 130A, or Article 11 of G.S. 130A that results in an increase in concentration of a substance in excess of the standards beyond the compliance boundary or within the compliance zone as specified by Rule [~~.0107(q)~~] .0107(p) of this Section, the person shall take the following steps:

(1) Within 24 hours of discovery of the initial violation, notify the Department of the activity that has resulted in the increase, the contaminants that are in exceedance, and the contaminant concentration levels.

(2) Respond in accordance with Paragraph (f) of this Rule.

(3) Implement a monitoring program in accordance with Rule .0110 of this Section.

(4) Submit a site assessment report to the Director in accordance with Rule .0111 of this Section.

(5) Submit a notification in accordance with the requirements of Rule .0114(a) of this Section.

(6) If required, submit a corrective action plan to the Director in accordance with Rule .0111 of this Section or pursue risk-based remediation per Paragraph (i) of this Rule. The corrective action plan may include alteration of existing site conditions, facility design, or operational controls that will prevent a violation at the compliance boundary. If a corrective action plan is submitted for active remediation or natural attenuation, then:

(A) Submit a notification in accordance with the requirements of Rule .0114(b) of this Section.

(B) Implement [~~an approved~~]the corrective action plan upon its approval by the Secretary.

(C) Submit a notification in accordance with the requirements of Rule .0114(c) of this Section.

~~(e) Any person conducting or controlling an activity that is conducted under the authority of a permit initially issued by the Department prior to December 30, 1983 pursuant to G.S. 143-215.1 or G.S. 130A-294, and that results in an increase in concentration of a substance in excess of the standards at or beyond the compliance boundary specified in the permit, shall:~~

~~(1) within 24 hours of discovery of the violation, notify the Department of the activity that has resulted in the increase and the contaminant concentration levels;~~

~~(2) respond in accordance with Paragraph (f) of this Rule;~~

~~(3) submit a report to the Secretary assessing the cause, significance and extent of the violation; and~~

~~(4) implement an approved corrective action plan for restoration of groundwater quality at or beyond the compliance boundary, in accordance with a schedule established by the Secretary. In establishing a schedule the Secretary shall consider any schedule proposed by the person submitting the plan. A report shall be made to the Health Director of the county or counties where the contamination occurs in accordance with the requirements of Rule .0114(a) in this Section.~~

(f) Initial response actions required to be conducted prior to or concurrent with the site assessment required in Paragraphs ~~(c), (d), or (e)~~ (c) and (e) of this Rule shall include:

(1) Prevention of fire, explosion, or the spread of noxious ~~fumes;~~fumes.

(2) Abatement, containment, or control of the migration of ~~contaminants;~~contaminants.

(3) Removal, treatment, or control of any primary pollution source such as buried waste, waste stockpiles, or surficial accumulations of free ~~products;~~products.

(4) Removal, treatment, or control of secondary pollution sources that would be potential continuing sources of pollutants to the groundwaters, such as contaminated soils and non-aqueous phase liquids. Contaminated soils that threaten the quality of groundwaters shall be treated, contained, or disposed

of in accordance with ~~rules~~ Rules in this ~~Chapter~~ Subchapter and in 15A NCAC 13 applicable to such activities. The treatment or disposal of contaminated soils shall be conducted in a manner that will not result in a violation of the ~~standards or North Carolina Hazardous Waste Management rules.~~ standards or 15A NCAC 13 Rules.

The initial response actions shall be documented in the site assessment report required under Rule .0111(b) of this Section. The Director may request written documentation of the response actions in advance of the site assessment report if the Director determines that there is an immediate threat to human [~~health.~~] health based on information including the nature and extent of the release, the potential exposure pathways, and proximity to human receptors.

~~(g) The site assessment conducted pursuant to the requirements of Paragraphs (c), (d), or (e) of this Rule, shall include:~~

~~(1) The source and cause of contamination;~~

~~(2) Any imminent hazards to public health and safety, as defined in G.S. 130A-2, and any actions taken to mitigate them in accordance with Paragraph (f) of this Rule;~~

~~(3) All receptors and significant exposure pathways;~~

~~(4) The horizontal and vertical extent of soil and groundwater contamination and all significant factors affecting contaminant transport; and~~

~~(5) Geological and hydrogeological features influencing the movement, chemical, and physical character of the contaminants.~~

~~Reports of site assessments shall be submitted to the Department as soon as practicable or in accordance with a schedule established by the Secretary. In establishing a schedule the Secretary shall consider a proposal by the person submitting the report.~~

~~(h) Corrective action plans for restoration of groundwater quality, submitted pursuant to Paragraphs (c), (d), and (e) of this Rule shall include:~~

~~(1) A description of the proposed corrective action and reasons for its selection;~~

~~(2) Specific plans, including engineering details where applicable, for restoring groundwater quality;~~

~~(3) A schedule for the implementation and operation of the proposed plan; and~~

~~(4) A monitoring plan for evaluating the effectiveness of the proposed corrective action and the movement of the contaminant plume.~~

~~(i) In the evaluation of corrective action plans, the Secretary shall consider the extent of any violations, the extent of any threat to human health or safety, the extent of damage or potential adverse impact to the environment, technology available to accomplish restoration, the potential for degradation of the contaminants in the environment, the time and costs estimated to achieve groundwater quality restoration, and the public and economic benefits to be derived from groundwater quality restoration.~~

~~(j)~~(g) Corrective action using active remediation. A corrective action plan prepared pursuant to Paragraphs ~~(c), (d), or (e)~~(c) or (e) of this Rule shall be implemented using a remedial technology demonstrated to the Director to provide the most effective means, taking into consideration geological and hydrogeological conditions at the contaminated site, for restoration of groundwater quality to the level of the standards. ~~Corrective action plans prepared pursuant to~~

~~Paragraphs (c) or (e) of this Rule may request an exception as provided in Paragraphs (k), (l), (m), (r), and (s) of this Rule.~~ Corrective action plans for active remediation shall include the information in Rule .0111(c) of this Section.

~~(k) Any person required to implement an approved corrective action plan for a site subject to Paragraphs (c) or (e) of this Rule may request that the Secretary approve such a plan without requiring groundwater remediation to the standards. A request submitted to the Secretary under this Paragraph shall include a description of site specific conditions, including information on the availability of public water supplies for the affected area; the technical basis for the request; and any other information requested by the Secretary to evaluate the request in accordance with Subparagraphs (1) through (7) of this Paragraph. The person making the request shall demonstrate:~~

~~(1) that all sources of contamination and free product have been removed or controlled pursuant to Paragraph (f) of this Rule;~~

~~(2) that the time and direction of contaminant travel can be predicted with reasonable certainty;~~

~~(3) that contaminants have not and will not migrate onto adjacent properties, or that:~~

~~(A) such properties are served by an existing public water supply system dependent on surface waters or hydraulically isolated groundwater; or~~

~~(B) the owners of such properties have consented in writing to the request;~~

~~(4) that the standards specified in Rule .0202 of this Subchapter will be met at a location no closer than one year time of travel upgradient of an existing or foreseeable receptor, based on travel time and the natural attenuation capacity of subsurface materials or on a physical barrier to groundwater migration that exists or will be installed by the person making the request;~~

~~(5) that, if the contaminant plume is expected to intercept surface waters, the groundwater discharge will not possess contaminant concentrations that would result in violations of standards for surface waters contained in 15A NCAC 02B .0200;~~

~~(6) that public notice of the request has been provided in accordance with Rule .0114(b) of this Section; and~~

~~(7) that the proposed corrective action plan would be consistent with all other environmental laws.~~

~~(l)~~(h) Corrective action using natural attenuation. Any person required to implement an approved corrective action plan for a site subject to Paragraphs (c) or (e) of this Rule may request that the Secretary approve such a plan based upon natural processes of degradation and attenuation of contaminants. Corrective action plans for natural attenuation shall make the demonstration and include the information in Rule .0111(d) of this Section.~~A request submitted to the Secretary under this Paragraph shall include a description of site specific conditions, including written documentation of projected groundwater use in the contaminated area based on current state or local government planning efforts; the technical basis for the request; and any other information requested by the Secretary to evaluate the request in accordance with Subparagraphs (1) through (10) of this Paragraph. The person making the request shall demonstrate:~~

~~(1) that all sources of contamination and free product have been removed or controlled pursuant to Paragraph (f) of this Rule;~~

~~(2) that the contaminant has the capacity to degrade or attenuate under the site specific conditions;~~

~~(3) that the time and direction of contaminant travel can be predicted based on subsurface conditions and the contaminant's physical and chemical properties;~~

~~(4) that contaminant migration will not result in any violation of applicable groundwater standards at any existing or foreseeable receptor;~~

~~(5) that contaminants have not and will not migrate onto adjacent properties, or that:~~

~~(A) such properties are served by an existing public water supply system dependent on surface waters or hydraulically isolated groundwater; or~~

~~(B) the owners of such properties have consented in writing to the request;~~

~~(6) that, if the contaminant plume is expected to intercept surface waters, the groundwater discharge will not possess contaminant concentrations that would result in violations of standards for surface waters contained in 15A NCAC 02B .0200;~~

~~(7) that the person making the request will put in place a groundwater monitoring program that, based on subsurface conditions and the physical and chemical properties of the contaminant, will accurately track the degradation and attenuation of contaminants and contaminant by products within and down gradient of the plume and to detect contaminants and contaminant by products prior to their reaching any existing or foreseeable receptor at least one year's time of travel upgradient of the receptor and no greater than the distance the groundwater at the contaminated site is predicted to travel in five years;~~

~~(8) that all necessary access agreements needed to monitor groundwater quality pursuant to Subparagraph (7) of this Paragraph have been or can be obtained;~~

~~(9) that public notice of the request has been provided in accordance with Rule .0114(b) of this Section; and~~

~~(10) that the proposed corrective action plan would be consistent with all other environmental laws.~~

(i) Corrective action using risk-based remediation. A person choosing to use risk-based remediation shall comply with the requirements in G.S. 130A Article 9 Part 8.

~~(m)~~(j) Termination of active remediation prior to achieving the standards. ~~The Department or any~~Any person required to implement an approved corrective action plan for a site subject to ~~Paragraphs (c) or (e)~~Paragraph (g) of this Rule may request that the Secretary approve termination of ~~corrective action.~~the active [~~remediation.~~]remediation prior to achieving the standards. The owner and operator of an active remediation system shall [~~demonstrate~~] demonstrate, [~~that,~~] by terminating the active remediation and then implementing an approved natural attenuation corrective action under Paragraph (h) of this Rule, that all potential receptors will be protected. A request submitted to the Secretary under this Paragraph shall include:

~~(1) A request submitted to the Secretary under this Paragraph shall include:~~

(1)~~(A)~~ ~~a~~ A discussion of the duration of the corrective action, the total project cost, projected annual cost for ~~continuance~~ continuance, and evaluation of the success of the corrective ~~action;~~action.

(2)~~(B)~~ ~~an~~ An evaluation of alternate treatment technologies that could potentially result in further reduction of contaminant levels, projected capital, and annual operating costs for each ~~technology; and~~technology.

(3)~~(C)~~ ~~the~~ The effects, including public health ~~and safety~~ impacts, on groundwater users if contaminant levels remain at levels existing at the time corrective action is terminated.

(4)~~[(D)]~~ The proposed contaminant concentrations to actively remediate to prior to reaching the standards in the source area and all predictive calculations and model runs demonstrating that the standards will be met at all existing or potential receptors, based on travel time and the natural attenuation capacity of subsurface materials or on a barrier to groundwater migration that exists or will be installed by the person making the request.

(5)~~[(E)]~~ A demonstration that continuation of active remediation would not result in a significant reduction in the concentration of contaminants. This demonstration shall show the duration and degree of success of existing remedial efforts to attain the standards. For the purpose of this Rule, a "significant reduction" is demonstrated by showing that the asymptotic slope of the contaminant concentrations over time is less than a ratio of 1:40 over a term of one year based on four consecutive quarters with sampling events spaced at least three months apart.

(6)~~[(F)]~~ A natural attenuation corrective action plan for the remaining contamination in accordance with Paragraph (h) of this Rule.

~~(2) In addition, the person making the request shall demonstrate:~~

~~(A) that continuation of corrective action would not result in a significant reduction in the concentration of contaminants. This demonstration shall show the duration and degree of success of existing remedial efforts to attain standards. For the purpose of this Part, a "significant reduction" is demonstrated by showing that the asymptotic slope of the contaminants curve of decontamination is less than a ratio of 1:40 over a term of one year based on quarterly sampling;~~

~~(B) that contaminants have not and will not migrate onto adjacent properties, or that:~~

~~(i) such properties are served by an existing public water supply system dependent on surface waters or hydraulically isolated groundwater; or~~

~~(ii) the owners of such properties have consented in writing to the request;~~

~~(C) that, if the contaminant plumes are expected to intercept surface waters, the groundwater discharge will not possess contaminant concentrations that would result in violations of standards for surface waters contained in 15A NCAC 02B .0200;~~

~~(D) that public notice of the request has been provided in accordance with Rule .0114(b) of this Section; and~~

~~(E) that the proposed termination would be consistent with all other environmental laws.~~

(k)~~(3)[(2)]~~ The Secretary shall not authorize termination of active remediation ~~corrective action~~ for any area that, at the time the request is made, has been identified by a ~~state~~ State or local groundwater use planning process for resource development.

(l)~~(4)[(3)]~~ The Secretary may authorize the termination of active remediation, ~~corrective action,~~ or amend the corrective action plan after considering all the information in the request. In making the authorization, the Secretary shall consider geologic and hydrogeologic conditions, the nature and extent of the contamination, technical and economic feasibility, and public health ~~and safety~~ impacts on all ~~existing and foreseeable~~ potential receptors should the contaminated plume reach them.~~receptors and the impacts the contaminated plume may have if it reaches them.~~ The Secretary will review the request for completeness and may request any additional information necessary to make their authorization. ~~Upon termination of corrective action, the Secretary shall require implementation of a groundwater monitoring program that, based on subsurface conditions and the physical and chemical properties of the contaminants, will accurately track the degradation and attenuation of contaminants at a location of no less than one year's predicted time of travel upgradient of any existing or foreseeable receptor. The monitoring program shall remain in effect until there is sufficient evidence that the contaminant concentrations have been reduced to the level of the standards. For the purpose of this Part, "sufficient evidence" means that sampling and analyses demonstrate that contaminant concentrations have been reduced to the level of the standards on multiple sampling events.~~

(m)[~~(k)~~] In the evaluation of active remediation or natural attenuation corrective action plans, the Secretary shall consider the extent of any violations, the extent of any threat to human health, the extent of damage or potential adverse impact to the environment, technology available to accomplish restoration, the potential for degradation of the contaminants in the environment, geologic and hydrogeologic conditions, the time estimated to achieve groundwater quality restoration, technical and economic feasibility, and the public and economic benefits to be derived from groundwater quality restoration.

(n)[~~(l)~~] ~~Upon a determination by the Secretary that~~Where continued corrective action would result in no significant reduction in contaminant ~~concentrations,~~ concentrations as determined in [~~Part~~]Subparagraph (j)[~~(1)(E)~~](5) of this Rule,~~and the contaminated groundwaters can be rendered potable by treatment using technologies that are in use in other applications and shown to be effective for removal of contaminants,~~ the person may request that the Secretary ~~may~~ designate the ~~remaining~~ area of degraded groundwater RS. ~~Where the remaining degraded groundwaters cannot be made potable by such treatment, the~~ The ~~Secretary~~ Commission may also consider a request for reclassification of the groundwater to a GC classification as outlined in Rule ~~.0201~~.0319 of this Subchapter.

(o)[~~(m)~~] If at any time the Secretary determines that a new technology is available that would remediate the contaminated groundwater to the standards specified in Rule .0202 of this Subchapter, the Secretary may require the ~~responsible party~~person to evaluate the economic and technological feasibility of implementing the new technology in an active ~~groundwater~~ remediation corrective action ~~plan in accordance with a schedule established by the Secretary.~~plan. The Secretary's determination to utilize new technology at any site or for any particular contaminant or constituent of interest shall include a consideration of the factors in ~~Paragraph (h) of this Rule.~~Rule .0111(c) of this Section.

(p)[~~(n)~~] Where the standards are exceeded as a result of the application of pesticides or other agricultural chemicals, the Secretary shall request the Pesticide Board or the Department of Agriculture and Consumer Services to assist the Department in determining the cause of the violation. If the violation is determined to have resulted from the use of pesticides, the Secretary shall request the Pesticide Board to take appropriate regulatory action to control the use of the chemical or chemicals responsible for, or contributing to, such violations, or to discontinue their use.

~~(q) The approval pursuant to this Rule of any corrective action plan, or modification or termination thereof, that permits the migration of a contaminant onto adjacent property, shall not affect any private right of action by any party that may be affected by that contamination.~~

(q)~~(r)~~[~~(o)~~] If a discharge or release is not governed by the rules in Section .0400 of this Subchapter and the increase in the concentration of a substance in excess of the standard resulted in whole or in part from a release from a commercial or noncommercial underground storage tank as defined in G.S. 143-215.94A, any person required to implement an approved corrective action plan pursuant to this Rule and seeking reimbursement for the Commercial or Noncommercial Leaking Petroleum Underground Storage Tank Cleanup Funds shall implement a corrective action plan meeting the requirements of Paragraph ~~(k) or (l)~~(g) or (h) of this Rule unless the person demonstrates to the Secretary that:

(1) contamination resulting from the discharge cannot qualify for approval of a plan based on the requirements of the ~~Paragraphs;~~ Paragraphs (g) or (h) of this Rule; or

(2) the cost of making such a demonstration would exceed the cost of implementing a corrective action plan submitted pursuant to ~~Paragraph (c) of this Rule.~~Rule .0111(c) of this Section.

(r)~~(s)~~[~~(p)~~] If a discharge or release is not governed by the rules in Section .0400 of this Subchapter and the increase in the concentration of a substance in excess of the standard resulted in whole or in part from a release from a commercial or noncommercial underground storage tank as defined in G.S. 143-215.94A, the Secretary may require any person implementing or operating a previously approved corrective action plan pursuant to this Rule to:

(1) develop and implement a corrective action plan meeting the requirements of Paragraphs ~~(k) and (l)~~(g) and (h) of this Rule; or

(2) seek discontinuance of corrective action pursuant to Paragraph ~~(m)~~(j) of this Rule.

(s)[~~(q)~~] Pursuant to this Rule, the approval of any corrective action plan, modification, or termination thereof, that permits the migration of a contaminant onto adjacent property, shall not affect any private right of action by any party that may be affected by that contaminant.

*History Note:* *Authority G.S. 143-215.1; 143-215.3; ~~143-215.94A;~~ 143-215.94T; 143-215.94V; 143B-282;*
*~~1995 (Reg. Sess. 1996) c. 648, s. 1;~~*
*Eff. August 1, 1989;*
*Amended Eff. October 1, 1993; September 1, 1992;*
*Temporary Amendment Eff. January 2, 1998; January 2, 1996;*
*Amended Eff. July 1, 2016; October 29, 1998;*
*Readopted Eff. June 1, 2022.*

15A NCAC 02L .0107 is readopted as published in 36:08 NCR 610 with changes as follows:

**15A NCAC 02L .0107 COMPLIANCE BOUNDARY**

(a) For disposal systems individually permitted prior to December 30, 1983, the compliance boundary ~~is~~ shall be established at a horizontal distance of 500 feet from the waste boundary or at the property boundary, whichever is closer to the source.

(b) For disposal systems individually permitted on or after December 30, 1983, a compliance boundary shall be established at a horizontal distance of 250 feet from the waste boundary, or 50 feet within the property boundary, whichever point is closer to the source.

(c) The compliance boundary shall be established ~~by the Director, or his designee~~ at the time of permit ~~issuance.~~ issuance and shall remain in place for the duration of the permit. ~~Any sale or transfer of property which affects a compliance boundary shall be reported immediately to the Director, or his designee. For disposal systems which are not governed by Paragraphs (e) or (f) of this Rule, the compliance boundary affected by the sale or transfer of property will be re-established consistent with Paragraphs (a) or (b) of this Rule, whichever is applicable.~~

~~(d) Except as provided in Paragraph (g) of this Rule, no water supply wells shall be constructed or operated within the compliance boundary of a disposal system individually permitted or repermitted after January 1, 1993.~~

(d) The compliance boundary and zone shall extend vertically from the surface through the water table to the maximum depth of saturation.

(e) The permitted activity shall not cause or contribute to an exceedance of the surface water standards established under 15A NCAC 02B .0200.

(f) Multiple contiguous properties under common ownership and permitted for use as a waste disposal area shall be treated as a single property with regard to determination of a compliance zone and setbacks to property lines as per Paragraphs (a) or (b) of this Rule.

(g) Where compliance zones for separately permitted waste disposal areas under the same ownership on the same property intersect, the Director shall combine the compliance zones into one single compliance zone with a single compliance boundary.

(h) The permittee shall establish a monitoring program within the compliance zone per the requirements in Rule .0110 of this Section.

(i) Except as provided in Paragraph (m) of this Rule, no new water supply wells shall be constructed within the compliance zone of a disposal system individually permitted after January 1, 1993.

~~(e)~~(j) Except as provided in Paragraph ~~(g)~~(m) of this Rule, ~~a permittee shall not transfer~~if the land within an established compliance ~~boundary~~ zone of a disposal system permitted ~~or repermitted~~ after January 1, 1993 ~~unless:~~is transferred and that land is serviced by a community water system as regulated under 15A NCAC 18C, the source of which is located outside the compliance boundary, the deed shall contain notice of the permit, including the permit number, a description of the type of permit, and the name, address and telephone number of the permitting agency.

~~(1) the land transferred is serviced by a community water system as defined in 15A NCAC 18C, the source of which is located outside the compliance boundary; and~~

~~(2) the deed transferring the property:~~

~~(A) contains notice of the permit, including the permit number, a description of the type of permit, and the name, address and telephone number of the permitting agency; and~~

~~(B) contains a restrictive covenant running with the land and in favor of the permittee and the State, as a third party beneficiary, which prohibits the construction and operation of water supply wells within the compliance boundary; and~~

~~(C) contains a restrictive covenant running with the land and in favor of the permittee and the State, as a third party beneficiary, which grants the right to the permittee and the State to enter on such property within the compliance boundary for groundwater monitoring and remediation purposes.~~

~~(f)~~(k) Except as provided in Paragraph ~~(g)~~(m) of this Rule, if at the time a permit is issued ~~or reissued~~ after~~-~~ January 1, 1993, the permittee is not the owner of the land within the compliance ~~boundary,~~zone, it shall be a condition of the permit issued or renewed that the landowner of the land within the compliance ~~boundary,~~zone, if other than the permittee, execute and file in the Register of Deeds in the county in which the land is located, an easement running with the land ~~which:~~that contains either a notice of the permit, including the permit number, a description of the type of permit, and the name, address and telephone number of the permitting agency; or a reference to a notice of the permit with book and page number of its recordation if such notice is required to be filed by statute. The Director shall, upon request by the landowner, file a document terminating the easement with the appropriate Register of Deeds once the following conditions have been met:

(1) all required groundwater remediation has been completed;

(2) groundwater monitoring is no longer [~~required;~~] required per Rule .0110(f) of this Section; and

(3) monitoring wells have been abandoned in accordance with 15A NCAC 02C .0113.

~~(1) contains:~~

~~(A) either a notice of the permit, including the permit number, a description of the type of permit, and the name, address and telephone number of the permitting agency; or~~

~~(B) a reference to a notice of the permit with book and page number of its recordation if such notice is required to be filed by statute;~~

~~(2) prohibits the construction and operation of water supply wells within the compliance boundary; and~~

~~(3) reserves the right to the permittee and the State to enter on such property within the compliance boundary for groundwater monitoring and remediation purposes. The easement may be terminated by the Director when its purpose has been fulfilled or the need for the easement no longer exists. Under those conditions the Director shall, upon request by the landowner, file a document terminating the easement with the appropriate Register of Deeds.~~

(l) Any sale or transfer of property which affects a compliance boundary shall be reported to the Director within seven days of the final sale or transfer. For disposal systems which are not governed by Paragraphs (j) or (k) of this Rule, the compliance boundary affected by the sale or transfer of property shall be reestablished consistent with this Rule.

~~(g)~~(m) ~~The requirements of Paragraphs (d), (e) and (f) of this Rule are not applicable to~~For ground adsorption sewage treatment and disposal systems serving four or fewer single family dwellings or multiunit dwellings of four or fewer

~~units.~~units regulated under 15A NCAC 02T .0600, the requirements of Paragraphs (i). (j), and (k) of this Rule shall not be applicable.

~~(h) The boundary shall form a vertical plane extending from the water table to the maximum depth of saturation.~~

~~(i)~~(n) For ground absorption sewage treatment and disposal systems which are ~~permitted~~ regulated under 15A NCAC 02T .0600, ~~18A .1900,~~ the compliance boundary shall be established at the property boundary.

~~(j)~~(o) Penalties authorized pursuant to G.S. 143-215.6A(a)(1) ~~will~~ shall not be assessed for violations of the standards within a compliance ~~boundary~~ zone unless the violations are ~~the result of violations~~ of permit conditions or negligence in the management of the facility.

~~(k) The Director shall require:~~

~~(1) that permits for all activities governed by G.S. 143-215.1 be written to protect the quality of groundwater established by applicable standards, at the compliance boundary;~~

~~(2) that necessary groundwater quality monitoring shall be conducted within the compliance boundary; and~~

~~(3) that a violation of standards within the compliance boundary resulting from activities conducted by the permitted facility be remedied through clean-up, recovery, containment, or other response when any of the following conditions occur:~~

~~(A) a violation of any standard in adjoining classified groundwaters occurs or can be reasonably predicted to occur considering hydrogeologic conditions, modeling, or other available evidence;~~

~~(B) an imminent hazard or threat to the public health or safety exists; or~~

~~(C) a violation of any standard in groundwater occurring in the bedrock other than limestones found in the Coastal Plain sediments, unless it can be demonstrated that the violation will not adversely affect, or have the potential to adversely affect a water supply well.~~

~~[(p) The Director shall require that permits for all activities governed by G.S. 143-215.1, Article 9 of G.S. 130A, or Article 11 of G.S. 130A be written in such a way to protect groundwater at or beyond the compliance boundary.]~~

[~~(q)~~] (p) The Director shall require that exceedances of the standards resulting from activities conducted by the permitted facility within the compliance zone be remedied through clean-up, recovery, containment, facility design, or operational control if any of the following occur:

(1) A violation of the standards occurs or is expected through professional judgment or predicted [~~to occur~~] through [~~groundwater~~] modeling to occur in groundwater at or beyond the compliance boundary as a result of the permitted activities.

(2) A violation of the surface water standards established under 15A NCAC 02B .0200 occurs or is expected through professional judgment or predicted through modeling to occur [~~through modeling~~] as a result of the permitted activities.

(3) An imminent hazard as defined in [~~G.S.130A-2~~] G.S. 130A-2 exists.

(4) An exceedance of the standards occurs in bedrock within the compliance zone as a result of the permitted [~~activities~~] activities, unless it can be demonstrated that the violation will not adversely affect any receptor.

*History Note:* *Authority G.S. ~~143-215.1(b);~~ 143-215.1; 143-215.3(a)(1);-143B-282;*
*Eff. August 1, 1989;*
*Amended Eff. October 1, 1993; November 2, 1992;*
*Readopted Eff. June 1, 2022.*

15A NCAC 02L .0108 is readopted as published in 36:08 NCR 612 with changes as follows:

**15A NCAC 02L .0108 REVIEW BOUNDARY**

A review boundary is established around any waste disposal ~~system~~ area ~~midway~~ half way between the compliance boundary and the waste boundary. When the concentration of any substance equals or exceeds the standard at the review boundary as determined by monitoring, the permittee shall be required to take action in accordance with the provisions of Rule ~~.0106(e)(2)(A).~~0106(d) of this ~~Subchapter.~~Section.

*History Note:* *Authority G.S. 143-215.1(b); 143-215.3(a)(1); 143B-282;*
*Eff. August 1, 1989;*
*Readopted Eff. June 1, 2022.*

15A NCAC 02L .0109 is readopted as published in 36:08 NCR 612 as follows:

**15A NCAC 02L .0109 DELEGATION**

(a) The Director is delegated the authority to enter into consent special orders under G.S. 143-215.2 for violations of the standards except when a public meeting is required as provided in 15A NCAC ~~2H~~02H .1203.

(b) The Director is delegated the authority to prepare a proposed special order to be issued by the Commission without the consent of the person affected and to notify the affected person of that proposed order and of the procedure set out in G.S. 150B-23 to contest the proposed special order.

(c) The ~~Director, or his designee~~Director shall give public notice of proposed consent special orders as specified in 15A NCAC ~~2H~~02H .1203.

*History Note:* *Authority G.S. 143-215.2; 143-215.3(a)(1); 143-215.3(a)(4);*
*Eff. August 1, 1989;*
*Amended Eff. October 1, 1993; October 1, 1990;*
*Readopted Eff. June 1, 2022.*

15A NCAC 02L .0110 is readopted as published in 36:08 NCR 612 with changes as follows:

**15A NCAC 02L .0110 MONITORING**

(a) Except where exempted by statute or this Subchapter, the Director may require any person who causes, ~~permits~~ permits, or has control over any discharge of ~~waste,~~waste or ~~groundwater~~ cleanup program, ~~shall install and~~ to implement a monitoring program ~~system, at such locations, and~~ in such ~~detail,~~detail as ~~the Director, or his designee may require~~ required to evaluate the effects of the discharge upon the environment or waters of the ~~state,~~State, including the effect of any actions taken to restore groundwater quality, as well as the efficiency of any treatment facility. The Director shall consider information including the geologic and hydrogeologic conditions, potential receptors, and risks to public health and the environment in determining the nature and extent of any required monitoring program. The monitoring program plan shall be prepared under the ~~responsible~~ charge of a ~~Professional~~ professional ~~Engineer~~ engineer or ~~Licensed~~ licensed ~~Geologist~~ geologist and bear the seal of the ~~same.~~same if required under G.S. 89C or G.S. 89E.

(b) Monitoring systems within the monitoring program shall be constructed and operated in a manner that will not result in the contamination of ~~adjacent groundwaters of a higher quality.~~waters of the State.

(c) The Director may require modification of a monitoring program or system or require additional monitoring of a contaminant or constituent of interest if [~~it is determined to be in the best interest~~] new information indicates such modification or additional monitoring is necessary to protect [~~to~~] public health [~~and~~] or the environment.

(d) Monitoring systems within the monitoring program shall be able to:

(1) Track the migration, degradation, and attenuation of contaminants and contaminant by-products from the source area through a point of compliance such as a compliance boundary (if applicable), within a contaminant plume, and in areas where the contaminant plume is expected through professional judgment or predicted through modeling to migrate.

(2) Be used to determine the background groundwater quality that is not affected by site conditions, actions, or activities.

(3) Detect contaminants and contaminant by-products prior to their reaching any potential receptor.

(4) Detect if a groundwater contaminant plume is causing or contributing to exceedances of the surface water standards established under 15A NCAC 02B .0200.

~~(c)~~(e) Monitoring shall be conducted and results reported in a manner and at a frequency specified by the ~~Director, or his designee.~~Director based on information including the geologic and hydrogeologic conditions, potential receptors, and risks to public health and the environment.

(f) Monitoring programs shall remain in effect until it is demonstrated that the contaminant concentrations resulting from site activities or actions have been reduced to a level at or below the standards for a minimum of four consecutive quarters with monitoring events spaced at least three months apart. The Director may require an extension of monitoring if the Director determines that concentrations are fluctuating at or near the standards or the data trends suggest that concentrations [~~may be~~] are increasing. Once the Director is satisfied that the concentrations are at or below standards [~~have been met~~] or that corrective action is no longer necessary to ensure compliance with the Rules of this Subchapter, the Director shall furnish a letter stating that no further action is required. The Director shall also

require a plan be submitted for maintaining or abandoning the monitoring wells in accordance with 15A NCAC 02C .0100.

*History Note:* *Authority G.S. 143-215.1(b); 143-215.3(a)(1); 143-215.65; 143-215.66; 143B-282;*
*Eff. August 1, 1989;*
*Amended Eff. October 1, 1993;*
*Readopted Eff. June 1, 2022.*

15A NCAC 02L .0111 is readopted as published in 36:08 NCR 612 with changes as follows:

**15A NCAC 02L .0111 REPORTS**

(a) Any person subject to the requirements ~~for corrective action specified~~ in Rule .0106 of this Section [~~Subchapter~~] shall submit to the Director, ~~in such detail as the Director may require, a written report that describes:~~plans or reports including those associated with initial response, site assessment, and corrective action. Reports shall be submitted in accordance with a schedule established by the Director. In establishing a schedule, the Director shall consider a proposal by the person submitting the plan or report.

~~(1) the results of the investigation specified in Paragraphs (c) and (d) of Rule .0106 of this Section, including but not limited to:~~

~~(A) a description of the sampling procedures followed and methods of chemical analyses used; and~~

~~(B) all technical data utilized in support of any conclusions drawn or determinations made.~~

~~(2) the results of the predictive calculations or modeling, including a copy of the calculations or model runs and all supporting technical data, used in the demonstration required in Paragraph (d) of Rule .0106 of this Section; and~~

~~(3) the proposed methodology and timetable associated with the corrective action for those situations identified in Paragraphs (c) and (d) of Rule .0106 of this Section.~~

~~(b) The report shall be prepared under the responsible charge of a Professional Engineer or Licensed Geologist and bear the seal of the same as specified in Rule .0106(d) of this Section.~~

(b) A site assessment conducted pursuant to the requirements of Paragraphs (c) or (e) in Rule .0106 of this Section shall include:

(1) a description of the site including current and historical operations at the facility and all current and historical waste streams;

(2) the source and cause of contamination;

(3) any imminent hazards to public health and any actions taken to mitigate them;

(4) a description of the initial response actions taken in accordance with Rule .0106(f) of this Section;

(5) all potential receptors and expected exposure pathways;

(6) the horizontal and vertical extent of soil and groundwater contamination and all significant factors affecting contaminant transport;

(7) background threshold values for affected media;

(8) geological and hydrogeological features influencing the movement, chemical, and physical character of the contaminants;

(9) the nature and extent of any surface water or sediment contamination resulting from interactions with contaminated soil or groundwater;

(10) a description of the sampling procedures followed, and methods of chemical analyses used;

(11) all technical data utilized in support of any interpretations, conclusions, determinations, or evaluations made; and

(12) the results of predictive calculations or modeling, including a copy of the calculations or model runs and all supporting technical data.

(c) Corrective action plans submitted pursuant to Paragraphs (c) or (e) in Rule .0106 of this Section for active remediation shall include:

(1) a summary of the results of the site assessment submitted in accordance with Paragraph (b) of this Rule;

(2) the technical basis for the requested corrective action;

(3) an evaluation of risk to receptors within the contaminant plume and in areas where the plume is expected through professional judgment or predicted through modeling to migrate; [~~migrate through modeling;~~]

(4) an evaluation of projected groundwater use within 1,500 feet of the predicted impacted area based on current State or local government planning efforts;

(5) a summary of the available technology that could feasibly be used as a potential remedial strategy based on the specific site conditions and nature and extent of the contamination that includes the predicted time to return to compliance with the standards and the estimated costs to implement each potential strategy;

(6) the proposed remedial technology that the person proposes to implement that includes:

(A) the rationale for selecting the proposed technology;

(B) plans and specifications, including engineering details;

(C) a schedule for implementation and operation of the technology;

(D) the predicted time to return to compliance with the standards;

(E) the estimated costs to implement and operate the technology;

(F) a monitoring plan [~~that evaluates~~]to evaluate the effectiveness of the technology; and

(G) the results of any modeling or predictive calculations that shows the projected movement of the contaminant plume until the predicted time to return to compliance with the standards;

(7) all technical data utilized in support of any interpretations, conclusions, determinations, or evaluations made; [~~and~~]

(8) [~~the results of predictive calculations or modeling, including~~]a copy of the calculations or model runs and all supporting technical data; and

(9) a demonstration that:

(A) all necessary access agreements needed to monitor groundwater quality have been or can be obtained; and

(B) the proposed corrective action plan would be consistent with all other environmental laws.

(d) Corrective action plans submitted pursuant to Paragraphs (c) or (e) in Rule .0106 of this Section for natural attenuation shall include: [~~all of the information required in Paragraph (c) of this Rule and demonstrate that:~~]

[~~(1) all sources of contamination and free product have been removed or controlled pursuant to Rule .0106(f) of this Section;~~

~~(2) the contaminant has the capacity to degrade or attenuate under the site-specific conditions;~~

~~(3) the time and direction of contaminant travel can be predicted based on subsurface conditions and the contaminant's physical and chemical properties;~~

~~(4) contaminant migration will not result in any violation of applicable standards at any existing or potential receptor;~~

~~(5) contaminants have not and will not migrate onto adjacent properties, or that:~~

~~(A) such properties are served by an existing public water supply system dependent on surface waters or hydraulically isolated groundwater; or~~

~~(B) the owners of such properties have consented in writing to the request;~~

~~(6) if the contaminant plume is expected to intercept surface waters, the groundwater discharge will not possess contaminant concentrations that would result in violations of the surface water standards established under 15A NCAC 02B .0200;~~

~~(7) the person making the request will put in place a groundwater monitoring program in conformance with Rule .0110 of this Section;~~

~~(8) all necessary access agreements needed to monitor groundwater quality have been or can be obtained;~~

~~(9) public notice of the request has been provided in accordance with Rule .0114(b) of this Section; and~~

~~(10) the proposed corrective action plan would be consistent with all other environmental laws.~~]

(1) a summary of the results of the site assessment submitted in accordance with Paragraph (b) of this Rule;

(2) the technical basis for the requested corrective action;

(3) an evaluation of risk to receptors within the contaminant plume and in areas where the plume is expected through professional judgment or predicted through modeling to migrate; [~~migrate through modeling;~~]

(4) an evaluation of projected groundwater use within 1,500 feet of the predicted impacted area based on current State or local government planning efforts;

(5) the predicted time to return to compliance with the standards;

(6) the results of any modeling or predictive calculations that show the projected movement of the contaminant plume until the predicted time to return to compliance with the standards;

(7) all technical data utilized in support of any interpretations, conclusions, determinations, or evaluations made;

(8) a copy of the calculations or model runs and all supporting technical data;

(9) a monitoring plan to evaluate the effectiveness of the natural attenuation; and

(10) a demonstration that:

(A) all sources of contamination and free product have been removed or controlled pursuant to Rule .0106(f) of this Section;

(B) the contaminant has the capacity to degrade or attenuate under the site-specific conditions;

(C) the time and direction of contaminant travel can be predicted based on subsurface conditions and the contaminant's physical and chemical properties;

(D) contaminant migration will not result in any violation of applicable standards at any existing or potential receptor;

(E) contaminants have not and will not migrate onto adjacent properties, or that:

(i) such properties are served by an existing public water supply system dependent on surface waters or hydraulically isolated groundwater; or

(ii) the owners of such properties have consented in writing to the request;

(F) if the contaminant plume is expected through professional judgment or predicted through modeling [~~or expected~~] to intercept surface waters, the groundwater discharge will not possess contaminant concentrations that would result in violations of the surface water standards established under 15A NCAC 02B .0200;

(G) all necessary access agreements needed to monitor groundwater quality have been or can be obtained;

(H) public notice of the request has been provided in accordance with Rule .0114(b) and (c) of this Section; and

(I) the proposed corrective action plan would be consistent with all other environmental laws.

(e) All reports and plans shall be prepared under the charge of a professional engineer, licensed soil scientist, or licensed geologist if required under G.S. 89C, G.S. 89E, or G.S. 89F.

*History Note:* *Authority G.S. 143-215.1(b); 143-215.3(a)(1); 143-215.65; 143B-282;*
*Eff. August 1, 1989;*
*Amended Eff. October 1, 1993;*
*Readopted Eff. June 1, 2022.*

15A NCAC 02L .0112 is readopted as published in 36:08 NCR 614 as follows:

**15A NCAC 02L .0112 ANALYTICAL PROCEDURES**

Tests or analytical procedures to determine compliance or noncompliance with the standards established in Rule .0202 of this Subchapter ~~will~~ shall be in accordance ~~with:~~with 15A NCAC 02H .0805(a)(1).

~~(1) The most sensitive of the following methods or procedures for substances where the standard is at or above the method detection limit value:~~

~~(a) The most recent version of Standard Methods for the Examination of Water and Wastewater, published jointly by American Public Health Association, American Water Works Association and Water Pollution Control Federation;~~

~~(b) Methods for Chemical Analysis of Water and Waste, 1979, U.S. Environmental Protection Agency publication number EPA-600/4-79-020, as revised March 1983;~~

~~(c) Test Methods for Evaluating Solid Wastes: Physical/Chemical Methods, 3rd Edition, 1986, U.S. Environmental Protection Agency publication number SW-846;~~

~~(d) Test Procedures for the Analysis of Pollutants Under the Clean Water Act, Federal Register Vol. 49, No. 209, 40 CFR Part 136, October 26, 1984;~~

~~(e) Methods or procedures approved by letter from the Director upon application by the regulated source; or~~

~~(2) A method or procedure approved by the Director for substances where the standard is less than the method detection limit value.~~

*History Note:* *Authority G.S. 143-215.3(a)(1); 143B-282;*
*Eff. August 1, 1989;*
*Amended Eff. October 1, 1993;*
*Readopted Eff. June 1, 2022.*

15A NCAC 02L .0113 is readopted as published in 36:08 NCR 614 with changes as follows:

**15A NCAC 02L .0113 VARIANCE**

(a) The Commission, on its own initiative or pursuant to a request under G.S. 143-215.3(e), may grant variances to the rules of this Subchapter.

(b) Requests for variances are ~~filed by letter from~~ submitted by the applicant to the ~~Environmental Management~~ Commission. The application shall be ~~mailed~~ submitted in writing to the chairman of the Commission in care of the ~~Director, Division of Environmental Management, Post Office Box 29535, Raleigh, N.C. 27626-0535.~~ Director.

(c) The application shall contain the following information:

(1) Applications filed by counties or municipalities ~~must~~ shall include a resolution of the County Board of Commissioners or the governing board of the municipality requesting the variance.

(2) A description of the past, ~~existing~~ existing, or proposed activities or operations that have or would result in a discharge of contaminants to the groundwaters.

(3) Description of the proposed area for which a variance is requested. A ~~detailed~~ location ~~map,~~map showing the orientation of the facility, potential for groundwater contaminant migration, as well as the area covered by the variance request, with reference to at least two geographic references including ~~(numbered~~numbered roads, named streams/rivers, ~~etc.)~~etc. ~~must~~ shall be included.

(4) Supporting information to establish that the variance will not endanger the public ~~health and safety,~~health, including health and environmental effects from exposure to groundwater contaminants. ~~(Location~~Location of wells and other water supply sources including details of well construction, if known, within 1/2 mile of site ~~must~~ shall be shown on a ~~map).~~map.

(5) Supporting information to establish that requirements of this Rule cannot be achieved by providing the best available technology economically reasonable. This information ~~must~~ shall identify specific technology considered, ~~and~~ the costs of implementing the ~~technology~~ technology, and the impact of the costs on the applicant.

(6) Supporting information to establish that compliance would produce serious financial hardship on the applicant.

(7) Supporting information that compliance would produce serious financial hardship without equal or greater public benefit.

(8) A copy of any Special Order that was issued in connection with contaminants in the proposed area and supporting information that applicant has complied with the Special Order.

(9) A list of the names and addresses of any property owners within the proposed area of the ~~variance~~ variance, as well as ~~any~~ property owners adjacent to the site covered by the variance.

(d) Upon receipt of the application, the Director ~~will~~ shall review it for completeness and request additional information if ~~necessary.~~ incomplete. When the application is complete, the Director shall give public notice of the application and schedule the matter for a public hearing in accordance with G.S. 143-215.4(b) and the procedures set out in Paragraph (e) of this Rule.

(e) Notice of Public Hearing:

(1) Notice of public hearing on any variance application shall be circulated in the geographical areas of the proposed ~~variance~~ variance. ~~by the Director at~~At least ~~30~~ 20 days prior to the date of the ~~hearing:~~hearing, the Director shall:

(A) ~~by publishing~~publish the notice one time in a newspaper having general circulation in said county;

(B) ~~by mailing~~submit the notice to the North Carolina Department of ~~Environment, Health, and Natural Resources,~~Health and Human Services, ~~Division of~~ Environmental Health Section and appropriate local ~~health agency;~~health director;

(C) ~~by mailing~~submit the notice to any other federal, state or local agency upon request;

(D) ~~by mailing~~submit the notice to the local governmental unit or units having jurisdiction over the geographic area covered by the variance;

(E) ~~by mailing~~submith the notice to any property owner within the proposed area of the variance, as well as any property owners adjacent to the site covered by the ~~variance; and~~variance;

(F) ~~by mailing~~submit the notice to any person or group upon ~~request.~~request; and

(G) post the notice on the Department website.

(2) The contents of public notice of any hearing shall include ~~at least~~ the following:

(A) ~~name,~~name, address, and phone number of agency holding the public hearing;

(B) ~~name~~ name and address of each applicant whose application will be considered at the meeting;

(C) a brief summary of the variance request;

(D) a geographic description of a proposed area for which a variance is requested;

(E) a brief description of activities or operations which have or will result in the discharge of contaminants to the ~~groundwaters~~ waters of the State described in the variance application;

(F) a brief reference to the public notice issued for each variance application;

(G) information regarding the time and location for the hearing;

(H) the purpose of the hearing;

(I) the address and phone number of premises at which interested persons may obtain further information, request a copy of each application, and inspect and copy forms and related documents; and

(J) a brief description of the nature of the hearing including the rules and procedures to be followed. The notice shall also state that additional information is on file with the Director and may be inspected at any time during normal working hours. Copies of the information on file will be made available upon request and payment of cost or reproduction.

(f) All comments received within 30 days following the date of ~~the public hearing~~publication in the newspaper in Part (e)(1)(a) of this Rule shall be made part of the application file and shall be considered by the Commission prior to taking final action on the application.

(g) In determining whether to grant a variance, the Commission shall consider whether the applicant has complied with any Special ~~Order,~~Order or Special Order by Consent issued under G.S. 143-215.2.

(h) ~~If the Commission's final decision is unacceptable, the~~ The applicant may file a petition for a contested case in accordance with Chapter 150B of the General Statutes. If the petition is not filed within 60 days, the decision on the variance shall be final and binding.

(i) A variance shall not operate as a defense to an action at law based upon a public or private nuisance theory or any other cause of action.

*History Note:* *Authority G.S. 143-215.3(a)(1); 143-215.3(a)(3); 143-215.3(a)(4); 143-215.3(e); 143-215.4;*
*Eff. August 1, 1989;*
*Amended Eff. October 1, 1993;*
*Readopted Eff. June 1, 2022.*

15A NCAC 02L .0114 is readopted as published in 36:08 NCR 616 with changes as follows:

**15A NCAC 02L .0114 NOTIFICATION REQUIREMENTS**

(a) Any person subject to the requirements of Rule .0106(c) or (e) of this Section shall submit to the local ~~Health~~ health ~~Director,~~director and the chief administrative officer of the ~~political~~ jurisdictions in which the groundwater contamination has occurred, a ~~report that describes:~~

~~(1) The area extent of the contaminant plume;~~

~~(2) The chemical constituents in the groundwater which exceed the standards described in Rule .0202 of this Subchapter;~~

~~(3) Actions taken and intended to mitigate threats to human health;~~

~~(4) The location of any wells installed for the purpose of monitoring the contaminant plume and the frequency of sampling.~~

~~The report described in this Rule shall be submitted no later than five working days after submittal of the completed~~ copy of the site assessment report ~~assessing the cause, significance and extent of the violation~~ as required by Rule ~~.0106(c).~~ .0111(b) of this Section.

(b) Any person who submits a request under Rule ~~.0106(k), (l), or (m).~~0106(g) or (h) of this Section shall notify the local ~~Health Director~~health director and the chief administrative officer of the ~~political~~ jurisdictions in which the contaminant plume occurs, and all property owners and occupants within or contiguous to the area underlain by the contaminant plume, and under the areas where it is predicted through modeling or expected through professional judgment to migrate, ~~of the nature~~ a summary of the request and reasons supporting it. Notification shall be made by certified mail concurrent with the submittal of the request to the Director. ~~A final decision by the Director shall be postponed for a period of 30 days following receipt of the request so that the Director may consider comments submitted by individuals interested in the request.~~ Individuals interested in the request may submit written comments to the Director within 30 days of the receipt of the notification. The Director shall issue a final decision after considering the written comments.

(c) Any person whose request under Rule ~~.0106(k), (l), or (m).~~0106(g) or (h) of this Section is granted by the Director shall notify parties specified in Paragraph (b) of this Rule of the Director's ~~decision.~~decision and a summary of the actions to be taken. Notification shall be made by certified mail within 30 days of receipt of the Director's decision.

*History Note:* *Authority G.S. 143-214.1; 143-215.3(a)(1); ~~143B-282(2)b;~~143B-282(a)(2)(c);*
*Eff. October 1, 1993;*
*Readopted Eff. June 1, 2022.*