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AGENCY OF NATURAL RESOURCES
DEPARTMENT OF ENVIRONMENTAL CONSERVATION**

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**ENVIRONMENTAL PROTECTION RULES
CHAPTER 11
UNDERGROUND INJECTION CONTROL REGULATIONS**

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SUBCHAPTER 1 SCOPE OF RULES; GENERAL PROVISIONS

§11-101 Scope

- (a) These Rules apply to discharges to injection wells.
- (b) These Rules are not intended to affect other existing regulations including, but not limited to, the Vermont Groundwater Protection Rule and Strategy and rules adopted by the Vermont Department of Health.
- (c) These Rules do not limit the powers of federal, state or local authorities to control existing or potential threats to human health or the environment.

§11-102 Authority

- (a) These Rules are implemented by the Secretary under the authority of 10 V.S.A. Chapter 47 and Part C of the Safe Drinking Water Act (SDWA) (Pub. L. 93-523, as amended; 42 U.S.C. 300f et seq.).

§11-103 Purpose

- (a) The purpose of this Subchapter is to:
 - (1) protect the quality of groundwater in the State of Vermont by regulating the discharge of waste into injection wells;
 - (2) assure that injection wells are designed, constructed, operated, maintained, converted, abandoned and closed in a manner that complies with the Groundwater Protection Rule and Strategy; and
 - (3) protect the groundwater resources that are held in trust for the public.

§11-104 Protection of Groundwater Resources; Public Trust

- (a) These Rules contain performance and design standards intended to protect the groundwater of the state and the public trust uses of that groundwater through the application of the best treatment and disposal technology and compliance with the groundwater protection rule and strategy.
- (b) The following are uses that are automatically protected as public trust uses:
 - (1) a groundwater withdrawal for fire suppression or other public emergency purposes;
 - (2) domestic, residential use;
 - (3) groundwater withdrawal for farming;

- (4) dairy processors and milk handlers licensed in accordance with 6 V.S.A. § 2721;
- (5) potable water supplies, as that term is defined in the Wastewater System and Potable Water Supply Rules;
- (6) public water systems, as that term is defined in 10 V.S.A. §1671; and
- (7) closed loop, standing column, or similar non-extractive geothermal systems.

(c)

- (1) The Secretary may, on a case by case basis, determine that a use not listed in Subsection (b) of this section is a use that requires protection as a public trust use. In making this determination, the Secretary shall consider:
 - (A) the nature and type of the use;
 - (B) whether the use serves a public purpose; and
 - (C) whether the use could have an adverse effect on the state's groundwater resources,
- (2) Industrial and commercial uses of groundwater shall not be protected as public trust uses.

(d) In order to further protect groundwater resources of the State, the Secretary shall not issue a permit for a new injection well if a feasible alternative to the discharge is available. A feasible alternative is available when:

- (1) a Wastewater Treatment Facility's collection system is within 500 feet of the project's property line;
- (2) the Facility has sufficient uncommitted reserve capacity for the discharge of wastes which would otherwise be directed to the injection well;
- (3) the waste to be discharged to the Facility will not interfere with, pass through without treatment, or otherwise be incompatible with the proper operation of the Facility; and
- (4) the owner of the Facility has indicated in writing that it will accept the discharge and that it has allocated capacity for the discharge to the Facility.

§11-105 Severability

The provisions of these rules are severable. If any provision of a section or subsection of these rules is ruled to be invalid, that ruling shall not affect other provisions that can be implemented in the absence of the invalidated provision.

§11-106 Confidentiality

- (a) Information submitted to the Secretary under these Rules shall be available to the public, unless;
- (1) the person submitting the information to the Secretary submits a written request for confidentiality;
 - (2) the request for confidentiality is based on the assertion that the particular information, if made public, would divulge methods or processes entitled to protection as trade secrets;
 - (3) the request contains specific information that supports the assertion of trade secret status; and
 - (4) the Secretary finds that the information submitted supports a determination that the information should be treated as a trade secret.

SUBCHAPTER 2 DEFINITIONS

§11-201 Definitions

- (a) As used in these Rules, the following terms shall have the specified meaning. If a term is not defined, it shall have its common meaning:
- (1) **Adjoining Landowner** -- means a person who owns land in fee simple, if that land:
 - (A) Shares a property boundary with a tract of land where a proposed or actual injection well is located; or
 - (B) Is adjacent to a tract of land where a proposed or actual injection well is located and the two properties are separated only by a river, stream, or public highway.
 - (2) **Applicant** – means the person(s) who own the land where the injection well is located. There may be multiple applicants if there are multiple owners.
 - (3) **Best Treatment and Disposal Technology** – means a treatment and disposal technology for a type of waste that is based on standard hydrogeologic and engineering principles and that is designed to achieve compliance with the primary enforcement standards of the Groundwater Protection Rule and Strategy.
 - (4) **CERCLA** – means the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. §§ 9601-9675.
 - (5) **Class I Well** – means an injection well as defined in 40 C.F.R. §144.6(a). (Deep wells for the disposal of hazardous waste, municipal and industrial waste and radioactive waste).
 - (6) **Class II Well** – means an injection well as defined in 40 C.F.R. §144.6(b). (Oil and natural gas wells).
 - (7) **Class III Well** – means an injection well as defined in 40 C.F.R. §144.6(c). (Mining for sulfur by the Frasch process; in-situ mining for uranium or other metals; solution mining of salts or potash).
 - (8) **Class IV Well** – means an injection well as defined in 40 C.F.R. §146.6(d). (Shallow hazardous waste disposal wells).
 - (9) **Class V Well** - means any injection well that does not meet the definition of a Class I, II, III, IV or VI well.
 - (10) **Class VI Well** – means an injection well that is not experimental in nature that is used for geologic sequestration of carbon dioxide beneath the lowermost formation containing groundwater; or, an injection well used for geologic sequestration of carbon dioxide that has

been granted a waiver of the injection depth requirements pursuant to requirements of 40 CFR § 146.95.

- (11) **Co-applicant** - means the person who will be using the injection well when that person does not own the land where the well is located.
- (12) **Compliance Point** – means the point of compliance as determined under the Vermont Groundwater Protection Rule and Strategy.
- (13) **Cooling Water** – means cooling water that does not meet the definition of non-contact cooling water.
- (14) **Discharge** – means the placing, depositing or emission of any wastes into an injection well.
- (15) **Disposal System** – means a waste discharging system that may or may not depend on soil to treat the waste that is discharged where there is no overland flow.
- (16) **Division** – means the Drinking Water and Groundwater Protection Division of the Department of Environmental Conservation of the Vermont Agency of Natural Resources.
- (17) **Domestic Waste** - means wastewater produced by ordinary living uses, including liquid waste containing animal or vegetable matter in suspension or solution, or the water carried waste from the discharge of toilets, bidets, tubs, washing machines, sinks, dishwashers, or other source of water-carried wastes of human origin. Domestic waste does not include process wastewater.
- (18) **Food Processing Waste** – means a non-pathogenic waste produced during commercial or industrial food production that is biodegradable.
- (19) **Groundwater** - means water below the land surface in a zone of saturation including springs. This term does not include surface water.
- (20) **GWPRS** - means the Vermont Groundwater Protection Rule and Strategy.
- (21) **Hazardous Material** - means all petroleum and toxic, corrosive or other chemicals and related sludge included in any of the following:
 - (A) any substance defined in section 101(14) of the federal Comprehensive Environmental Response, Compensation and Liability Act of 1980;
 - (B) petroleum, including crude oil or any fraction thereof; or
 - (C) hazardous wastes.
- (22) **Hazardous Waste** - means any material determined to be hazardous under the Vermont Hazardous Waste Management Regulations.

- (23) **Injection Well** - means a disposal system or any bored, drilled, or driven shaft, dug hole, or any other opening in the ground that is used to discharge waste, either under pressure or gravity, to the soil or groundwater. Injection well includes those wastewater systems used to dispose of the waste and waste streams listed in §11-302 of this Rule.

Note: The majority of the wastewater systems are regulated under the Wastewater System and Potable Water Supply Rules.

- (24) **Mining Waste** - means process wastewater from an industrial or manufacturing facility that processes materials from a mining activity and where chemicals are intentionally added as a part of that processing. Mining waste can include waste solely from cutting, shaping or finishing granite, marble, limestone, slate or other stone for monuments, buildings or other similar uses.
- (25) **Mineral Processing Waste** - means process wastewater from an industrial or manufacturing facility that processes materials from a mining activity that is generated from the beneficiation, irrespective of the addition of chemicals, of rock or ore to separate and concentrate valuable minerals from waste material, remove impurities, or prepare the rock for further refinement. Mineral processing waste does not include mining waste solely from cutting, shaping or finishing granite, marble, limestone, slate or other stone for monuments, buildings or other similar uses.
- (26) **Non-contact Cooling Water** – means the water used to reduce temperature that does not come in contact with any raw material, intermediate product, waste product (other than heat), or finished product. Non-contact cooling water does not include any process waters or other type of wastewaters, nor is it exposed to anything but the inside of the pipe.
- (27) **Permanent Legal Access** - means an easement, right of way, deed or other legal document that creates an enforceable permanent property interest that provides access to an injection well for the purposes of construction, operation, maintenance, sampling, and monitoring the injection well.
- (28) **Person** - means any individual; partnership; company; corporation; association; joint venture; trust; municipality; the State of Vermont or any agency, department, or subdivision of the state; any federal agency or any legal or commercial entity.
- (29) **Process Wastewater** - means any water that, during manufacturing or processing, comes into direct contact with, or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product. For the purposes of these rules, process wastewater does not include food processing waste, mining waste or mineral processing waste.
- (30) **Professional Engineer** - means an engineer licensed by the Board of Professional Engineering under 26 V.S.A. Chapter 20 who is operating within the scope of his or her license.
- (31) **Qualified Hydrogeologist** – means a person with training or experience in bedrock geology, glacial geology and groundwater hydrogeology sufficient to prepare the hydrogeologic studies and analyses required for a permit application under these rules.

- (32) **Residence** - means a building or structure where one or more person(s) live, whether year round, seasonally or temporarily. Examples of a residence include, but are not limited to: single family dwellings, duplexes, apartment buildings, mobile home parks, dorms, residential condominiums, residential accessory units, hotels, motels, bed and breakfast establishments, boarding houses. A residence does not include any commercial operation located in the residence unless:
- (A) The commercial operation itself is residential in nature; or
 - (B) The commercial operation is run by an occupant of the residence and does not entail the substantial presence of non-residential employees or regular visits from the public.
- (33) **Secretary** - means the Secretary of the Agency of Natural Resources or his or her duly authorized representative.
- (34) **Soil-Based Disposal System** – means a disposal system that depends on naturally occurring soil to receive the effluent from the system and to transmit the effluent away from the site without any overland flow. Soil-based disposal systems include, but are not limited to, those that have a settling tank with leachfield, an advanced treatment system with leachfield, or a spray disposal system.
- (35) **Waste** – means any substance or material that flows or moves whether in a semi-solid, liquid or other state.
- (36) **Wastewater system** - means any piping, pumping, treatment or disposal system used for the conveyance and treatment of sanitary waste or used water, including, but not limited to, carriage water, shower and wash water, and process wastewater. This definition does not include any internal piping or plumbing, except for mechanical systems, such as pump stations and storage tanks or toilets, that are located inside a building or structure and that are integral to the operation of a wastewater system. This definition also does not include wastewater systems that are used exclusively for the treatment and disposal of animal manure. For the purposes of these Rules, “wastewater system” refers to a soil-based disposal system of less than 6,500 gallons per day.

SUBCHAPTER 3 PROHIBITIONS; PERMIT REQUIRED; EXEMPTIONS

§11-301 Prohibitions

- (a) No person shall construct, operate, maintain, or convert any Class I, Class II, or Class III well.
- (b) No person shall construct, operate, maintain, modify, or convert any Class IV well except for a Class IV well that is installed and utilized pursuant to a corrective action plan approved by the Secretary under 10 V.S.A. Chapter 159 or a response action taken pursuant to CERCLA.
- (c) No person shall construct, operate, maintain, modify, or convert a Class V well that receives waste from the location within a facility or business where the following occurs:
 - (1) vehicular repair or maintenance activities, such as an auto body repair shop, automotive repair shop, new and used car dealerships, specialty repair shop (e.g., transmission and muffler repair shop), or any facility that does any vehicular repair work;
 - (2) gas or diesel engine repair, cleaning and maintenance;
 - (3) vehicle salvage yards and vehicle recycling facilities;
 - (4) storage of dust suppression agents, excluding water;
 - (5) storage of road salt and salt charged sand;
 - (6) dry cleaning;
 - (7) photo finishing;
 - (8) chemical based body preparation and embalming;
 - (9) oil and gas extraction and petroleum refineries;
 - (10) petroleum distribution (fuel pumps, gas stations, etc.);
 - (11) petroleum bulk storage;
 - (12) hazardous material storage, excluding:
 - (A) hazardous materials stored in residences and their associated garages, sheds, and other buildings for onsite residential uses; or
 - (B) hazardous materials stored in office buildings for use in and around the office building;
 - (13) storage, manufacturing or processing of pesticides, herbicides, and fungicides, excluding:

- (A) pesticides, herbicides, and fungicides stored in residences and their associated garages, sheds, and other buildings for onsite residential uses; or
 - (B) pesticides, herbicides, and fungicides stored in office buildings for use in and around the office building.
- (14) hydraulic fracturing used to extract natural gas or oil .
- (d) The Secretary shall prohibit discharges of waste to an injection well from a specific facility, site or activity or from a category of facilities, sites, or activities if the Secretary determines, based on clear and convincing evidence, that:
- (1) the waste that is discharged contains constituents in excess of the primary groundwater enforcement standards of the GWPRS; and
 - (2) there is no form of treatment that can be used that would result in compliance with the GWPRS at the point of compliance.

Note: Cesspools and dry wells that receive only domestic waste are subject to the Wastewater System and Potable Water Supply Rules (See § 11-303(a)(7))

§11-302 Permit Required

- (a) No person shall construct, operate, maintain, modify, convert, abandon, or close the following types of Class V wells without first obtaining a permit from the Secretary:
- (1) injection wells that receive process wastewater, not regulated as a hazardous waste, from the following:
 - (A) industrial facilities with the following Standard Industrial Classification (SIC) codes:
 - (i) packaging paper & plastics film, plastics packaging (SIC 2671);
 - (ii) printing and publishing (SIC 2711-2796);
 - (iii) chemicals and allied products (SIC 2813 – 2899 and 3952);
 - (iv) steel foundries (SIC 3325);
 - (v) plastic products (SIC 3089);
 - (vi) furniture finishing (SIC 7641);
 - (vii) textile production (SIC 2211 – 2299);
 - (viii) metal fabricators and metal platers (SIC 3411 – 3419, and 3471);

- (ix) electronic parts manufacturing (SIC 3612 – 3699);
- (x) rubber and resin production (SIC 3011 – 3089);
- (xi) wood treatment and reconstituted wood production (SIC 2431 – 2439 and 2491);
- (xii) pulp production (SIC 2611, 2679);
- (xiii) pharmaceuticals (SIC 2834);
- (xiv) leather tanning and finishing (SIC 3111);

(B) quarries or other sites where materials are extracted if perchlorate is used for blasting, excluding perchlorate in blasting caps; or

- (2) injection wells at aircraft de-icing facilities;
- (3) injection wells that receive laboratory waste (that is not regulated as a hazardous waste);
- (4) injection wells that receive boiler blowdown discharges from boilers generating steam that use chemicals other than sulfite-based oxygen scavengers and/or phosphate-based cleaners;
- (5) injection wells that receive blowdown water from cooling towers associated with a heating systems;
- (6) injection wells that receive 1000 gallons or more per day of cooling water;
- (7) injection wells that receive mineral processing waste; or
- (8) any other Class V well not listed above if the Secretary determines, based on clear and convincing evidence, that the operation of the well is causing a violation of the GWPRS.

(b) No person shall construct, operate, maintain, modify, convert, abandon, or close the following types of Class IV or Class V wells without first obtaining a permit from the Secretary unless they are exempt under §11-303 of this Subchapter:

- (1) Class IV and Class V wells that are installed and used consistent with a corrective action plan approved by the Secretary under 10 V.S.A. Chapter 159 or a response action taken pursuant to CERCLA;
- (2) open loop geothermal systems, including standing column wells;
- (3) injection wells that receive backwash from water treatment units;

- (4) injection wells that receive discharges from the operation of in line analyzers at water treatment plants;
 - (5) injection wells at vehicle washing facilities;
 - (6) injection wells that receive mining waste;
 - (7) Class V wells subject to regulation under a different permit program administered by the Secretary including, but not limited to, solid waste facilities, indirect discharge systems, stormwater systems, and wastewater systems.
- (c) No person shall construct, operate, maintain, modify, convert, abandon, or close a Class VI well without first obtaining a permit from the Secretary.

§11-303 Exemptions

- (a) The following types of injection wells are exempt from the requirement to obtain a permit under this Chapter provided the specified conditions are met:
- (1) a Class IV or Class V well that is installed and utilized consistent with a corrective action plan approved by the Secretary pursuant to 10 V.S.A. Chapter 159 or a response action taken pursuant to CERCLA;
 - (2) open loop geothermal systems, including standing column wells, used for heating and/or cooling provided:
 - (A) the heat exchange medium in the system is R-410A or a non-toxic heat exchange medium approved by the Secretary;
 - (B) no additive is introduced to the re-circulated groundwater;
 - (C) the system has a low pressure safety cutout circuit that will turn off the system when there is a pressure leak in the heat exchange medium containment vessel;
 - (D) all electrical components of the system are properly grounded to prevent potential electrolysis of metals;
 - (E) when the heat exchange unit is disconnected as a heating and/or cooling source, all piping associated with the unit shall either be capped and labeled or removed; and
 - (F) the owner of the building or structure using the injection well(s) has permanent legal access to the well.

Note 1: Closed loop and direct exchange geothermal systems are not injection wells and so are not subject to these Rules.

Note 2: Discharge of bleed water from a geothermal system may require additional permits from the Agency depending on the point of discharge.

- (3) injection wells that receive backwash from water treatment units provided the water treatment system is designed to:
 - (A) reduce or eliminate water hardness;
 - (B) reduce or eliminate properties or constituents on the list of secondary standards in the Vermont water supply rules;
 - (C) reduce or eliminate radon, radium, uranium, lead, arsenic, nitrate, nitrite, manganese, fluoride or a combination of these; or
 - (D) eliminate bacteria or pathogenic organisms, provided that the treatment system treats all of the water used for drinking, washing, bathing, the preparation of food, and laundering.

Note 1: A water treatment system that is designed to treat for one or more of the constituents listed above qualifies for this exemption.

- (4) injection wells that receive waste from in-line chlorine or fluorine analyzers;
- (5) wastewater systems that were permitted under the Wastewater System and Potable Water Supply Rules to receive waste from vehicle washing facilities provided that the permit was issued prior to the effective date of this Rule;
- (6) injection wells where mining wastes are discharged provided:
 - (A)
 - (i) the waste that is to be discharged has been sampled and does not contain contaminants in excess of the primary groundwater enforcement standards of the GWPRS; or
 - (ii) the waste that is to be discharged has been sampled and does not contain contaminants that, when discharged, would result in a violation of the GWPRS at the compliance point;
 - (B) the owner of the injection well notifies the Secretary on the form provided that he or she is operating under the exemption; and
 - (C) the owner of the injection well retains a copy of the sampling results and any hydrogeologic analysis for seven (7) years from the date of the notification.

- (7) injection wells that are subject to regulation under other permitting programs administered by the Secretary including, but not limited to, solid waste facilities, indirect discharge systems, stormwater systems, and wastewater systems.

- (b) If the Secretary determines, based on clear and convincing evidence, that an injection well that is exempt under this section is causing a violation of the GWPRS, that injection well is no longer eligible for the exemption. If this determination is made and upon written notification from the Secretary, the discharge to the injection well must immediately cease and the owner must obtain a permit under this chapter before reinitiating the operation of the injection well.

SUBCHAPTER 4 PERMIT REQUIREMENTS; PERMIT APPLICATIONS; PUBLIC PARTICIPATION

§11-401 Application for a Permit

- (a) Any person required to obtain a permit under these Rules shall complete and submit an application together with the applicable fee to the Secretary. All applications shall be made in accordance with the requirements of Subchapter 5 of these Rules and use the form(s) provided by the Secretary.
- (b) An application submitted under these Rules shall be signed by the owner of the property where the injection well is located. An application submitted by a corporation shall be signed by a principal executive officer of at least the level of vice-president or a duly authorized representative who is responsible for the operation of the facility. An application submitted by a partnership or a sole proprietorship shall be signed by a general partner or proprietor. An application submitted by a municipality, state, or other public entity shall be signed by a principal executive officer, ranking elected official or other duly authorized employee.
- (c) If the person who discharges waste to an injection well is a co-applicant, that person shall submit evidence of permanent legal access to the well at the time of application.
- (d) All applications for permits under these Rules shall be prepared by a professional engineer who shall stamp all engineering plans included with the application.
- (e) All designs and design-related information contained in an application for a permit shall be accompanied by a certification by a professional engineer that reads as follows:

“I hereby certify that in the exercise of my reasonable professional judgment the design-related information submitted with this application is true and correct, and that the design included in this application for a permit complies with the Vermont Underground Injection Control Rules”
- (f) An administratively complete application for a renewal of an existing permit must be received at least 90 days prior to the expiration date of the existing permit.

§11-402 Permit Requirements

- (a) A proposed injection well must comply with all of the applicable standards and criteria of this Rule in order for the Secretary to issue a permit.
- (b) Any permit issued by the Secretary under these Rules shall only be issued after the applicable public participation requirements have been met.
- (c) When issuing a permit, the Secretary may impose any conditions, requirements or restrictions as deemed necessary to assure protection of public trust uses including, but not limited to, design standards, mechanical specifications, maintenance requirements, records keeping, monitoring, right of inspection and access, and compliance schedules.

- (d) When issuing a permit, the Secretary may impose any conditions, requirements or restrictions as deemed necessary to assure compliance with applicable statutes and rules or to protect human health or the environment including, but not limited to, design standards, mechanical specifications, maintenance requirements, records keeping, monitoring, right of inspection and access, and compliance schedules.
- (e) Permits for injection wells shall be effective for a fixed term not to exceed five (5) years. The Secretary may issue any permit for a duration that is less than the full allowable term.
- (f) When issuing a permit under these Rules, the Secretary relies on the data, designs, judgment and other information supplied by the applicant, the applicant's consultants and other experts who have participated in the preparation of the application. The Secretary makes no assurance that this system will meet the performance objectives of the applicant and no warranties or guaranties are given or implied.

§11-403 Notice of Application

- (a) The Secretary, after determining that the application is administratively complete, shall post a notice of the application on the appropriate Agency of Natural Resources website and shall send notice of the application to:
 - (1) the applicant, and if any, the co-applicant;
 - (2) all adjoining landowners;
 - (3) the town clerk for the municipality where the injection well is proposed to be located for posting in the municipal offices;
 - (4) the town and regional planning commissions in the area where the proposed injection well is to be located; and
 - (5) persons on the interested party mailing list described in §11-404(c)(4) of these Rules.

§11-404 Notice of a Draft Permit

- (a) General. The Secretary will provide the public with notice of a draft permit prepared under these Rules in the following manner, unless the draft permit is for a minor application, minor amendment or administrative amendment.
- (b) Content of Notice. The Public Notice of a draft permit shall, at a minimum, include:
 - (1) the name and address of each applicant and, if any, co-applicant;
 - (2) the name of the project and the municipality where the project is located;

- (3) a brief description of each applicant's activities or operations associated with the injection well described in the application;
- (4) a brief description of the process for the issuance of a final permit, including a statement of the right of persons to request a public informational meeting;
- (5) the address, phone number and email address of the person that interested persons may contact to obtain further information, request a copy of the draft permit, and inspect and copy files and related documents pertinent to the application; and
- (6) the date the comment period ends.

(c) Methods of Notice:

- (1) The public notice shall be posted on the agency website and posted by the town clerk at the municipal offices within the municipality where the proposed injection well is located. In addition, at a minimum, the public notice shall be sent to:
 - (A) all adjoining landowners;
 - (B) the regional planning commission for the area in which the proposed injection well will be located;
 - (C) the following in the municipality in which the proposed injection well will be located:
 - (i) the town clerk for posting;
 - (ii) the municipal legislative body; and
 - (iii) the municipal planning commission.
- (2) Notice of the draft permit shall be published in a local weekly periodical generally circulating in the area where the proposed injection well is located or in a daily newspaper of general circulation. The Secretary shall prepare the notice. The applicant, or the co-applicant if there is one, shall be responsible for arranging and paying for all published notices. The applicant shall provide a printed copy of the published notice to the Secretary.
- (3) A copy of the notice shall be mailed to any person or group upon request to the Secretary.

- (4) Interested Party Mailing List. The Secretary shall maintain and use a mailing list of interested parties for those persons or groups interested in receiving certain or all public notices for permit applications and draft injection well permits.
 - (A) For an interested party to be included on such a mailing list, the party shall submit a written request specifying which notices they wish to receive and whether they wish to receive the notices electronically or not.
 - (B) The Secretary will periodically revise the interested party mailing list. All parties on the list will be contacted to see if they wish to remain on the mailing list. Failure to respond will result in removal from the list.
- (d) Comment Period. The Secretary shall provide a period of not less than thirty (30) days following the date of the public notice during which time interested persons may submit their written comments on the draft permit. All written comments submitted during the comment period shall be retained by the Secretary and considered in the formulation of the Secretary's final determination on the application. The comment period for receiving written comments may be extended at the discretion of the Secretary.

§11-405 Public Informational Meetings on Draft Permit

- (a) The Secretary shall provide an opportunity for the applicant, the municipal legislative body for the municipality where the proposed injection well is located, any state agency, any federal agency, or any interested group or other person to request a public informational meeting with respect to a draft permit.
- (b) Any request for public informational meeting must be received by the Secretary within the thirty (30) day public comment period.
- (c) The Secretary shall hold an informational meeting when requested or upon his or her own motion.
- (d) Any meeting held pursuant to this subsection shall be held in the geographical area of the proposed injection well or other appropriate area, at the discretion of the Secretary, and may, as appropriate, consider related groups of permit applications.
- (e) The official notice of a public informational meeting pursuant to this section shall be circulated a minimum of thirty (30) days prior to the meeting in the same manner as the notice of the draft permit.
- (f) Informational meetings held pursuant to this section shall be conducted by the Secretary. All statements, comments and data presented at the meeting shall be retained and considered in the formulation of the final determination on the draft permit.

- (g) When an informational meeting is held, the Secretary shall allow a minimum of ten days following the end of the meeting for filing written comments and may extend the original public comment period.
- (h) The informational meeting described by this section is informal and does not constitute a hearing subject to the contested case provisions of 3 V.S.A. Chapter 25.

§11-406 Agency Response to Comments Received on Draft Permit

- (a) When the final determination is made to issue or deny a permit, the Secretary shall also issue, in writing, a response to comments for that permit. The response to comments shall contain:
 - (1) a specific indication of which provisions of the draft permit have been changed in the final permit, if any;
 - (2) the reasons for the change; and
 - (3) a brief description of comments received and the Secretary's response to the comments on the draft permit received during the public comment period.

§11-407 Issuance of Final Permit Decision

- (a) If the Secretary denies a permit application, the Secretary shall notify the applicant, and co-applicant if any, in writing and provide the reason(s) for denial.
- (b) When a final permitting decision is made by the Secretary, a copy of the final permit or the permit denial and the response to comments shall, at a minimum, be sent to all persons who received a copy of the draft permit and all persons who commented on the draft permit.

SUBCHAPTER 5

SPECIFIC INFORMATION FOR APPLICATIONS

§11-501 General Requirements

- (a) All applications shall be submitted on the form(s) provided by the Secretary and shall contain the information described in this Subchapter.

§11-502 New Injection Wells

- (a) **General Content:** An application shall contain the following:
 - (1) name and location, including street address, of the facility that will be using the injection well;
 - (2) name, address and phone number of the applicant and any co-applicant;
 - (3) name(s) and address(es) of adjoining landowners;
 - (4) name, mailing address, phone number and email address for the professional engineer preparing the application;
 - (5) signature of the applicant and any co-applicant;
 - (6) if the injection well is located on a lot of land other than the lot where the waste is generated, evidence of permanent legal access to the injection well;
 - (7) the latitude and longitude of the center of the injection well shall be reported using global positioning system receiver using the NAD 83 coordinate system or a NAD 83 base map. The coordinates shall be reported in decimal degrees to five decimal places with an accuracy of +/- 50 feet; and
 - (8) the application fee as specified in 3 V.S.A. §2822.
- (b) **General Facility and Well Description:** An application shall contain the following:
 - (1) a description of the facility that generates the waste;
 - (2) copies of the material safety data sheets (MSDS) for all chemicals used at the facility that can reasonably be expected to be found in the waste to be discharged to the injection well;
 - (3) a description of the treatment processes, if any, used prior to discharge to the injection well including the manufacturer's specifications, if any, and all other information regarding the design of the treatment unit.

- (4) a description of the waste storage tanks, if any, used prior to discharge to the injection well; and
 - (5) the Standard Industrial Classification (SIC) code(s) for industrial facilities.
- (c) **Design Flows:** An application shall contain a description of the amount of waste proposed to be discharged to the injection well calculated on a gallon per day basis substantiated using the following;
- (1) meter data or flow data received from facilities of a similar size and nature;
 - (2) manufacturing or manufacturers specifications;
 - (3) flow values identified in recognized scientific literature; or
 - (4) other calculation methods acceptable to the Secretary.
- (d) **Waste Characterization:** An application shall include information regarding the concentrations of the constituents in a waste to be discharged to an injection well based on the following, if available:
- (1) sampling data received from facilities of a similar size and nature;
 - (2) representative samples of the waste stream;
 - (3) expected contaminant concentrations in a waste stream identified in recognized scientific literature; and
 - (4) other sources of information requested or approved by the Secretary.
- (e) **Facility Site Plan:** An application shall include a detailed facility site plan drawn to an accurate scale of 1" = 100' or smaller showing the following features and information within a 1000 foot radius of the proposed injection well:
- (1) title, legend, true north arrow, scale to which the plan is drawn with scale bar, and location/elevation/datum/source of bench mark(s) used;
 - (2) topography at ten (10) foot intervals;
 - (3) injection well(s) locations including all associated infrastructure such as tanks, piping, and treatment systems;
 - (4) buildings, holding tanks, and other surface infrastructure;

- (5) wastewater systems, indirect discharge systems, stormwater systems (surface and subsurface), other injection wells, and other subsurface infrastructure;
 - (6) underground storage tanks, active and closed solid waste disposal facilities, sites on the Secretary's contaminated sites list and brownfields;
 - (7) all potable water supplies and public water systems, including a public water system's source protection area (include Zones 1 and 2 for public community water systems);
 - (8) the location of groundwater withdrawals for fire suppression or other emergency purposes;
 - (9) the location of non-potable water supplies used to withdraw water for farming;
 - (10) the location of groundwater withdrawals for dairy processors and milk handlers licensed in accordance with 6 V.S.A. § 2721;
 - (11) the location of groundwater withdrawals for closed loop, standing column, or similar non-extractive geothermal systems;
 - (12) surface waters, wetlands, floodways, floodplains, special flood hazard areas, and drainage swales including intermittent streams;
 - (13) exposed bedrock;
 - (14) roads, foundation drains, curtain drains, property lines, sewer and water mains and services;
 - (15) existing and proposed groundwater monitoring wells, including the well ID number or designation;
 - (16) test pit and boring locations;
 - (17) compliance points: and
 - (18) Class I, II, and IV groundwater areas.
- (f) **Detailed Design Plans:** An application shall contain detailed design sheets drawn to a scale of 1" = 20' that show;
- (1) design details for the injection well and associated infrastructure; and

- (2) design details for monitoring wells.

(g) **Hydrogeologic Assessment**

- (1) for injection wells where the waste meets the primary groundwater enforcement standards of the GWPRS at the point of discharge, the applicant shall submit information, prepared by a qualified hydrogeologist, regarding horizontal and vertical hydraulic gradients and flow directions.
- (2) for all other injection wells, the applicant shall submit the results of a hydrogeologic investigation, prepared by a qualified hydrogeologist, that includes information that demonstrates that the discharge will meet the primary groundwater enforcement standards of the GWPRS at the compliance point. This includes, at a minimum, the following information:
 - (A) seasonal high groundwater levels;
 - (B) groundwater contours;
 - (C) a determination that the hydrogeologic capacity of the site shall be sufficient to receive the design flow for the injection well without resulting in surfacing of the waste within 300 feet of the well;
 - (D) all water supply investigations;
 - (E) documentation that demonstrates that subsurface conditions exist that will prevent the direct discharge of waste to a bedrock aquifer;
 - (F) the potential for geochemical changes downgradient of the discharge as a result of the discharge; and
 - (G) the potential for contamination of an aquifer(s).

(h) **Pre-application Groundwater Monitoring:** An application for a discharge that will not meet the primary groundwater enforcement standards of the GWPRS at the point of discharge shall contain information obtained from groundwater monitoring of the site where the injection well is proposed to be located. A quality assurance/quality control (QA/QC) plan, prepared by a qualified hydrogeologist, shall be submitted to and approved by the Secretary before any sampling or testing is conducted. At the applicant's request, the approved QA/QC plan can be amended provided the Secretary approves such proposed amendments. The QA/QC plan shall include, but not be limited to:

- (1) the testing methodology to be used;
- (2) the exact location(s) where the tests and sampling will occur;
- (3) the number and type of samples to be obtained; and

- (4) the method of field collection.
- (i) **Monitoring Plan:** An application shall contain a proposed monitoring plan, prepared by a qualified hydrogeologist, that identifies, at a minimum:
 - (1) the number of monitoring wells that will be used;
 - (2) the number and frequency of the samples to be taken from;
 - (A) the waste, prior to any treatment;
 - (B) the point of discharge to the injection well; and
 - (C) the groundwater monitoring wells.
 - (3) the constituents to be analyzed in the samples that are collected;
 - (4) the analytical methods to be used in conducting the sample analysis; and
 - (5) a quality assurance/quality control plan for sample collection, testing, and analysis.
- (j) Notwithstanding any other provision of this section, the application for an injection well that is a waste absorption trench, absorption bed, mound system, at-grade system, or drip irrigation system shall contain all information required by the application requirements of the Wastewater System and Potable Water Supply Rules in addition to these Rules. The Secretary may modify this requirement and establish different standards based on site specific considerations and the nature of the waste to be discharged.

§11-503 Existing Injection Wells

- (a) Injection wells in existence as of the effective date of these Rules that have not received a permit before the effective date of these rules shall submit the application information required for new injection wells under §11-502 of these Rules within one year of receiving notification from the Secretary.

§11-504 Renewal Applications

- (a) Injection wells that were permitted after the effective date of these Rules do not need to re-submit all of the information submitted with the initial application but shall submit a signed complete renewal application using the form(s) provided by the Secretary that includes:
 - (1) any proposed changes to the injection well and/or its associated infrastructure;

- (2) any proposed changes to the quantity or quality of the waste to be discharged; and
 - (3) a summary of the data submitted pursuant to the permit during the term of the permit including, but not limited to, annual reports, monitoring data, and a statistical analysis of the monitoring data.
- (b) Injection wells that were permitted before the effective date of these Rules shall submit:
- (1) evidence of compliance with the GWPRS; and
 - (2) a copy of all plans, documents and materials that were submitted in support of the prior permit application.

SUBCHAPTER 6 MINOR APPLICATIONS; PERMIT AMENDMENTS

§11-601 Minor Applications

- (a) The following types of applications for injection well permits are determined to be minor:
- (1) renewals of currently permitted injection wells when there are no changes to the prior permitted activities; or
 - (2) applications for closure and abandonment of currently permitted injection wells.
- (b) Notwithstanding the notice and comment requirements for a draft permit in Subchapter 4 of these Rules, notice of a draft permit for a minor application shall be posted on the Agency website and provided to the Town clerk for posting. The notice shall include:
- (1) a description of the injection well that is being permitted;
 - (2) where a copy of the complete application and draft permit can be obtained; and
 - (3) the date of the end of the 30 day comment period on the draft permit.
- (c) When a final permitting decision is made by the Secretary, a copy of the final permit or the permit denial and the responses to comments received shall be sent to all persons who received a copy of the draft permit.
- (d) Notwithstanding any other provision of this section, the Secretary may require a minor permit application to be processed in accordance with the full public notice and comment requirements of Subchapter 4 of these Rules.

§11-602 Major Permit Amendments

- (a) The Secretary may modify any permit during its term for cause, including but not limited to the causes set forth in subsection (b) of this section.
- (b) The Secretary may amend any permit upon his or her own motion or upon a written request by the permittee containing facts and reasons supporting the request. If the Secretary determines that amendment is appropriate, only the conditions subject to amendment shall be reopened. All amendments under this section shall comply with the notice and comment provisions of Subchapter 4 of these Rules. Until amendments are granted or denied, in whole or in part, all terms and conditions of the original permit shall remain in full force and effect. Amendments to a permit may be made for cause, including:
 - (1) material or substantial additions or alterations to the injection well or the operation of the well or any other change in conditions, that occurred after the permit was issued that justify the application of requirements different or absent from the existing permit;
 - (2) the receipt of information that was not available when the permit was issued that justifies the application of requirements different or absent from the existing permit;
 - (3) the statutes, standards or rules, on which the permit was based, were revised by adoption or judicial decision after the permit was issued and those revisions justify the application of requirements different or absent from the existing permit;
 - (4) a request from the permittee that the permit be modified; or
 - (5) a determination by the Secretary that other good cause exists for a permit amendment.

§11-603 Minor Permit Amendments

- (a) Notwithstanding the requirements of §11-602 of these Rules, the Secretary may make minor amendments to a permit, using the notice and comment requirements for minor applications of §11-601 of these Rules, if the Secretary determines that the modifications pose a low risk to groundwater. Minor amendments include, but are not limited to, amendments that:
 - (1) authorize only slight deviations to the existing dimensions of the injection well that do not affect the operation and/or performance of the well; or
 - (2) amend a closure plan.

§11-604 Administrative Permit Amendments

- (a) Notwithstanding the requirements of §11-602 of these Rules, the Secretary may make administrative amendments to a permit without complying with the notice and comment requirements of Subchapter 4

of these rules if the Secretary has determined that the amendments pose no risk to groundwater. Administrative amendments include, but are not limited to, amendments that:

- (1) correct typographical errors;
- (2) change mailing addresses;
- (3) modify the permit to add a co-permittee; or
- (5) transfer the permit to a new permittee when there is no change in the permitted injection well or the waste type or amount being discharged to the well.

SUBCHAPTER 7 ADMINISTRATIVE RECONSIDERATION; SUSPENSION OR REVOCATION OF PERMITS

§11-701 Administrative Reconsideration of Permitting Decisions

- (a) An applicant, or following issuance of a permit, a permittee or any person whose interests are directly affected by jurisdictional decision or a permit may request that the decision or permit be reviewed by the Director of the Drinking Water and Groundwater Protection Division. All reconsiderations shall comply with the following process:
 - (1) All requests for reconsideration shall be made within 30 days of the date of the decision or issuance of the permit unless the Secretary determines that good cause exists to waive such 30 day period.
 - (2) The person shall submit a written request for reconsideration to the Director. This request must specify which aspects of the decision are at issue, the reasons why the person believes the decision to be in error, and the decision requested of the Director.
 - (3) As soon as possible but no later than 15 days after receipt of the request, the Director shall convene a meeting with affected persons, their representatives and Division personnel. The Director may call on other individuals within or outside the Department who have expertise appropriate to the case to assist in her or his review.
 - (4) The Director shall issue a written decision within 15 days of the meeting. This time period may be extended if the affected persons agree. If no request for review of this decision is made under subsection (b) of this section, the written decision shall constitute the final decision of the Secretary.
- (b) Any person who requested reconsideration under subsection (a) above may, within 30 days of the date of that decision, submit a request for reconsideration of the decision to the Commissioner using the following process:

- (1) The person shall submit a written request for reconsideration to the Commissioner. This request must specify which aspects of the decision are at issue, the reasons why the person believes the decision to be in error, and the decision requested of the Commissioner.
- (2) The Commissioner may hold additional meetings at her or his discretion or act on the basis of the record.
- (3) The Commissioner shall issue a written decision within 30 days from the date of the request or the last meeting held on the matter, whichever is later. This written decision shall constitute the final decision by the Secretary.

§11-702 Permit Suspension or Revocation

- (a) **General:** The Secretary may suspend or revoke a permit either in response to a petition or on his or her own motion. The Division may file a petition and may participate in revocation proceedings.
- (b) **Basis for Suspension or Revocation:** The bases for suspension or revocation are:
 - (1) violation of a permit condition;
 - (2) false or misleading information submitted in support of the permit;
 - (3) untrue or incorrect design certifications and/or design related information that does not reflect the exercise of reasonable professional judgment;
 - (4) failure to disclose all relevant facts during the permit process that were known or should have been known, at that time;
 - (5) misrepresentation of any relevant fact at any time; or
 - (6) violation or failure to comply with the provisions of these Rules;
 - (7) violation of the GWPRS;
 - (8) a petition to revoke submitted by the permittee; or
 - (9) a determination by the Secretary that only the suspension or revocation of a permit can alleviate an actual or potential hazard to public health or the environment.
- (c) **Petition for Revocation:** All petitions for suspension or revocation shall be addressed to the Secretary, shall be copied to the permittee, and shall include:
 - (1) the name, address, and telephone number of the petitioner;
 - (2) the signature of the petitioner;

- (3) identification of the specific statutory provision, rule, or permit condition in question;
 - (4) a statement of the petitioner's interest in the matter and the petitioner's contentions, including the alleged basis for the suspension or revocation of the permit; and
 - (5) a statement that a copy of the petition for suspension or revocation has been sent by the petitioner to the permittee.
- (d) **Party Status:** The Secretary shall determine the right of the petitioner or other persons requesting party status to participate in the proceedings. In determining party status, the Secretary shall consider whether a person or his/her property is directly affected by the permitted project. The Division and the municipality in which the project at issue is located are automatically parties in a revocation proceeding.
- (e) **Notice of Suspension or Revocation Hearing:** Notice of a petition for suspension or revocation of a permit shall be sent to the permittee, the municipality in which the project is located, and all other potentially affected parties. The notice shall be issued at least two weeks prior to hearing and shall include the following information:
- (1) the legal authority for revocation;
 - (2) a brief statement of facts upon which the proposed action is based;
 - (3) a statement that the Secretary will hold a hearing for the purpose of determining whether the permit shall be suspended or revoked; and
 - (4) the date, time, and place where the hearing will be held.
- (f) **Hearing:** The hearing for suspension or revocation is a contested case and shall be conducted by the Secretary. Any party to the revocation proceedings shall either appear in person or shall be represented by an attorney. The burden of proceeding and of proving that the permit should be revoked shall be upon the party petitioning for revocation. The admissibility of evidence in all revocation proceedings shall be determined under criteria set forth in 3 V.S.A. §810. Upon the request of a party, a hearing shall be transcribed by a qualified stenographer or recorded on an electronic sound device at the election of the party. If transcription by a stenographer is requested, the request shall be in writing and filed at least 10 days before the hearing. Costs shall be borne by the requesting party. The requesting party shall provide one copy of the transcript to the Secretary without cost; other parties wishing a copy shall reimburse the requesting party on a prorated basis.
- (g) **Examination of Evidence, Decision and Order:** The examination of evidence, decision and order shall be governed by the provisions of 3 V.S.A. §§811 and 812. The final decision shall be made within 30 days after the close of the hearing. This decision shall constitute the final decision of the Secretary. Copies shall be sent to the permittee, other parties, the legislative body of the municipality, and all affected municipal and regional planning commissions.

- (h) **Voluntary Revocation:** Notwithstanding the other provisions of this section, the permittee may voluntarily waive the right to have a hearing, in which case the permit may be administratively revoked by the Secretary.

SUBCHAPTER 8 ENFORCEMENT AND APPEALS

§11-801 Enforcement

- (a) If at any time the Secretary determines that a Class V well is causing a violation of the primary groundwater enforcement standards of the GWPRS, he or she may:
 - (1) initiate an enforcement action under 10 V.S.A. Chapters 201 or 211 to order the responsible person to take such actions (including, where required, closure of the injection well) as may be necessary to prevent the violation and/or pay penalties; or
 - (2) initiate an enforcement action under 10 V.S.A. §§1274 and 1275.
- (b) Whenever the Secretary receives credible information that an injection well may be adversely affecting human health, he or she may direct that actions be taken in order to prevent the adverse effect and/or initiate an enforcement action.

§11-802 Appeals

- (a) Any act or decision of the Secretary under these Rules, including final decisions as a result of a request for reconsideration under section §11-701 of these Rules, may be appealed to the Environmental Court within thirty (30) days of the date of issuance pursuant to 10 V.S.A. Chapter 220.

SUBCHAPTER 9 TECHNICAL STANDARDS

§11-901 Basic Performance Standard

- (a) Discharges of waste must meet the primary groundwater enforcement standards of the GWPRS at either:
 - (1) the point of discharge to the injection well; or
 - (2) the compliance point.
- (b) If there are naturally occurring contaminants in the groundwater that exceed the primary groundwater enforcement standards of the GWPRS at the point of discharge, as determined in accordance with the GWPRS, the concentration of the naturally occurring contaminant in the waste may exceed the enforcement standard at the point of discharge but shall not exceed the concentrations of the naturally occurring contaminants at the compliance point.

Note: Examples of where this subsection may apply include injection wells that receive backwash from water treatment units that are not exempt from the permitting requirements of these Rules.

- (c) An injection well shall not discharge waste directly into groundwater unless the Secretary finds that:
 - (1) the waste meets the primary groundwater enforcement standards at the point of discharge; or
 - (2) the approved design of the well specifically requires the well to discharge to groundwater or below the seasonal high groundwater level.

Note: Seasonal high groundwater shall be determined either by soil mottling or other soil column indicators or through a groundwater monitoring program approved by the Secretary.

- (d) An injection well shall be operated in a manner:
 - (1) that prevents direct discharges to surface water;
 - (2) that assures that wastes discharged to the well will not surface at the point of discharge or within 300 feet of the point of discharge; and
 - (3) that prevents the waste from backing up into a treatment unit, if there is one, or into the facility that produces the waste.

§11-902 Design and Construction Standards

- (a) The design and construction of waste absorption trenches, absorption beds, mound systems, at-grade systems, and drip irrigation systems shall comply with the standards in the Wastewater and Potable Water Supply Rules. The Secretary may modify this requirement and establish different standards based on site specific considerations and the nature of the waste to be discharged.

- (b) The design and standards for injection wells not covered by subsection (a) of this section shall be based on the best treatment and disposal technology. Construction standards shall be based on standard engineering principles and practices.

§11-903 Siting

- (a) No injection well shall be located in a floodway.
- (b) No new injection well shall be located in Zone 1 of a source protection area for a public community water supply.
- (c) All injection wells located in a mapped special flood hazard area must be located, designed and constructed in a manner that avoids impairment to the well and contamination from the well during flooding. Refer to Flood Resistant Management Design guidance from FEMA, No. 348: Protecting Building Utilities from Flood Damage.

§11-904 Minimum Horizontal Isolation Distances

- (a) Injection wells shall be designed to meet the minimum isolation distances to features listed in Table 9-1.
- (b) The Secretary may reduce or increase the horizontal isolation distances of Table 9-1 of these Rules based on the following factors:
 - (1) the constituents of the wastes being discharged to the injection well;
 - (2) the type of injection well;
 - (3) the travel time between a feature and the injection well; or
 - (4) the type of aquifer receiving the discharge from the injection well.
- (c) Horizontal distances shall be measured to each feature from the closest edge of the injection well.

Table 9-1 Horizontal Isolation Distances for UIC Injection Wells

FEATURE	Minimum Horizontal Isolation Distance (feet)		
	UIC UPGRADIENT	UIC DOWNGRADIENT	UIC COMPONENTS
Potable Water Supply Source	see (i)	see (i)	see (i)
Public Community Water System	see (ii)	see (ii)	see (ii)
Public Non-Community Non-Transient Water Systems	see (iii)	see (iii)	see (iii)
Public Transient Non-Community Water Systems	500[See (iv)]	500[see (iv)]	500[see (iv)]
Standing Water (Lake or Pond)	300[see (v)]	300[see (v)]	300[see (v)]
Streams and Rivers (includes groundwater seeps)	300[see(vi)]	300[see (vi)]	300[see (vi)]
Drainage Swales / Roadway Ditches	50	50	25
Water Mains	50	25	50
Service Water Lines (gravity and pressure)	25	25	25
Roads, Driveways, Parking Lots	10	10	10
Slope Greater than 30%	50	25	25
Property Line	50	25	50
Trees	0	0	10
Other Systems, Facilities, Sites or activities, including injection wells, Permitted by the Secretary that can Potentially Discharge to Groundwater	see (vii)	see (vii)	see (vii)
Foundations, Footing Drains or Curtain Drains	75	25	50
Suction Water Line	50	25	25

- (i) Separation between potable water supply sources and UIC Injection Wells shall be determined by the methods in the Vermont Wastewater System and Potable Water Supply Rules.
- (ii) If the injection well is proposed to be located in Zone 2 of the Source Protection Area for a Public Community Water System, contact the Water Resources Program of the Division for a determination of whether the well can be permitted in the actual or proposed location.
- (iii) If the injection well is proposed to be located in the Source Protection Area for a Public Non-Transient Non-Community Water System, contact the Water Resources Program of the Division for a determination of whether the well can be permitted in the actual or proposed location.
- (iv) The separation between an injection well and a Public Non-Community System source may be increased or decreased using the methods identified in the Vermont Water Supply Rules.
- (v) The isolation distance shall be measured from the annual high water level.
- (vi) The isolation distance shall be measured from the top of the bank. For the purposes of this note, “Top of Bank” means that point along a stream bank where an abrupt change in slope is evident. For streams in wider valleys it is the point where the stream is generally able to overflow the banks and enter the floodplain. For steep and narrow valleys, it will generally be the same as the top of slope.
- (vii) To be determined on a site specific basis

§11-905 Monitoring Wells; Sampling

- (a) All monitoring wells shall be designed, constructed and maintained in a manner that assures that representative groundwater samples can be obtained from the wells.
- (b) The number of monitoring wells will be established in a permit based on the approved monitoring plan.
- (c) The required sampling and analysis will be established in the permit based on the approved monitoring plan.
- (d) All sampling and analysis procedures for testing and monitoring shall be conducted by a competent laboratory. A competent laboratory is one that maintains accreditation by the National Environmental Laboratory Accreditation Program (NELAP), or other DEC recognized certification/accreditation programs. Laboratories must clearly state the status of accreditation for each reported parameter, which allows appropriate interpretation of the validity of the results.

- (e) All permits shall contain a condition that allows the Secretary to direct an increase in the frequency of sampling and analysis in the event that contaminant levels approach, meet or exceed the limits specified in the permit and/or the primary groundwater enforcement standards of the GWPRS.
- (f) Permits may require testing for contaminants not listed in the GWPRS. The Secretary shall establish groundwater concentration limits for those contaminants.

§11-906 Annual Inspections

- (a) The permittee shall be required to contract with a professional engineer to conduct an annual inspection of the injection well and its associated infrastructure, including any treatment system. The engineer shall provide a report of the results of the inspection to the Secretary in accordance with the conditions of the permit. On a case by case basis, the Secretary may waive the requirement that a professional engineer perform the annual inspection if the Secretary determines that a different type of professional, such as a geologist, is qualified to conduct the inspection.

§11-907 Well Closure

- (a) Injection wells shall be plugged, abandoned and closed in a manner that assures future compliance with the GWPRS.
- (b) The Secretary shall review and approve all closure plans.
- (c) Closure plans shall be based on standard hydrogeologic principles and engineering practices.