

ORDINANCE NO. 22-05

AN ORDINANCE IN AMENDMENT OF CHAPTER 21 OF THE CODE OF ORDINANCES, TOWN OF NORTH KINGSTOWN, ENTITLED, "ZONING"

Note: Words set as ~~strikeover~~ are to be deleted from the ordinance; all underlined text is to be added to the ordinance.

The Town Council of the Town of North Kingstown hereby ordains:

SECTION 1. That Section 21-22 of the Code of Ordinances, Town of North Kingstown, entitled, "Definitions" is hereby amended by adding the following:

Ambulatory and urgent health care means health care services provided to outpatients whose condition does not require emergency medical care as defined herein, by or under the supervision of a physician/dentist licensed in Rhode Island pursuant to R.I. Gen. Laws Chapters 5-37 and 5-31.1 respectively.

Animal feeding operation – as defined by the United States [Environmental Protection Agency](https://www.epa.gov/npdes/animal-feeding-operations-afos) (EPA) found at <https://www.epa.gov/npdes/animal-feeding-operations-afos>.

BACT - Best Available Controls Practices means the best available nonpoint pollution control practices, technologies, processes, siting criteria, operating methods, or other alternatives to reduce pollutants and prevent or reduce the degradation of the groundwater.

BMP – Best Management Practices means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices designed to prevent or reduce the degradation of the state's groundwater to the maximum extent possible (RIDEM Groundwater Quality Rules 250-RICR-150-05-3).

Commercial Feedlot - A feedlot or feed yard is a type of animal feeding operation (AFO) which is used in intensive animal farming for finishing livestock, notably beef cattle, but also swine, horses, sheep, turkeys, chickens or ducks, prior to slaughter. ¹ They may contain thousands of animals in an array of pens.

Commercial Paint Application Shop – This use is characterized by the application of paint and/or epoxy products with any process other than a hand-held brush. Commercial paint application shops that can show proof of the use of **only** non-toxic latex or water based paints are allowable. Additionally, the use of any solvent-based products for applicator, brush or equipment cleaning is prohibited.

Commercial on-site photo processing including, but not limited to x-rays – Commercial on-site photo or x-ray processing that is carried out without the use of any chemicals, liquid or solid (i.e.

digital imaging) is allowable. Photo and/or x-ray processing facilities that require chemical as a part of their process are prohibited.

GAA - means those groundwater resources which the Director of the RI Department of Environmental Management has designated to be suitable for public drinking water use without treatment and which are located within the areas described in RI Groundwater Quality Rules (250-RICR-150-05-3) §§ 3.9(A)(1)(a) through (c) of this Part below.

a. Groundwater reservoirs and portions of their recharge areas as delineated by the Department.

b. Wellhead protection areas for community water supply wells delineated in accordance with § 3.16 of this Part. Wellhead protection areas for community water supply wells will by definition be considered reclassified to GAA at the time of approval of the community water supply well by the Rhode Island Department of Health.

c. Groundwater dependent areas that are physically isolated from reasonable alternative water supplies and where the existing groundwater supply warrants the highest level of protection. Block Island is the only area currently designated pursuant to this provision.

Groundwater Overlay Zones means both “wellhead protection overlay zone” and “groundwater protection overlay zone”.

Groundwater reservoirs means those stratified drift deposits having a saturated thickness greater than or equal to 40 feet and a transmissivity greater than or equal to 4000 feet squared per day which have been designated by the Director [RIDEM] to be potentially significant sources of water.

Health care facilities, hospitals, nursing and convalescent homes – This category of medical facility is characterized by the need for patients to remain at the facility for periods of 24 hours or longer.

High Strength Wastewater is wastewater characterized by Biological Oxygen Demand (BOD) of greater than 300 mg/l, Total Suspended Solids of greater than 350 mg/l and/or Fats, Oils & Grease (FOG) of greater than 150 mg/l. Additionally, elevated concentrations of petroleum constituents and phosphates can allow for wastewater to be characterized as high strength. Uses that typically produce high strength wastewater include, but are not limited to, the following: restaurants, coffee shops & convenience stores, food processing facilities, supermarkets that include on-site food preparation, nursing homes and other overnight medical and care facilities, hotels, motels, bed and breakfasts & inns with food preparation, funeral homes with on-site embalming facilities, car washes, laundromats, RV and marine pump out facilities, and gas stations with food or drink dispensing facilities.

Large Onsite Wastewater Treatment System means an OWTS that meets any of the following:
(1) Any single OWTS designed to treat five thousand (5,000) gallons or more per day;

(2) Multiple OWTs for any project on one or more parcels of land, excluding residential subdivisions, where the total design flow for the project is five thousand (5,000) gallons or more per day;

(3) All OWTs serving multiple residential units in a residential subdivision, provided that the total design flow of these OWTs, each serving more than one unit, is five thousand (5,000) gallons or more per day; or (4) Proposed OWTs and existing OWTs on the parcel that will result in a total design flow for the parcel exceeding five thousand (5,000) gallons per day.

Medical or biological laboratories, clinics or research facilities – Facilities in this category with processes that can be carried out without the use of any chemicals, liquid or solid, are allowable.

Nitrate-reducing cluster or satellite system, RIDEM approved – an innovative system with flows that meet or exceed 10,000 gallons per day and has been approved by the RI Department of Environmental Management as a system capable of treating effluent to a maximum discharge level of 10 mg/L.

Onsite Wastewater Treatment System (OWTS) means any system of piping, tanks, dispersal areas, alternative toilets or other facilities designed to function as a unit to convey, store, treat or disperse wastewater by means other than discharge into a public wastewater system.

Organized ambulatory care facility hereinafter referred to as OACF means a structurally distinct public or private health care establishment, institution or facility, primarily constituted, staffed and equipped to deliver ambulatory and urgent health care services as defined herein, to the general public and known by such terms as central service facility, treatment center, diagnostic center, rehabilitation center (outpatient), infirmary, outpatient clinic or health center which is not a part of a hospital, excluding however, OACFs owned and operated by professional service corporations as defined in R.I. Gen. Laws Chapter 7-5.1, (the "Professional Services Corporation Law"), or to a private practitioner's (physician, dentist or other health care provider) office, and/or operated by an individual practitioner, alone or as a member of a partnership, professional service corporation, organization or association), and those health care facilities otherwise licensed by or under the jurisdiction of the Department of Health and/or the Department of Behavioral Healthcare, Developmental Disabilities and Hospitals, or other governmental agency.

Process Wastewater means any water which, 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 (USEPA).

Recharge area means the land surface from which water is added to the zone of saturation. The recharge area for a particular well or aquifer, for instance, is that land surface from which water moves to the well or aquifer or may move to the well or aquifer under certain hydraulic conditions.

Soil evaluation means interpretation of the morphology and properties of the soil in a profile within a pit prepared for this purpose. Interpretation is performed by a RIDEM-licensed soil evaluator in accordance with the RIDEM OWTS Rules and associated Guidance Document.

Vehicle Maintenance as accessory to a permitted or special use – Vehicle maintenance and repair shall be limited to work conducted entirely within an enclosed building or garage on vehicles that are registered to the person or business currently operating on the property. Total petroleum load allowed to be maintained under this special use permit shall not exceed 500 gallons.

Veterinary Offices – Veterinary offices with kenneling facilities that are solely used for the care of animals under medical supervision are allowed as long as the facility follows best available control technologies. Veterinary offices that include kenneling facilities utilized for anything other than medically necessary supervision shall fall under the category of Commercial kennels, pounds or animal shelters and must meet those requirements.

Wastewater treatment facility means a group or assemblage of processes, devices and structures for the conveyance, treatment or removal of objectionable constituents of Wastewater. A Wastewater Treatment Facility shall include, but not be limited to, all physically connected Wastewater collection system piping, pumping, storage, physical, chemical and/or biological treatment, filtering and disinfection systems. For the purposes of these Rules and Regulations, a Wastewater Treatment Facility shall include privately owned wastewater collection, pumping, storage and conveyance systems interconnected with and emptying into a host Wastewater collection system. For the purposes of these Rules and Regulations, a Wastewater Treatment Facility shall not be considered to be:

1. An Onsite Wastewater Treatment System, which does not discharge into surface waters but discharge into subsurface waters; or,
2. Any privately owned plumbing; or,
3. Any privately owned low-pressure grinder pumps; or,
4. Gravity sewer lines conveying an average flow of less than 30,000 gallons per day, as calculated by the Department’s “Flow Estimation Policy for Design of Sanitary Sewers.”

SECTION 2. That Section 21-186 of the Code of Ordinances, Town of North Kingstown, entitled, “Groundwater recharge and wellhead protection overlay districts” and Section 21-187 of the Code of Ordinances, Town of North Kingstown, entitled, “Best management practices” are hereby deleted and replaced with the following:

Sec. 21-186. - Groundwater recharge and wellhead protection overlay districts.

- (a) Findings. The groundwater underlying the town is the sole source of its existing and future drinking water supply. Discharges of toxic and hazardous materials and septic system effluent threaten the quality of this groundwater supply and hydrologically connected surface waters, posing potential public health and safety hazards and threatening economic losses to the community. Additionally, the preservation and protection of natural areas is

critical to groundwater quality and quantity as these natural areas are the most efficient environments for both recharge of the aquifer and attenuation of pollutants that may threaten it.

(b) Purpose. The purpose of this section is to:

- (1) Protect the health, safety and welfare of the public;
- (2) Protect the public drinking water supply in the town from the effects of high intensity land development and from potentially hazardous materials associated with specific land uses;
- (3) Protect, preserve and maintain the quality and quantity of the groundwater supply; and
- (4) Emphasize the importance of the acquisition of land located within wellhead protection areas and/or the transfer of development rights from wellhead protection areas to appropriate locations.

(c) Criteria for designation of groundwater protection overlay zones. The designated zones described in this subsection have been mapped based on the best available scientific information. The most current RIDEM Groundwater Classification Map and Wellhead Protection Area Map included in the RIDEM Groundwater Quality Rules (250-RICR-150-05-3) will be utilized. The characteristics of soils and subsoils in these areas are such that any use introducing pollutants, contaminants, or waste into the natural drainage system could adversely affect the quality of municipal drinking water sources. The groundwater recharge and wellhead protection overlay district zones are as follows:

(1) Wellhead Protection Overlay Zones:

Designation: **Wellhead Protection Overlay Zones** for community water supply wells are areas underlain by groundwater classified GAA by the Rhode Island Department of Environmental Management (RIDEM) pursuant to Rule 3.9(A)(1) of the Groundwater Quality Rules (250-RICR-150-05-3). All of North Kingstown's municipal wells are completed in stratified drift; the wellhead protection overlay zones were determined using an analytical model for delineation of well capture zones in stratified drift and hydrogeologic mapping of the upgradient till deposits.

These areas directly contribute recharge to our municipal wells, making them critical to the protection of our drinking water quality.

(2) Groundwater Recharge Overlay Zone:

Designation: **The Groundwater Recharge Overlay Zone** includes all land in the town corresponding to groundwater reservoirs and portions of their recharge areas classified GAA by RIDEM pursuant to Rule 3.9(A)(1) of the Groundwater Quality Rules (250-RICR-150-05-3).

- a. Only those portions of a lot located in a Wellhead Protection Overlay Zone or Groundwater Recharge Overlay Zone shall be subject to the requirements of Section 21-186.
 - b. Requests to change an established wellhead protection or groundwater recharge overlay zone's boundary must be made in accordance with §3.10 of RIDEM Groundwater Quality Rules (250-RICR-150-05-3) and will only be affected with RIDEM approval.
- (d) Permitted uses in the Groundwater Recharge and Wellhead Protection Overlay Districts. All uses permitted in the underlying districts shall be permitted in the groundwater recharge and wellhead protection overlay districts subject to the development criteria listed in (1) – (5) below. However, these development criteria shall not apply to development that will be connected to a centralized sewer system.
- (1) The average density of any residential development shall not exceed four (4) bedrooms per two (2) acres. No density bonuses shall be granted in wellhead protection and groundwater recharge zones.
 - (2) All new development within the Wellhead Protection Overlay Zones must be served by a RIDEM approved nitrogen reducing Onsite Wastewater Treatment Technology (OWTS).
 - (3) All new commercial and industrial development must show that the nitrate loading standard of five (5) mg/L can be met on site.
 - (4) For the purpose of determining nitrogen loading, where separate commercial and residential operations share a common denitrifying OWTS, the portion of the design flow attributed to residential use shall be assigned a nutrient loading coefficient of 31 mg/L in wastewater effluent. The portion of the design flow attributed to high strength wastewater uses shall be assigned a nutrient loading coefficient of 40 mg/L.
 - (5) On residential lots that are nonconforming by area (square footage) and where municipal sewers are not available, for all new construction, alteration, additions, expansions, enlargements or intensifications for which the RIDEM determines that an upgrade to the OWTS is required, the upgraded system must include the installation of RIDEM approved nitrogen reducing OWTS.
- (e) Regulated and Prohibited Land Use Activities in the Groundwater Recharge and Wellhead Protection Overlay Districts
- (1) Any use or accessory use which is not permitted as a permitted use or by special use permit in the underlying zoning district is prohibited in the Groundwater Recharge and Wellhead Protection Overlay Districts.
 - (2) Any use that includes the use or storage of materials, chemicals or petroleum products that pose a risk to the underlying groundwater must include groundwater contour information and the installation of groundwater monitoring wells. Predevelopment water quality data will be required and a monitoring plan for targeted constituents will be a condition of approval.

(3)Emerging contaminants of concern will be considered/regulated as health standards become available.

Y = Permitted use

N = Prohibited use

S = Special use permit required

AR = Administrative Review

<u>Land Use Activity</u>	<u>Wellhead Protection Overlay Zone</u>	<u>Groundwater Recharge Overlay Zone</u>	<u>Monitoring Well Required¹</u>
<u>Machine shops (9) A machine shop is a facility with equipment and supplies for machining, a process where parts are cut, fabricated, and finished to prepare them for use. Machine shops are used in the creation of new parts, as well as repairs of existing equipment and parts.</u>	<u>N</u>	<u>S</u>	<u>Y</u>
<u>The process of wood preserving, staining, and refinishing except as accessory to a permitted use</u>	<u>N</u>	<u>S</u>	<u>Y</u>
<u>Commercial paint application shops</u>	<u>N</u>	<u>S</u>	<u>Y</u>
<u>Beauty shops, salons, parlors, and hair salons including the commercial operation of similar cosmetology or hairdressing establishments/schools. Also includes home occupations (15) (17)</u>	<u>N</u>	<u>S</u>	<u>N</u>
<u>Barbershop and other establishments where the only service is hair-cutting (no hair coloring, dying, straightening, intensive conditioning, perms, manicures, chemical based treatments or other procedures that</u>	<u>AR</u>	<u>AR</u>	<u>N</u>

<u>Land Use Activity</u>	<u>Wellhead Protection Overlay Zone</u>	<u>Groundwater Recharge Overlay Zone</u>	<u>Monitoring Well Required¹</u>
materials) (15)			
<u>Nail Salons</u>	<u>AR</u>	<u>AR</u>	<u>N</u>
<u>Veterinary Offices</u>	<u>N</u>	<u>AR</u>	<u>N</u>
<u>Commercial kennels, pounds, animal shelters and Doggy Day Care operations</u>	<u>N</u>	<u>S</u>	<u>Y</u>
<u>Health care facilities, hospitals, nursing and convalescent homes</u>	<u>N</u>	<u>S</u>	<u>Y</u>
<u>Medical offices including home occupation (5)</u>	<u>S</u>	<u>Y</u>	<u>N</u>
<u>Dental offices (5)</u>	<u>S</u>	<u>Y</u>	<u>N</u>
<u>Ambulatory and urgent health care or including as an accessory use</u>	<u>S</u>	<u>Y</u>	<u>N</u>
<u>Medical or biological laboratories, clinics or research facilities</u>	<u>N</u>	<u>S</u>	<u>Y</u>
<u>Commercial on-site photo processing, including but not limited to medical X-rays and nuclear medicine</u>	<u>N</u>	<u>S</u>	<u>N</u>
<u>Commercial washing of automobiles, trucks or other motorized vehicles or vessels (10)</u>	<u>N</u>	<u>S</u>	<u>Y</u>
<u>New automobile dealerships that include vehicle service and vehicle washing (14)</u>	<u>N</u>	<u>S</u>	<u>Y</u>
<u>Vehicle maintenance as an accessory use (1)(8)</u>	<u>S</u>	<u>S</u>	<u>Y</u>

<u>Land Use Activity</u>	<u>Wellhead Protection Overlay Zone</u>	<u>Groundwater Recharge Overlay Zone</u>	<u>Monitoring Well Required¹</u>
<u>Filling, grading or transferring material from off site in excess of 20 cubic yards (4)</u>	<u>AR</u>	<u>AR</u>	<u>NA</u>
<u>Any use or accessory use which is not permitted as a permitted use or by special use permit in the underlying zoning district is prohibited in the Groundwater Recharge and Wellhead Protection Overlay Districts</u>	<u>N</u>	<u>N</u>	<u>NA</u>
<u>Excavation other than for construction associated with a permitted use and installation of a physical improvement associated therewith to a level closer than eight feet to the groundwater table (1 and 3)</u>	<u>N</u>	<u>N</u>	<u>NA</u>
<u>Incinerators, solid waste landfills, hazardous waste treatment, storage or disposal facilities and solid waste transfer stations and recycling facilities (7)</u>	<u>N</u>	<u>N</u>	<u>NA</u>
<u>Vehicle maintenance, airplane, boat, truck, other vehicle maintenance and/or small engine service stations and gas stations (8)</u>	<u>N</u>	<u>N</u>	<u>NA</u>
<u>Junkyards and salvage yards</u>	<u>N</u>	<u>N</u>	<u>NA</u>
<u>All uses which discharge process wastewater on site except for the discharge of sanitary waste in accordance with the approved onsite wastewater treatment system (1)</u>	<u>N</u>	<u>N</u>	<u>NA</u>

<u>Land Use Activity</u>	<u>Wellhead Protection Overlay Zone</u>	<u>Groundwater Recharge Overlay Zone</u>	<u>Monitoring Well Required¹</u>
<u>Any other use which involves as a principal activity the generation, storage, use, treatment, transportation or disposal of hazardous waste</u>	<u>N</u>	<u>N</u>	<u>NA</u>
<u>Except as otherwise permitted by this section, all uses which involve the use, storage, treatment, processing, recovery or disposal of hazardous materials designated under 40 CFR 116, pursuant to Section 311 of the Federal Clean Water Act and subsequent amendments thereto or other toxic pollutants as defined under G.L. 1956, § 23-19.1-1 et seq., as amended (1 and 11)</u>	<u>N</u>	<u>N</u>	<u>NA</u>
<u>Underground storage of hazardous materials, oil, gasoline or other petroleum products, excluding liquefied petroleum gases, in any quantity (12 and 16)</u>	<u>N</u>	<u>N</u>	<u>NA</u>
<u>Storage or piping of petroleum or refined petroleum products other than liquefied petroleum gases or petroleum products, which will provide heat for the premises. All aboveground tanks must be bermed and the Planning Commission must approve adequate containment measures (1 and 13)</u>	<u>N</u>	<u>N</u>	<u>NA</u>
<u>The bulk storage in vehicles of fuel oil or other toxic and hazardous substances in excess of 110 gallons overnight or for more than 12 hours (1)</u>	<u>N</u>	<u>N</u>	<u>NA</u>

<u>Land Use Activity</u>	<u>Wellhead Protection Overlay Zone</u>	<u>Groundwater Recharge Overlay Zone</u>	<u>Monitoring Well Required¹</u>
<u>Bulk storage of road salt and deicing chemicals</u>	<u>N</u>	<u>N</u>	<u>NA</u>
<u>Commercial metal plating and etching</u>	<u>N</u>	<u>N</u>	<u>NA</u>
<u>Jewelry manufacturing and jewelry plating</u>	<u>N</u>	<u>N</u>	<u>NA</u>
<u>Chemical and bacteriological laboratories</u>	<u>N</u>	<u>N</u>	<u>NA</u>
<u>Rust proofers, metal and drum cleaning/reconditioning</u>	<u>N</u>	<u>N</u>	<u>NA</u>
<u>On-site embalming</u>	<u>N</u>	<u>N</u>	<u>NA</u>
<u>Gravel extraction (2)</u>	<u>N</u>	<u>N</u>	<u>NA</u>
<u>Bulk commercial storage of paint, thinners, lacquers, chemical strippers and chemical preservatives (6)</u>	<u>N</u>	<u>N</u>	<u>NA</u>
<u>Bulk pesticide and fertilizer storage (1)</u>	<u>N</u>	<u>N</u>	<u>NA</u>
<u>Commercial on-site dry cleaning</u>	<u>N</u>	<u>N</u>	<u>NA</u>
<u>Commercial laundromats in unsewered areas</u>	<u>N</u>	<u>N</u>	<u>NA</u>
<u>Commercial feedlots/animal feeding operations as defined by the USEPA</u>	<u>N</u>	<u>N</u>	<u>NA</u>

¹Number & location of required monitoring wells will be determined by the Director of Water Supply in consultation with the Town Engineer or a suitable designee

*All permitted and special use permits must include the use of best available control technology.

End notes:

- (1) These prohibitions and/or permit requirements shall not apply, however, to uses accessory to on-site agricultural operations as that term is defined in G.L. 1956, § 2-23-4 or any amendment thereto on any lot on which, as of October 5, 1998, agricultural operations were being performed as a primary use.
- (2) Gravel extraction, gravel mining and mineral deposit removal, except as part of preparation for an approved development project or an existing licensed removal site, providing that the following conditions are met:
 - a. All conditions as required by Chapter 16, entitled, "Soil and Earth Removal," are complied with.
 - b. Excavation for removal of earth, sand, gravel and other soils shall be no closer than eight feet above the maximum groundwater table.
- (3) Where excavation is allowed with development plan review approval, excavation shall be the least amount necessary in order to maximize the distance to the groundwater table. Best Management Practices shall be utilized.
- (4) Except where part of an approved final development/site plan or approved building permit or performed in the normal course of maintenance or operation of a permitted use, or where the use of the land is for the primary purpose of agriculture. Fill material needs to meet the residential direct exposure (RDEC) criteria in the RIDEM Office of Waste Management Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (250-RICR-140-30-1). This prohibition is due to the fact that there are no practical methods to conclusively ensure the complete absence of contaminants in fill brought from offsite.
- (5) Provided, however, that the Zoning Board of Review may require effluent separation and the installation of separate waste disposal systems for the disposal of toilet and bath facilities' waste and for the disposal of waste from all other sources on the premises.
- (6) The commercial storage for resale of paint, thinners, lacquers, chemical strippers, chemical preservatives, pesticides and fertilizers as accessory to a primary permitted use only.
- (7) Except horticultural waste from on-site agricultural operations.
- (8) It is the intent of this ordinance to prohibit vehicle maintenance, airplane, boat, truck maintenance and/or small engine service stations and gas stations as a primary use. Vehicle maintenance may be allowed by special use permit when accessory to a permitted or special use activity. Such repair/maintenance activities shall be conditioned on the use of the best available control technologies (BACTs) and best management practices (BMPs) that protect and monitor water quality. The developer will be required to provide for oversight/monitoring of repair facilities by a mutually agreed upon qualified entity.
- (9) Except where accessory to an on-site agricultural operation as defined in end note (1).
- (10) Provided, however, car and truck cleaning may be allowed by special use permit where accessory to a permitted use or a use allowed by special use permit; however, BACTs and BMPs shall be used and water reclamation/recycling shall be required. The number of vehicles may be conditioned by the Zoning Board of Review.
- (11) Provided, however, that quantities of the substances described in this section not to exceed 55 gallons or 250 pounds dry weight may be stored on the premises, if the Water

Department determines that the storage of the substance(s) does not constitute a potential for degradation of surface water or groundwater resources in the area and there is compliance with the following requirements:

- a. The total quantity of all of the hazardous materials stored on the premises shall not exceed 55 gallons or 250 pounds dry weight.
- b. The hazardous materials stored on the premises shall only be used for office or business use.
- c. All hazardous materials stored on the premises shall be contained in a suitable storage area which shall be approved by the Building Official.

(12) Replacement or upgrade of preexisting storage facilities shall be exempt from this provision, provided that any such replacement of a preexisting storage facility shall not, without the grant of a special use permit, exceed 125 percent of the tank size total capacity existing as of the effective date of the ordinance from which this section derives, and all such replacements shall be required to obtain all necessary permits and licenses from the State Department of Environmental Management and the town.

(13) Aboveground storage tanks located outside shall be placed on an impervious surface and have containment dikes or berms surrounding them. Containment systems shall be designed in accordance with Federal Rule 40 CFR 112. Containment dikes shall be coated concrete or metal or equivalent materials and shall be large enough to contain 110 percent of the tank capacity. Storage tanks located inside buildings shall be placed on an impervious surface which shall be bermed to retain spillage. RIDEM-approved double walled tanks with interstitial alarm may be permitted in place of dikes or berms. Storage tanks permitted by this section shall be located either outside of the building and aboveground or within the building for which the petroleum product is providing heat.

(14) New automobile dealerships may be allowed in a Groundwater Recharge Overlay Zone where existing conditions would preclude future water supply development. Applicant must demonstrate that existing water quality would be protected.

(15) Such systems shall be conditioned on the use of the BACTs and BMPs that protect water quality.

(16) Provided however BMPs shall be used in the siting and containment of the propane or liquefied petroleum gas. Aboveground outside storage tanks need not be enclosed within a roofed three-sided structure. The propane or liquefied petroleum gas storage shall be in compliance with the National Fire Protection Association standards, applicable Groundwater Recharge and Wellhead Protection Overlay District standards and Section 21-279 (d)(13) d.

(17) For establishments that utilize an OWTS and will perform hair coloring, dying, straightening, intensive conditioning, perms, manicures, chemical based treatments or other procedures that require the use of chemicals, solvents, or other similar materials, all sinks and hair washing stations must be plumbed directly into a holding tank. This holding tank will be separate from the required OWTS in areas where municipal sewer services are not available. Copies of the chemical manifest and product purchases, as well as reporting of the pumping out of the holding tank shall be submitted to the North Kingstown Department of Water Supply on a quarterly basis.

(4) Groundwater Recharge and Wellhead Protection Overlay District Administrative Review Approval required.

(a) Procedures for approval are as follows:

The administrative officer may determine that certain land use activities as indicated in Section f above that meet specific criteria for the protection of groundwater quality and quantity are exempt from the requirements of the development plan review, except where the approval of the Zoning Board of Review is required. These uses may be permitted conditioned on specific BMP and BACT and/or other conditions to protect groundwater quality and quantity as required by the Director of Planning after review by technical staff.

(f) Review Procedures for development proposals located in the Groundwater Recharge and Wellhead Protection Overlay Districts

(1) Special use permits. Where consistent with the definition of the district or reasonably necessary for the public convenience and welfare, certain land use activities noted in subsection (f) above may be granted by special use permit by the Zoning Board of Review in a Wellhead Protection Overlay Zone or a Groundwater Recharge Overlay Zone, following development plan/site plan approval and recommendation by the Planning Commission.

(2) Criteria for special use permits. In addition to any other requirements imposed by this chapter or any other applicable sections of this chapter, all special uses shall comply with the following design criteria:

(a) The storage of any toxic or hazardous materials that are permitted by this chapter shall be stored indoors on impervious surfaces which shall be bermed to retain any spillage, and in accordance with all other applicable regulations.

(b) No floor drains shall be permitted.

(c) All site plans submitted for review shall, in addition to all other materials, include for approval by the Planning Commission a hazardous material handling and contingency plan and a waste management plan specific to the proposed use.

(3) Land development and development plan review

(a) All uses proposed to be located in the Wellhead Protection Overlay Zone or Groundwater Recharge Overlay Zone shall be reviewed in accordance with North Kingstown Zoning Ordinance Section 21-133 or North Kingstown Zoning Ordinance Section 21-284 of the Zoning Ordinance as applicable. Evidence shall be submitted to the satisfaction of the Planning Commission that the proposed use will not cause contaminants to enter the groundwater in concentrations that could impair the use of the groundwater as a drinking water supply (Cross reference Revised Ordinances of the Town of North Kingstown, Rhode Island, 1988, Chapter 8, Health and Sanitation, Article VII., Groundwater Reservoirs and Recharge Areas). Note: certain site/building improvements that have no effect

on groundwater quality as determined by Administrative Review may not require site plan review by the Planning Commission.

(b) At the request of the Director of Planning and Development, the Planning Commission or Zoning Board of Review, applications may be referred to existing town committees, commissions or boards or outside expertise, at the expense of the applicant, for a report of findings and recommendations.

(c) In addition to the standard plan review submission requirements, the following shall be provided for proposals to be located in the wellhead protection overlay zones and groundwater recharge overlay zones:

1. Existing and proposed water sources and volumes of projected water use.
2. Location and description of any proposed facilities for refuse storage and disposal.
3. Location and brief description of existing vegetation, topographic features, and water bodies and wetlands.
4. Location of public wells within 400 feet and private water supply wells within 200 feet of the subject property.

(g) In granting approval for applications located within a Wellhead Protection Overlay Zone or Groundwater Recharge Overlay Zone, the following shall be considered by the reviewing body and applied in the decision-making process:

1. Adequacy and suitability of the site for the proposed use, including the availability of utilities and other public services.
2. Demonstration of the use of currently accepted best available control technology (see Sections (h) and (i)).
3. Adequacy of sewage treatment method, water source and stormwater management.
4. Proposed groundwater withdrawals.
5. Nitrate-nitrogen loading pursuant to Article VII of Chapter 8 pertaining to groundwater reservoirs and recharge areas. Applicants must provide data regarding ambient water quality nitrate levels.
6. Soil erosion and sediment control plans.
7. Provision of appropriate natural buffers for wetlands and surface water bodies.
8. Impact on public and private water supplies.
9. Storage of any potentially hazardous material and a hazardous materials contingency plan for these materials.
10. The ability to meet standards contained in Article VII of Chapter 8 pertaining to groundwater reservoirs and recharge areas.

(h) Nutrient loading calculations performed as part of any permit submittal shall incorporate the following assumptions:

Table 1: Loading numbers for nitrogen sources^{1 2}

<u>Activity or Discharge</u>	<u>Nitrogen Loading Coefficient</u>	<u>Reference</u>
<u>Effluent from standard OWTS</u>	<u>62 mg/L</u>	<u>New England Onsite Wastewater Training Program, University of Rhode Island Department of Natural Resources Science</u>
<u>Effluent from RIDEM approved nitrate-reducing innovative system*</u>	<u>19 mg/L</u>	<u>New England Onsite Wastewater Training Program, University of Rhode Island Department of Natural Resources Science</u>
<u>Effluent from RIDEM approved nitrate-reducing cluster or satellite system</u>	<u>10 mg/L</u>	<u>North Kingstown Water Department</u>
<u>Effluent from development connected to North Kingstown sewer system</u>	<u>0 mg/L</u>	<u>North Kingstown Water Department</u>
<u>Turf fertilization</u>	<u>1.36 Kilograms per 1,000 square feet with 25% leaching rate to groundwater*</u>	<u>-</u>
<u>Roof runoff</u>	<u>0.5 mg/L per unit area</u>	<u>-</u>
<u>Pavement runoff</u>	<u>1.5 mg/L per unit area</u>	<u>-</u>
<u>Atmospheric Deposition</u>	<u>8 lbs nitrogen per acre</u>	<u>-</u>

¹These coefficients will be consistent with any amendments made to the source information as the technology changes.

² The town will inquire about updates to these numbers yearly.

*Innovative technology expected to reduce nitrogen loading by 50%.

For the purposes of any residential lots included in nitrogen loading calculations, any land that is not covered by a structure or other permanent surface as part of the development proposal shall be considered "turf" for the purposes of these calculations unless otherwise determined by the town during review. The burden of proof shall be on the applicant to demonstrate that these areas should be considered something other than turf based on unique site conditions. Conditions that should warrant a different designation for these areas may include, but shall not be limited to, the presence of exposed ledge, wetland, easements or other legal agreements that would specifically preclude the establishment of turf. Physical permanent boundary markers shall be installed to indicate the boundaries of turf and natural areas.

Table 2: Recharge Numbers for Nitrogen Dilution

<u>Site Area</u>	<u>Rate of Recharge</u>
<u>Artificial recharge from impervious areas</u>	<u>Annual volume determined by stormwater management calculations</u>
<u>Undisturbed areas by NRCS¹ hydrologic soils group</u>	
<u>A soils</u>	<u>24 inches per year</u>
<u>B soils</u>	<u>18 inches per year</u>
<u>C soils</u>	<u>10 inches per year</u>
<u>D soils</u>	<u>3 inches per year</u>
<u>Wetlands and surface waters</u>	<u>0 inches per year</u>

¹ NRCS is the Natural Resource Conservation Service. Descriptions of these soil groups can be found at <https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx>

- (1) Submittal requirements for projects subject to the Sec. 21-186 - Groundwater recharge and wellhead protection overlay districts.
 - a. North arrow, locus plan, title block, including scale, date, name of owner, name of development, name of designer, architect, engineer or surveyor. Plans must include professional stamp showing license number.
 - b. Narrative explaining proposed uses including BACT and BMP for the protection of groundwater.
 - c. Supporting documentation including soil/groundwater sampling and analysis results, soil evaluation or test pit information, or other information needed to evaluate impact to groundwater resources or drinking water quality.
 - d. Nutrient loading evaluation.

- (i) Addition, enlargement or expansion of a permitted use on nonconforming lots in the Groundwater Recharge and Wellhead Protection Overlay Districts.
On residential lots that are nonconforming by area (square footage) and where municipal sewers are not available, for all additions, expansions, enlargements or intensifications for which the RIDEM determines that an upgrade to the OWTS is required, the upgraded system must include the installation of an RIDEM approved nitrogen reducing technology for on-site treatment of wastewater.

(j) Addition, enlargement or expansion of nonconforming uses in the Groundwater Recharge and Wellhead Protection Overlay Districts.

Nonconforming uses. Nonconforming uses are those uses that were lawfully existing or in receipt of a building permit prior to the first publication of notice of public hearing for the ordinance from which this amendment derives. Any expansion or change in use shall be subject to this section.

Special use permit for enlargement. The Zoning Board of Review may grant a special use permit for the enlargement of an existing building or structure located in a Groundwater Recharge and Wellhead Protection Overlay Districts which constitutes a nonconforming use consistent with the North Kingstown Zoning Ordinance Sec. 21-308.

(k) Best available control technology.

(1) Recommendations and guidelines. All applicants for activities in Groundwater Recharge and Wellhead Protection Overlay Districts shall follow the recommendations and guidelines contained in the documents listed below. Where any applicable standards in the Post Road district conflict with those listed in these publications, the standards for the Post Road district shall apply.

(a) Current Rhode Island Soil Erosion and Sediment Control Handbook, as amended.

(b) Current State of Rhode Island Stormwater Design and Installation Standards Manual, as amended.

(c) Controlling Urban Runoff: A Practical Manual for Planning and Designing Urban BMPs, by the Metropolitan Washington Council of Governments, 1987, as amended.

(d) The USEPA Office of Water Publication Guidance Specifying Management Measures for Sources of Nonpoint Pollution in Coastal Waters, 1993, as amended.

(e) The RIDEM OWTS Rules and associated Soil Evaluation Guidance Document.

(l) Demonstration of use. In addition to subsection (a) of this section, all applicants shall demonstrate the use of the BMPs:

(1) Maintenance. Approval of all facilities and structures shall be conditioned on the use of BMPs and constructed in accordance with current industry installation standards. Facilities/structures shall be maintained by the owner and/or operator to ensure the ability of such facilities and structures to function as designed to protect groundwater. Annual compliance reports shall be submitted to the town. Failure to properly maintain such facilities and structures shall constitute a violation of this section and shall be subject to enforcement action of the town.

(2) Secondary containment. Use of a berm, dike, wall or other physical means shall be used to contain spilled material and reduce or eliminate interception of overland flow of stormwater during and following precipitation events.

Containment must be designed sufficient to contain ten percent of the total volume of all containers of hazardous materials and/or substances stored or 110 percent of the largest container, whichever is greater. All aboveground tanks must be bermed and the Planning Commission must approve adequate containment measures (1 and 13).

- (3) Blocking of existing interior floor drains; design of new buildings without floor drains/sumps. All existing structures with a potential for the release of hazardous materials/substances to the environment via a floor drain or sump must ensure that such exit routes are maintained blocked (e.g., spill mats, berms, etc.) to prevent the release or accumulation of material. All new structures that utilize such materials must be designed without drains and/or sumps.
- (4) Prohibited outdoor unenclosed hazardous material and pesticide storage. Hazardous materials/substances and pesticides must be stored in a three-sided structure with a roof and a means to prevent the influx and/or flow of precipitation and overland flow into the structure.
- (5) Fertilizer storage. The storage of fertilizers is prohibited when not provided with a means to prevent the influx and/or flow of precipitation and overland flow.
- (6) UST compliance; retrofitting of existing USTs and prohibition of the installation of new USTs. All existing underground storage tanks (USTs) used to store hazardous materials/substances/petroleum products must be retrofitted in accordance with the requirements specified in the RIDEM regulations for underground storage facilities used for petroleum products and hazardous materials (250-RICR-140-25-1). Installation of all new USTs is prohibited.
- (7) Cover and secondary containment for loading/unloading areas. All areas utilized for the loading/unloading/transfer of hazardous materials/substances/petroleum products must be provided with sufficient overhead and side cover to prevent the influx of precipitation and overland flow and sufficient secondary containment (via berms, dikes, negative berms, etc.) to prevent the release of the material to the environment.
- (8) Density restrictions for unsewered areas. There shall be a limitation on the average density of development to four bedrooms per two acres for all residential structures located in areas not served by municipal sewers. Density bonuses shall not be granted in Groundwater Recharge and Wellhead Protection Overlay Districts.
- (9) Facility spill prevention. Development of a facility spill prevention plan for all facilities utilizing hazardous materials/hazardous substances, and/or petroleum products shall be required. The plan shall be developed in accordance with the minimum requirements of Rhode Island Rule 5.02 Contingency Plan Requirements. Note: This requirement does not preclude or substitute for any potentially applicable requirements of the Rhode Island Oil Pollution Prevention Regulation (RIGL) Chapters 46-12, 42-17.1 and 42.35 or USEPA Spill Prevention Control and Countermeasure Plan (SPCC), 40 CFR 112.
- (10) Mandatory inspection and pumping of onsite wastewater treatment systems (OWTS). Inspection and pumping of OWTS located in Groundwater Recharge and

Wellhead Protection Overlay Districts shall be required. Such pumping and inspection shall be consistent with any applicable sections of this Code or town ordinances pertaining to wastewater management.

- (11) Surface stormwater runoff controls. The use of on-site surface stormwater runoff controls to both prevent the potential for releases of hazardous materials/substances, oil, fertilizers or pesticides to the environment and if deemed necessary to provide for appropriate discharge off site shall be required. Controls may include such structures as trench drains, berms, retention ponds, vegetated buffer areas, etc.
 - (12) Mandatory monitoring of wells. The installation and/or use of existing wells to monitor for the presence of specified pollutant parameters shall be required.
 - (13) Denitrification systems. The development shall use a denitrification septic system for the on-site treatment of domestic wastewater. Denitrification systems must have the approval of the RIDEM, Office of Water Resources, Onsite Wastewater Treatment Systems Program. Due to required maintenance and monitoring of denitrification systems, all denitrification systems must be noted on the deed to the lot to ensure knowledge, recognition and maintenance of the system at the time of sale. In addition, all commercial and shared residential systems must provide maintenance and monitoring reports to the North Kingstown Department of Water Supply on a yearly basis.
- (m) Creation or modification of lots. Upon the creation or modification of lots from a lot that was in an existing Groundwater Recharge and Wellhead Protection Overlay Districts, said new or modified lot(s) shall automatically be included or removed from the applicable Groundwater Recharge and Wellhead Protection Overlay Districts, according to the official groundwater recharge and wellhead protection overlay district map and as specified in this chapter.

SECTION 3. This Ordinance shall take effect upon passage and all Ordinances or parts of Ordinances inconsistent herewith are hereby repealed.

First Read at the Town Council Meeting of January 24, 2022 and referred to the Town Council Meeting of February 28, 2022 for Second Reading and Consideration of Adoption, continued to the Town Council Meeting of March 14, 2022.

Adopted at the Town Council Meeting of March 14, 2022.

Jeannette Alyward
Town Clerk