

## **SECTION XIII. GROUNDWATER PROTECTION ORDINANCE**

*[Adopted 2012]*

### I. INTRODUCTION

This ordinance is established to preserve and protect the Town of Greenfield's groundwater resources within the designated areas for the health, safety, and general welfare of current and future residents. It is hereby acknowledged that groundwater is the most important source of drinking water and is an integral part of the hydrologic cycle that warrants protection from contamination.

### II. AUTHORITY

Authority for this ordinance is granted pursuant to RSA 674:16, II and RSA 674:21, innovative land use controls, RSA 147:1, local health regulation and RSA 485-C, defining Best Management Practices.

### III. GROUNDWATER PROTECTION DISTRICT

The groundwater protection district is an overlay district which is superimposed over the existing underlying districts and includes within its boundaries the Stratified Drift Aquifers and Wellhead Protection Areas for public water supply wells as defined under Section V of this ordinance as shown on the map entitled "Town of Greenfield Groundwater Protection District Boundaries" 2012 and subsequent addenda.

### IV. APPLICABILITY

This ordinance applies to all uses within the designated boundaries of the Groundwater Protection District, except for those uses exempt under Section XII, Exemptions, of this ordinance.

### V. DEFINITIONS

Aquifer: a geological formation composed of rock, sand, or gravel that contains significant amounts of potentially recoverable water.

Designee: A person appointed by the Planning Board or Board of Selectmen to issue/monitor Conditional Use Permits and Spill Prevention, Control and Countermeasure Plans (SPCC). Such individual shall be a qualified professional whose credentials are acceptable to the State DES.

Groundwater: subsurface water that occurs beneath the water table in soils and geologic formations.

Gasoline station: a place where petroleum products are received by tank vessel, pipeline, tank car, or tank vehicle and distributed for the purpose of the retail sale of gasoline.

Impervious: not readily permitting the infiltration of water.

Impervious surface: surface through which regulated substances cannot pass when spilled. Surfaces that are not considered to be impervious are asphalt, untreated wood, gravel, soil (including hard packed), concrete if cracks, holes or unsealed seams are present.

Junkyard: an area which is maintained, operated, or used for storing, keeping, buying, or selling junk or for the maintenance or operation of an automotive recycling yard, and includes garbage dumps and sanitary landfills. This does not include motor vehicle dealers registered with NH DMV under RSA 261:104 and controlled under RSA 236:126.

Outdoor storage: storage of materials where they are not protected from the elements by a roof, walls, and a floor with an impervious surface.

Petroleum bulk plant or terminal: a place where petroleum products are received by tank, vessel, pipeline, tank car, or tank vehicle and are stored or blended in bulk for the purpose of distributing such liquids by tank vessel, pipeline tank car, tank vehicle, portable tank, or container.

Public water system: a system for the provision to the public of piped water for human consumption, if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days of the year.

Regulated substance: petroleum, petroleum products, and substances listed under 40 CFR 302, 7-1-05 edition (Code of Federal Regulations-Environmental), excluding the following substances: ammonia, sodium hypochlorite, sodium hydroxide, acetic acid, sulfuric acid, potassium hydroxide, potassium permanganate, and propane and other liquefied fuels which exist as gases at normal atmospheric temperature and pressure.

Sanitary protective radius: The area around a public water supply well which must be maintained in its natural state as required by Env Dw 301 or 302 (NH Code of Administrative Rules-community water systems); Env Dw 301.06 and Env-Dw 302.06 (NH Code of Administrative Rules-other public water systems)

Seasonal High Water Table: The depth from the mineral soil surface to the upper most soil horizon that contains 2% or more distinct or prominent redoximorphic features that increase in percentage with increasing depth as determined by a licensed Hydrogeologist, Soils Scientist, Wetlands Scientist, Engineer or other qualified professional approved by the Planning Board.

Secondary containment: A structure such as a berm or dike with an impervious surface which is adequate to hold at least 110% of the volume of the largest regulated substances container that will be stored there.

Snow dump: an area where snow from roadways and parking lots is deposited for disposal.

Stratified-drift aquifer: A geological formation of predominantly well sorted sediment deposited by or in bodies of glacial melt water, including gravel, sand, silt or clay, which contains sufficient quantities of water to wells.

Surface water: streams, lakes, ponds, and tidal waters, including marshes, water-courses and other bodies of water, natural or artificial.

Wellhead protection area: The surface and subsurface area surrounding a water well or well field supplying a community public water system, through which contaminants are reasonably likely to move toward and reach such water well or well field.

## VI. PERMITTED USES

All uses permitted by right or by special exception in the underlying zoning district(s) are permitted in the Groundwater Protection District, except those uses expressly prohibited in Section VII or listed as regulated uses in Section VIII of this Ordinance.

## VII. PROHIBITED USES

The following uses have been identified as posing a potential threat to the quality of groundwater resources. Therefore the establishment or operation of these uses is prohibited within the Groundwater Protection District.

1. Hazardous waste disposal facility
2. Solid waste landfill
3. Junkyard
4. Outdoor storage of road salt or other deicing chemicals
5. Snow storage area
6. Motor vehicle dealers (including boats, snowmobiles, motorcycles and similar motorized equipment) facilities for the sale of power equipment, which provide product repair and service,

facilities for vehicle body repair and paint shops, vehicle service stations, vehicle radiator, tire, exhaust, transmission shops, tire retreading facilities, and other facilities for the repair and service of internal combustion engines or vehicles powered by them, including the storage, warehousing or parking of vehicles in connection with their repair or service.

7. Petroleum distribution, through the use of above or underground storage tanks and piping; or petroleum fuel dispensing activities.
8. Wastewater or septage lagoon.
9. The following waste handling and disposal practices: new or private municipal solid waste disposal areas; regional solid waste disposal areas; private or special solid waste disposal areas; resource recovery facilities; transfer stations; biomedical waste treatment facilities and regional processing centers; hazardous waste water facilities; septage disposal areas; publicly –owned treatment works; wastewater treatment systems which discharge to the groundwater other than those which treat domestic sanitary sewage and sanitary sewage generated from public and private restrooms.
10. Waste processing systems: floor drains, dry wells (except those permitted by state regulations), or other leaching structures intended to convey waste or spillage to the groundwater, excluding publicly owned or domestic septic systems and excluding non-contaminated roof drainage or storm water runoff to the ground.
11. Facilities that require underground storage or transmission of petroleum liquids or hazardous materials: underground storage tanks, underground distribution systems, and liquid fuel pipelines.
12. Textile mills, tanneries, and apparel production facilities which engage in dyeing, textile coating or treatment
13. Wood product manufacturing facilities which engage in hardwood or softwood veneer or plywood production, wood preservation, production of reconstituted wood products, and pulp and paper manufacturing.
14. Printing and publishing facilities which engage in plate-making, commercial lithography, photoengraving, and gravure.
15. Production facilities which engage in the production of chemicals, petroleum or products derived from petroleum, or coal.
16. Facilities for the production of rubber and plastic products which engage in the manufacture of coated rubber products, elastomeric and resin cements, tires and tubes.
17. Facilities which are primary metal industries or fabricate metal, clay glass, and electrical parts that engage in foundry operations, metal forming, machine shops, chemical processes for mirror or glass coating, metal plating, degreasing shops, and etching operations or which engage in the use, storage, handling, or disposal of hazardous materials.
18. Facilities for the generation of electrical power by the means of fossil fuel, except for those intended for the generation of electricity during emergencies and those facilities which utilize natural gas as a fuel.
19. Petroleum terminals and fuel oil dealers.
20. Facilities for wholesale trade which engage in: coal, ore, and mineral sales and metal salvage, sale of paints, varnishes, solvents, and hazardous chemicals.
21. Personal and business service organizations which engage in dry cleaning, industrial laundering, motorized equipment rental, funeral services (excluding those connected to a municipal sewerage system with industrial pre-treatment), photographic processing operations (excluding those connected to a municipal sewerage system with industrial pre-treatment), and furniture stripping and finishing.
22. Laboratory facilities which engage in biological or chemical research or testing with the exception of those facilities associated with the testing of a public or private water supply or with photographic processing from radiological examination, or those which are connected to a municipal sewerage system with industrial pre-treatment.

## VIII. REGULATED USES

The following uses may be permitted in the Groundwater Protection District subject to certain conditions. Regulated uses require the granting of a Conditional Use Permit by the Planning Board/designee and are

subject to a greater standard of protection than those uses that are otherwise permitted within the underlying district.

A. Regulated uses must:

1. Be a use that is permitted in the underlying district either by right or by Special Exception
2. Be a use that is not listed as a Prohibited Use in Section VII of this Ordinance
3. Use and/or install best management practices (BMPs) as required under state administrative rule, Best Management Practices for Groundwater Protection, Env-Wq 401.

B. Regulated uses include:

1. Any use that is a Permitted Use in Section VI of this ordinance which has (or will have upon completion of construction) a total impervious surface area of 2,500 square feet or greater, or which results in an impervious area of 15% or greater of the parcel's area.
2. Any use which involves the storage, handling, and use of regulated substances in quantities exceeding 100 gallons of liquid or 800 pounds of dry weight at any one time. This shall include an approved Spill Prevention, Control, and Countermeasure (SPCC) plan in accordance with Article X of these regulations.

C. The applicant shall submit a completed Conditional Use Permit application to the Planning Board certifying that all applicable requirements specified within Articles IX and X, have been met prior to the issuance of the Building Permit. In the event that a Building Permit is not required for the regulated use, the applicant shall submit a Conditional Use Permit application to the Planning Board or its designee for review and approval.

## IX. PERFORMANCE STANDARDS

A. No floor drains, dry wells (except those permitted by state regulations), or other infiltration devices that discharge waste water into the ground shall be installed.

B. Storage of Regulated Substances shall be as follows:

1. Regulated substances shall be stored in an enclosed structure or under a roof which minimizes storm water entry.
2. All structures used to store regulated substances shall be protected from storm water run-off and groundwater intrusion and must be at least 50 feet from surface water or storm drains, at least 75 feet from private wells, and outside of the sanitary protective radius of wells used by public water systems. The floor of the area in which the material is being stored shall be coated to protect the surface of the floor from deterioration due to spillage of any such materials.
3. Regulated substances shall be stored in an area that is secured against intrusion from unauthorized people or animals.
4. Regulated substances shall be stored in their original containers with proper labels including contents and warnings. In the event that the original container is not available, or if the regulated substance is a waste product, an alternate container may be used but shall be properly labeled with information that would otherwise be included on the original container.
5. Outdoor storage is permitted if all of the above conditions are met (with the exception of IX.1) and if stored in a secondary containment with a storage capacity of 110% containment.

C. Storage of Fertilizers, Compost, and Animal Manure shall be stored in accordance with Best Management Practices for Agriculture in New Hampshire, NH Dept. of Agriculture, Markets, and Food, July 2008, and any subsequent revisions.

D. All inactive wells on the property (those wells that are not in use or properly maintained at the time the plan is submitted) shall be considered abandoned and must be sealed in accordance with We 604 of the New Hampshire Water Well Board Rules.

E. Excavation and blasting activities must be conducted in a manner that minimizes groundwater contamination, adverse impacts to hydrology, and the dewatering of drinking water supply wells. The use of best management practices must be included in these activities (see Env-wq 401 Best Management Practices for Groundwater Protection).

F. The refueling, washing, and maintenance of motor vehicles used as part of any permitted/regulated activities shall be conducted out of the groundwater protection area wherever possible. Otherwise, such refueling or maintenance shall be conducted on an impervious surface with appropriate containment area. Spill response material shall be readily available and easily accessible.

G. In addition to the above standards, the following performance standards are required and must be submitted for all activities involving Regulated Uses:

**Storm Water Management Plan** that meets the minimum requirements set forth in the most current New Hampshire Storm Water Manual, and/or uses accepted innovative practices for the treatment and control of storm water. The plan must identify

- a. Location of storage or transfer of regulated substances and/or other potential sources of pollution, as well as structural pollution control methods or non-structural practices that minimize the release of regulated substances into the storm water or discharge to the ground.
- b. Storm water discharge setbacks between public and private water supply wells and storm water practices that meet setbacks in the Innovative Land Use Planning Techniques, Section 2.1 Permanent Storm Water Management.
- c. A stipulation that expansion or redevelopment activities shall require an amended storm water plan and may not infiltrate storm water through areas containing contaminated soils without completing a Phase I Assessment in conformance with ASTM E 1527-05 (American Society of Testing and Materials-Environmental Assessment)
- d. Must maintain at least four feet vertical distance between the bottom of the storm water practice and the average seasonal high water table as determined by a qualified professional.

#### X. SPILL PREVENTION, CONTROL, AND COUNTERMEASURE PLAN (SPCC)

In addition to the requirements set forth in Section IX Performance Standards, any Regulated Use that includes the use of regulated substances shall submit a Spill Prevention, Control and Countermeasure Plan to the Planning Board/designee. SPCC plans completed to meet state or federal requirements may be submitted provided they reflect the application before the Planning Board. The Planning Board /designee shall then make a determination as to the effectiveness of the plan to prevent, contain, or mitigate releases of regulated substances into the environment in the event of a catastrophic occurrence. The Planning Board/designee may retain the services of a third-party consultant to assist in reviewing any plan presented, the cost of which the applicant will reimburse. The plan shall include the following:

A. A detailed description of the facility, storage area of regulated substances, and type and amount of each regulated substance shall be submitted. A map acceptable to the Planning Board/designee showing the layout of the facility and storage area as well as nearby surface water and wellhead protection areas must be included.

B. A list of facility contact information, including phone numbers, for all those who will be accountable for emergency response, and all appropriate federal, state and local agencies that must be notified in the event of a catastrophic occurrence.

C. A prediction of the direction of the flow of any regulated substance and potential quantity that could be released into the environment. A description of the proposed materials and equipment that would be used to divert, capture or absorb any regulated substance must be also submitted.

#### XI. PRE-EXISTING NONCONFORMING USES

A. All uses that previously existed prior to the adoption of these regulations, and which do not conform to these regulations, shall be permitted to continue as the same use and capacity at the time of adoption so long as the use does not pose a threat to the public health, safety or welfare, or otherwise constitute a nuisance. Any pre-existing nonconforming use must be in compliance with all applicable state and federal requirements, including Env-Wq 401, Best Management Practices Rules.

B. Change of Use

Any change of use of a non- conformity will require a Conditional Use Plan and a Spill Control and Countermeasure Plan, approved by the Planning Board/designee.

C. Expansion of Structure or Intensity of Use

Any expansion/change of structure or change of intensity involving a non-conforming Regulated use requires a Conditional Use Permit to be submitted and approved by the Planning Board/designee.

## XII. EXEMPTIONS

The following uses are exempt from all or some of the requirements of this ordinance as noted herein:

1. Private residences are exempt from Article IX, Performance Standards.
2. Any business, including home occupations, where regulated substances are stored in containers of not more than 5 gallons are exempt from Performance Standards, Section B.
3. Storage of heating fuels for on-site use or fuels for emergency electric generation are exempt from Performance Standards, Section B.4 provided that storage tanks are kept indoors on a concrete floor or have corrosion control, leak detection, and secondary containment in place.
4. Storage of motor fuel in tanks attached to vehicles with permanent fuel lines are exempt from Performance Standards, Section B.
5. Storage and use of office supplies is exempt from Performance Standards, Section B.
6. The temporary storage of construction materials and equipment on a site where they are to be used is exempt from Performance Standards, Section B until the project is completed.
7. The sale, transportation, and use of pesticides as defined in RSA 430:29 XXVI (NH Statutes-Agriculture, Horticulture and Animal Husbandry) are exempt from all provisions of this ordinance.
8. [remove italics at #8] Household hazardous waste collection projects regulated under Env-Wm 401.03 (b)(1) and 501.01 (b) (NH Code of Administrative Rules-Hazardous Wastes) are exempt from the Performance Standards , Section B of this ordinance.
9. Underground and aboveground storage tank systems that are in compliance with applicable state rules are exempt from inspections under Article XIII of this Ordinance.

## XIII. INSPECTIONS AND MAINTENANCE

1. The Board of Selectmen/designee may perform routine inspections to verify compliance with Performance Standards or inspections initiated by a complaint of a potential violation. Prior notice will be given to the property owner and/or occupant for compliance inspections.
2. All commercial properties within the Groundwater Protection District using or storing regulated substances in containers having the capacity to hold more than five gallons are subject to inspections in accordance with this section unless the facility is exempt under section XII of these regulations.
3. The Board of Selectmen may charge the property owner or commercial occupant a fee, a schedule of which shall be developed by the Board of Selectmen, for routine inspections.

4. A detailed description of the maintenance of structures and storm water management devices for any use requiring approval by the Planning Board/designee shall be filed with the Planning Board prior to the issuance of a certificate of occupancy or within 30 days of completion of the proposal. Such narrative shall include specifications, frequency, and responsible party (including contact information). A copy shall also be filed at the Registry of Deeds for Hillsborough County and shall include a statement that the requirement of maintenance of the structures and storm water management devices shall run with the land. Costs of said filing shall be borne by the applicant.

#### XIV. ENFORCEMENT

Any violation of the requirements established in this ordinance is subject to the enforcement procedures and penalties set forth in RSA 676 (Administrative and Enforcement Procedures) or RSA 485-C (NH Safe Drinking Water Act).

#### XV. RELATIONSHIP BETWEEN STATE AND LOCAL REQUIREMENTS

Where both the State and the Town have existing requirements, the more stringent shall be used.

#### XVI. SAVING CLAUSE

If any provision of this ordinance is found to be unenforceable, such provision shall be considered separable and shall not be construed to invalidate the remainder of the ordinance.

#### XVII. EFFECTIVE DATE

This ordinance shall be effective upon the adoption by the municipal governing body.

### ***Summary of Best Management Practices for Groundwater Protection Rules:***

#### **Storage**

- Store regulated substances on an impervious surface.
- Secure storage areas against unauthorized entry.
- Label regulated containers\* clearly and visibly.
- Inspect storage areas weekly.
- Cover regulated containers in outside storage areas.
- Keep regulated containers that are stored outside more than 50 feet from surface water and storm drains, 75 feet from private wells, and up to 400 feet from public wells.
- Secondary containment is required for regulated containers stored outside, except for on-premise use heating fuel tanks, or aboveground or underground storage tanks otherwise regulated.

#### **Handling**

- Keep regulated containers closed and sealed.
- Place drip pans under spigots, valves, and pumps.
- Have spill control and containment equipment readily available in all work areas.
- Use funnels and drip pans when transferring regulated substances; perform transfers over impervious surface.

#### **Release Response Information**

- Post information on what to do in the event of a spill.

#### **Floor Drains and Work Sinks**

- Cannot discharge into or onto the ground.

\*Regulated container means any device in which a regulated substance is stored, transported, treated, disposed of, or otherwise handled, with a capacity of five gallons or more. The term does not include fuel tanks attached to and supplying fuel to a motor vehicle.

For more information on best management practices for groundwater protection visit the  
DES Drinking Water Source Protection webpage at  
<http://des.nh.gov/organization/divisions/water/dwgb/dwspp/index.htm>, or contact the  
NH Department of Environmental Services at (603) 271-2947 or (603) 271-0688.

*Disclaimer: Statutory information contained in this fact sheet is current as of February 2, 2007. Statutory or regulatory changes that may occur after February 2, 2007, may cause part or all of the information to be invalid. If there are any questions concerning the status of the information, please contact DES at (603) 271-3644.*