

2010 North Brookfield Source Water Protection Plan Update

Introduction

A Source Water Protection Plan (SWPP) identifies water system vulnerabilities to contamination and describes techniques to manage potentially contaminating land uses. The North Brookfield Source Water Protection Plan has been developed by the North Brookfield Source Water Protection Steering Committee and MassRWA to aid in the protection of the public water system (PWS) for the Horse Pond Reservoir.

Public water suppliers around the state of Massachusetts and across the nation are increasingly finding that proactive planning and prevention are essential to both the long-term integrity of their water systems and limitation of their costs and liabilities. Despite our best efforts, accidental spills of hazardous chemicals are all too common and bacterial outbreaks still occur unexpectedly, sometimes with dangerous consequences. These types of events may result in costly treatment, remediation and/or litigation, and in worst-case scenario could permanently destroy a water source or injure/kill a water customer.

According to the National Center for Small Communities (2000), successful planning and prevention requires six basic steps:

1. Source protection area (SPA) delineation
2. Identification of sources of contamination within SPA's
3. Assessment of the risks to drinking water posed by contaminant sources
4. Publication of the risk assessment results
5. Implementation of measures to manage contaminant sources
6. Contingency planning for response to contamination incidents

Source protection planning has numerous benefits including:

- Increasing consumer confidence that their drinking water source will continue to be protected and reliable
- Reducing the likelihood that contamination incidents will occur with costly and/or potentially harmful results
- Relationships with regulatory agencies, employees and the public are often enhanced through source protection
- Source Protection Plan's provide strong support to requests for financial assistance

Glossary Protection Zones

Zone A: is the most critical for protection efforts. It is the area 400 feet from the edge of the reservoir and 200 feet from the edge of the tributaries (rivers and/or streams) draining into it.

Zone B: is the area one-half mile from the edge of the reservoir but does not go beyond the outer edge of the watershed.

Zone C: is the remaining area in the watershed not designated as Zones A or B.

North Brookfield Water Department 2007 Source Water Protection Plan (SWPP)

The SWPP report for the North Brookfield Water Department determined that the overall ranking of source susceptibility for the Horse Pond Reservoir is “**High**” based land uses in the associated Source Protection Area (SPA). The Key issues identified by the SWPP report include:

1. Potential contamination from land uses in Zone A including:
 - Residential Land Uses
 - Septic Systems
 - Hazardous Materials Located in Zone A.
2. Aquatic Wildlife, especially beaver populations.
3. The need for a Water Supply Protection District and Source Protection By-laws to ensure the quality of North Brookfield’s public drinking water supply.

Goals and Objectives of the North Brookfield SWPP Steering Committee

The North Brookfield SWPP Committee determined that the following goals and objectives were important to the success of the North Brookfield Source Water Protection Plan:

1. A plan for the implementation of a **Water Supply Protection District (WSPD) Bylaw** for the Horse Pond Reservoir and its watershed;
2. A **Public Education and Outreach Program** for residents and businesses residing within the Horse Pond Reservoir’s recharge area to inform them of the threats to quality drinking water;
3. A **spill-pad requirement (BOH regulation)** for any new development occurring within the WSPD;
4. Strategies for controlling high-risk land use and development within North Brookfield’s watershed that supplies its public drinking water;
5. **Strengthen “Right of First Refusal” By-Law** to ensure that sensitive land within the recharge area can be purchased by the Town.
6. Inform farmers about hazardous materials storage. Encourage to remove high risk materials.
7. Inform residents and farmers about the danger of abandoned wells to water supplies.
8. Encourage residents to report increased beaver activity in watershed.
9. Encourage residents to report suspicious behavior around Horse Pond.

2010 Updates to SWPP

Water Supply Protection District (WSPD) Bylaw

The North Brookfield Planning Board has requested a WSPD Bylaw that only includes only the regulations that the State of Massachusetts requires for surface water protection. The State of Massachusetts Department of Environmental Protection presently does not have a model Surface Water Bylaw to use as a guide. The North Brookfield Water Department therefore has provided the Planning Board with a sample bylaw passed by the Town of Cohasset for their surface water supply and the regulations **22.20B: Surface Water Supply Protection** and **310 CMR 22.20C: Surface Water Supply Protection for New and Expanded Class A Surface Water Sources**. (See Attachment A at the end of this report.) The North Brookfield Water Department is recommending that the Planning Board begin work to implement a WSPD Bylaw to better protect Horse Pond Reservoir and its tributaries from potential sources of contamination found in the 2007 SWPP.

Education and Outreach

The North Brookfield Water Department continues to conduct education and outreach to the Horse Pond Reservoir abutters and consumers through individual site visits, letters and phone contact and the annual Consumer Confidence Report (CCR).

Agricultural Activities

The North Brookfield Water Department contacted landowner James Mendala about pasturing horses within 100 feet of the North Brook Canal, a tributary of the Horse Pond reservoir, in accordance with Massachusetts General Law 310 CMR 22.20B (4). A notice was sent in December 2009 to cease pasturing of animals within 100 feet of said tributary. A second notice was sent in March of 2010. Copies were sent to the North Brookfield Board of Health and the Massachusetts Department of Environmental Protection's Central Regional Office. In March of 2010, Mr. Mendala notified the Water Department that the horses had been removed from the pasture until he can move the fences back to the 100' setback required. Subsequent watershed inspections have confirmed that the horses are no longer using said pasture. No other noticeable potential contaminating agricultural activities in the watershed were found through onsite and watershed inspections.

An aboveground diesel fuel storage tank pictured and noted in the 2007 SWPP has been moved away from the roadside just outside the 400 foot Zone A of the Reservoir to the landowner's (James Mendala) driveway. The tank does continue to be actively used for refueling farm equipment on the property.

Residential Activities

A new single-family residence has been built in close proximity to a Zone A tributary by resident Carol Cohen. The Water Department reviewed the building plans and did determine that the septic system was too close to the tributary utilizing Title V guidelines.

The project engineer changed the plans and moved the septic system out of the Zone A. No other difficulties reported with the construction of the new residence.

Wildlife Activity

The North Brookfield Water Department, Board of Health and residents living along Horse Pond Reservoir's Tributaries continue to work jointly in ensuring that any beaver activity is halted as soon as it is noticed. The Water Department is highly satisfied with the chain of action where a resident or employee of the Water Department notices activity, the Board of Health is notified and a trapping permit is issued. The Water Department notes that beaver activity in the watershed greatly affects the quality of the raw water coming into the treatment plant and considers any beaver activity a high priority in its weekly survey of the watershed.

The North Brookfield Water Department has adopted the strategies and techniques developed by GeesePeace to reduce the hazards caused by an ever increasing wild goose population in the watershed. Geesepeace is a non-profit organization dedicated to building better communities through innovative, effective and humane solutions to wildlife conflicts. The specific strategy used is to locate the goose nests, monitor activity to correctly time the site visit, go to the nest, check for transpiration and if there is none, use corn oil to cover the egg so there will be none. This process to reduce the wild goose population is endorsed by the Massachusetts Society for the Prevention of Cruelty to Animals. Federal and state registrations are completed before any work is done and all activity is reported at the end of the season.

Horse Pond Reservoir Dam Rehabilitation Project

North Brookfield is under a consent order to repair the Horse Pond reservoir dam. The Phase I inspection found the dam to be in "Poor" condition due to a deteriorating spillway and training walls, an inoperable low level gate valve, uncontrolled seepage, and trees on the downstream face. Lenard Engineering was hired to complete the Phase II Inspection which also found poor dam stability. Lenard was also hired to design the repairs needed to bring the dam into compliance. The design has been completed and accepted by the Office of Dam Safety. A debt exclusion vote to allow the town to borrow the money needed for the repairs passed by a large margin and the article to fund the repairs at the Annual Town Meeting also passed by a large amount. The construction bidding should begin shortly. The town has filed an application for funding through the USDA Rural Development loan and grant program. Approximately 80% of the population is served by the municipal water system, although only fifty-five percent (55%) are property owners. The importance of the water system to the town as a whole is clearly seen as the town taxpayers have decided to fund the repairs instead of leaving it to the water users to pay the cost.

Primary Contacts

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Attachment A

22.20B: Surface Water Supply Protection

(1) To protect surface waters used as sources of drinking water supply from contamination, the requirements of 310 CMR 22.20B shall apply to Zones A, B, C of a surface water source, except at:

(a) Rivers and streams designated as Class B waters pursuant to 314 CMR 4.00 which are used as drinking water sources and are not impounded at some point by means of a dam or dike to create a reservoir at which the water supply intake is located;

(b) Emergency sources approved by the Department under the provisions of M.G.L. 21G.

(2) On and after January 1, 2001, a public water system shall prohibit the following new or expanded land uses within the Zone A of its surface water sources.

(a) All underground storage tanks,

(b) Above-ground storage of liquid hazardous material as defined in M.G.L. c.21E, or liquid propane or liquid petroleum products, except as follows:

1. The storage is incidental to:

a. normal household use, outdoor maintenance, or the heating of a structure;

b. use of emergency generators;

c. a response action conducted or performed in accordance with M.G.L. c.21E and 310 CMR 40.000 and which is exempt from a ground water discharge permit pursuant to 314 CMR 5.05(14); and

2. The storage is either in container(s) or above-ground tank(s) within a building, or outdoors in covered container(s) or above-ground tank(s) in an area that has a containment system designed and operated to hold either 10% of the total possible storage capacity of all containers, or 110% of the largest container's storage capacity, whichever is greater. However, these storage requirements do not apply to the replacement of existing tanks or systems for the keeping, dispensing or storing of gasoline provided the replacement is performed in accordance with applicable state and local requirements;

(c) Treatment or disposal works subject to 314 CMR 3.00 or 5.00, except the following:

1. The replacement or repair of an existing treatment or disposal works that will not result in a design capacity greater than the design capacity of the existing treatment or disposal works;

2. treatment or disposal works for sanitary sewage if necessary to treat existing sanitary sewage discharges in non-compliance with Title 5, 310 CMR 15.00, provided the facility owner demonstrates to the Department's satisfaction that there are no feasible siting locations outside of the Zone A. Any such facility shall be permitted in accordance with 314 CMR 5.00 and shall be required to disinfect the effluent. The Department may also require the facility to provide a higher level of treatment prior to discharge;

3. treatment works approved by the Department designed for the treatment of contaminated ground or surface waters and operated in compliance with 314 CMR 5.05(3) or 5.05 (13).

4. discharge by public water system of waters incidental to water treatment processes.

(3) All on-site subsurface sewage disposal systems, as defined in 310 CMR 15.000 (Title 5), within Zones A, B, and C, shall be in compliance with the requirements of 310 CMR 15.000.

(4) No stabling, hitching, standing, feeding or grazing of livestock or other domestic animals shall be located, constructed, or maintained within 100 feet of the bank of a surface water source or tributary thereto. Owners and operators of agricultural operations should consult the Massachusetts Department of Food and Agriculture's "On-Farm Strategies to Protect Water Quality - An Assessment & Planning Tool for Best Management Practices" (December 1996) for information about technical and financial assistance programs related to erosion and sediment control and nutrient, pest, pesticide, manure, waste, grazing, and irrigation management.

(5) No burial shall be made, except by permission in writing by the Board of Water Commissioners or like body having jurisdiction over such source of supply, in any cemetery or other place within 100 feet of the high water mark of a source of public water supply or tributary thereto. No lands not under the control of cemetery authorities and used for cemetery purposes, from which lands the natural drainage flows into said source of water supply or tributary thereto, shall be taken or used for cemetery purposes until a plan and sufficient description of the lands is presented to the Department and until such taking or use is expressly approved in writing by the Department.

(6) No person shall swim, wade or bathe in any public surface water source and no person shall, unless permitted by written permit by the Board of Water Commissioners or like body having jurisdiction over such source, fish in; enter or go in any boat, seaplane, or other vehicle ; enter upon the ice for any purpose, including the cutting or taking of ice; or cause or allow any animal to go into, or upon, any surface water source or tributary thereto.

(7) Enforcement. A public water system has the following enforcement responsibilities with respect to protection of the Zone A, B, and C of its surface water source(s)

(a) A public water system shall conduct regular and thorough inspections of Zones A, B, and C to determine and enforce compliance with 310 CMR 22.20B.

The public water system shall take prompt enforcement actions against persons violating 310 CMR 22.20B, and report all such enforcement actions to the Department in the system's Annual Statistical Report the results of the regular inspections made during the preceding calendar year. The report shall include the number and dates of the inspections, the number, nature and outcome of violations found, and enforced against by the public water system, and the general condition of the watershed at the time of the last inspection.

(b) The public water system shall document on a form provided by the Department and submitted to the Department in calendar year 2001, that the public water system has established a protocol that provides the system with an opportunity to review and comment on all proposed new or expanded land uses or activities within the watershed of its surface water source(s) to local boards, commissions and other authorities with primary responsibilities for approving such uses and activities.

(c) The Department may take enforcement actions against any public water system which fails to carry out its enforcement responsibilities under 310 CMR 22.20B, or may enforce directly against persons violating 310 CMR22.20B.

310 CMR 22.20C: Surface Water Supply Protection for New and Expanded Class A Surface Water Sources

(1) Source Approval.

(a) A public water system shall obtain prior written approval of the Department for:

1. the development of a new surface water source;
2. the physical expansion of an existing surface water source or the replacement or modification of an existing intake structure;
3. any increase in withdrawal from an existing surface water source in excess of the permitted threshold volume as defined in 310 CMR 36.00; or
4. placing an existing unapproved or inactive surface water on-line.

(b) Persons seeking Department approval for any of the activities described in 310 CMR 22.20C(1)(a) are required to follow the procedures set forth in the "Guidelines and Policies for Public Water System".

(c) In determining whether to grant such approval, the Department will apply the criteria set forth in 310 CMR 22.20C and the "Guidelines and Policies for Public Water Systems."

(d) The Department will not grant its approval pursuant to 310 CMR 22.20C(1), unless the public water system demonstrates to the Department's satisfaction that the system:

1. complies with the applicable "Guidelines and Policies for Public Water Systems",
2. meets all applicable water quality standards set forth in the Massachusetts Drinking Water Regulations, 310 CMR 22.00, and will meet the requirements of 310 CMR 22.20A,B, C;
3. has delineated and mapped Zones A, B and C of the proposed surface water source and provided a map depicting existing land uses existing within Zones A, B and C;
4. has developed a Surface Water Supply Protection Plan in accordance with the Department's "Guidelines and Policies for Public Water Systems" and "Developing a Local Surface Water Supply Protection Plan" (revised May 2000), which shall be updated by the public water system, with a copy submitted to the Department, every three years thereafter; and
5. has developed a reservoir and watershed public control plan, to specify allowable and non-allowable uses on existing public surface water sources and within adjacent public surface water supplier-owned lands at new and existing sources, and contains provisions for public education, inspection, and enforcement.
6. obtain a permit or permit amendment for any withdrawal, in accordance with the Water Management Act, M.G.L. c. 21G, and 310 CMR 36.00.

(e) Municipal Source.

1. No new municipal surface water source, or physical expansion of an existing surface water source shall be placed on line or allowed to expand, unless:

- a. in the case of a Zone A contained entirely within the municipality, the municipality has adopted and has in effect surface water protection zoning or nonzoning controls that prohibit siting within the Zone A of each source the land uses set forth in 310 CMR 22.20C(2) unless the land uses are designed in accordance with the performance standards specified in 310 CMR 22.20C(2); and
- b. in the case of a municipality or municipalities in which any part of the Zone A of a proposed or physically expanded municipal surface water source is located the municipality (or municipalities) has in effect zoning or nonzoning controls that prohibit siting within Zone A the land uses set forth in 310 CMR 22.20C(2) unless the land uses are designed in accordance with the performance standards established in 310 CMR 22.20C(2), or the municipal supplier of water demonstrates to the Department's satisfaction that it has used best efforts to have such zoning or nonzoning controls adopted and in effect; and
- c. the municipality has submitted to the Department a copy of the adopted zoning or nonzoning controls, if any, including any local legislation that provides a variance, waiver or exemption process related to surface water protection zoning and nonzoning controls applicable to the Zone A of the municipal source.

2. An owner or operator of a municipal surface water source that will increase its withdrawal of water by more than the threshold volume, as defined in 310 CMR 36.00, shall, within two years of the effective date of a Water Management Act permit or permit amendment that authorizes the increase:

- a. in the case of a Zone A contained entirely within the municipality, adopt and have in effect surface water protection zoning or nonzoning controls that prohibit siting within the Zone A of the source the land uses set forth in 310 CMR 22.20C(2), unless the land uses are designed in accordance with the performance standards specified in 310 CMR 22.20C(2);and
- b. in the case of a municipality or municipalities in which any part of the Zone A of the source is located, have zoning or nonzoning controls in effect that prohibit the siting within the Zone A of land uses set forth in 310 CMR 22.20C(2), unless the land uses are designed in accordance with the performance standards specified in 310 CMR 22.20C(2), or have demonstrated to the Department's satisfaction that the municipal water supplier has used its best efforts to have the municipality or municipalities where the Zone A is located adopt zoning or nonzoning controls; and
- c. submit to the department a copy of the zoning or nonzoning controls in effect and any local legislation that provides a variance or exemption

process related the surface water protection zoning and nonzoning controls.

(f) Non-Municipal Sources. No new surface water source, or existing surface water source physically expanding, or increasing its withdrawal by more than the threshold volume as defined by 310 CMR 36.00, that will be used in a non-municipal public water system owned or operated by a non-municipal public water supplier shall demonstrate to the Department's satisfaction that it has used its best efforts to have all municipalities in which Zones A, B and C of the surface water source are located establish zoning or nonzoning controls that prohibit siting within Zones A, B and C the land uses set forth in 310 CMR 22.20C(2), unless the land uses are designed in accordance with the performance standards specified therein.

(g) The proponent may meet the requirements set forth in 310 CMR 22.20C(1)(e) and 310 CMR 22.20C(1)(f) by demonstrating that the water supplier has acquired land for water supply purposes or the existing rights in perpetuity or for a specific period of years stated in the form of a restriction, easement, covenant or condition in a deed or other instrument, or other mechanism approved by the Department, prohibiting the siting within Zone A of the land uses set forth in 310 CMR 22.20C(2).

(h) Amendment or Repeal of Zoning/Nonzoning Controls: no public water system surface water source shall remain on-line more than 120 days following the amendment or repeal of surface water protection zoning or nonzoning controls protecting that surface water source, or the expiration of any rights stated in a deed or other instrument approved pursuant to 310 CMR 22.20C(1)(g), unless the Department finds in writing that the water supplier meets the requirements set forth in 310 CMR 22.20C(1)(e) or 310 CMR 22.20C(1)(f), whichever is applicable, or grants a variance in accordance with 310 CMR 22.20C(3).

(i) Water Supply Emergency. The Department may exempt a water supplier from any of the requirements set forth in 310 CMR 22.20C(1) while a declaration of a state of water supply emergency pursuant to M.G.L. Ch.21G is in effect. In the event that the Department declares a state of water supply emergency, the surface water source shall operate, for the duration of the state of water supply emergency, as directed by the Department.

(2) Restricted Activities Upon Surface Water Sources and Within Protection Zones. Required Surface Water Protection Controls Applicable to Zone A: Surface water protection zoning and nonzoning controls submitted to the Department in accordance with 310 CMR 22.20C(1), shall collectively prohibit the siting of the following new land uses within Zone A:

(a) land uses described in 310 CMR 22.20B(2); (as follows):

(2) On and after January 1, 2001, a public water system shall prohibit the following new or expanded land uses within the Zone A of its surface water sources.

- (a) All underground storage tanks,
- (b) Above-ground storage of liquid hazardous material as defined in M.G.L. c.21E, or liquid propane or liquid petroleum products, except as follows:

- 1. The storage is incidental to:
 - a. normal household use, outdoor maintenance, or the heating of a structure;
 - b. use of emergency generators;
 - c. a response action conducted or performed in accordance with M.G.L. c.21E and 310 CMR 40.000 and which is exempt from a ground water discharge permit pursuant to 314 CMR 5.05(14); and
- 2. The storage is either in container(s) or above-ground tank(s) within a building, or outdoors in covered container(s) or above-ground tank(s) in an area that has a containment system designed and operated to hold either 10% of the total possible storage capacity of all containers, or 110% of the largest container's storage capacity, whichever is greater. However, these storage requirements do not apply to the replacement of existing tanks or systems for the keeping, dispensing or storing of gasoline provided the replacement is performed in accordance with applicable state and local requirements;

- (c) Treatment or disposal works subject to 314 CMR 3.00 or 5.00, except the following:

- 1. the replacement or repair of an existing treatment or disposal works that will not result in a design capacity greater than the design capacity of the existing treatment or disposal works;
- 2. treatment or disposal works for sanitary sewage if necessary to treat existing sanitary sewage discharges in non-compliance with Title 5, 310 CMR 15.00, provided the facility owner demonstrates to the Department's satisfaction that there are no feasible siting locations outside of the Zone A. Any such facility shall be permitted in accordance with 314 CMR 5.00 and shall be required to disinfect the effluent. The Department may also require the facility to provide a higher level of treatment prior to discharge;
- 3. treatment works approved by the Department designed for the treatment of contaminated ground or surface waters and operated in compliance with 314 CMR 5.05(3) or 5.05 (13).
- 4. discharge by public water system of waters incidental to water treatment processes.

(3) All on-site subsurface sewage disposal systems, as defined in 310 CMR 15.000 (Title 5), within Zones A, B, and C, shall be in compliance with the requirements of 310 CMR 15.000.

(4) No stabling, hitching, standing, feeding or grazing of livestock or other domestic animals shall be located, constructed, or maintained within 100 feet of the bank of a surface water source or tributary thereto. Owners and operators of agricultural operations should consult the Massachusetts Department of Food and Agriculture's "On-Farm Strategies to Protect Water Quality - An Assessment & Planning Tool for Best Management Practices" (December 1996) for information about technical and financial assistance programs related to erosion and sediment control and nutrient, pest, pesticide, manure, waste, grazing, and irrigation management.

(5) No burial shall be made, except by permission in writing by the Board of Water Commissioners or like body having jurisdiction over such source of supply, in any cemetery or other place within 100 feet of the high water mark of a source of public water supply or tributary thereto. No lands not under the control of cemetery authorities and used for cemetery purposes, from which lands the natural drainage flows into said source of water supply or tributary thereto, shall be taken or used for cemetery purposes until a plan and sufficient description of the lands is presented to the Department and until such taking or use is expressly approved in writing by the Department.

(6) No person shall swim, wade or bathe in any public surface water source and no person shall, unless permitted by written permit by the Board of Water Commissioners or like body having jurisdiction over such source, fish in; enter or go in any boat, seaplane, or other vehicle; enter upon the ice for any purpose, including the cutting or taking of ice; or cause or allow any animal to go into, or upon, any surface water source or tributary thereto.

(7) Enforcement. A public water system has the following enforcement responsibilities with respect to protection of the Zone A, B, and C of its surface water source(s)

(a) A public water system shall conduct regular and thorough inspections of Zones A, B, and C to determine and enforce compliance with 310 CMR 22.20B. The public water system shall take prompt enforcement actions against persons violating 310 CMR 22.20B, and report all such enforcement actions to the Department in the system's Annual Statistical Report the results of the regular inspections made during the preceding calendar year. The report shall include the number and dates of the inspections, the number, nature and outcome of violations found, and enforced against by the public water system, and the general condition of the watershed at the time of the last inspection.

(b) the public water system shall document on a form provided by the Department and submitted to the Department in calendar year 2001, that

the public water system has established a protocol that provides the system with an opportunity to review and comment on all proposed new or expanded land uses or activities within the watershed of its surface water source(s) to local boards, commissions and other authorities with primary responsibilities for approving such uses and activities.

(c) The Department may take enforcement actions against any public water system which fails to carry out its enforcement responsibilities under 310 CMR 22.20B, or may enforce directly against persons violating 310 CMR22.20B.

(8) No person shall apply herbicides to any surface water body including but not limited to any reservoir and their tributaries, which serve as a source of public water supply without a permit issued by the Department pursuant to M.G.L. c. 111, § 5E. This requirement does not apply to the application of algaecides containing copper by the public water system. However, the public water system shall notify the Department in writing prior to the application of such algaecides. (End of 310 CMR 22.20B(2))

(b) facilities that, through their acts or processes, generate, treat, store or dispose of hazardous waste that are subject to M.G.L. c. 21C and 310 CMR 30.000, except for the following:

1. very small quantity generators, as defined by 310 CMR 30.000;
2. treatment works approved by the Department designed in accordance with 314 CMR 5.00 for the treatment of contaminated ground or surface waters;

(c) sand and gravel excavation operations;

(d) uncovered or uncontained storage of fertilizers;

(e) uncovered or uncontained storage of road or parking lot de-icing and sanding materials;

(f) storage or disposal of snow or ice, removed from highways and streets outside the Zone A, that contains deicing chemicals;

(g) uncovered or uncontained storage of manure;

(h) junk and salvage operations;

(i) motor vehicle repair operations;

(j) cemeteries (human and animal) and mausoleums;

(k) solid waste combustion facilities or handling facilities as defined at 310 CMR 16.00;

(l) land uses that result in the rendering impervious of more than 15%, or more than 20%

with artificial recharge, or 2500 square feet of any lot, whichever is greater; and

(m) commercial outdoor washing of vehicles, commercial car washes.

(3) Department Variances.

(a) The Department may grant a variance from the requirements of 310 CMR 22.20C(1)(f) to a proponent that, despite its best efforts, is unable to adopt one or more of the requirements set forth in 310 CMR 22.20C(2) if the Department finds that strict compliance with such requirements would result in an undue hardship and would not serve to further the intent of 310 CMR 22.20A, B and C.

(b) The Department will consider the following factors in making the finding necessary to grant a variance pursuant to 310 CMR 22.20C(3):

1. the reasonableness of available alternatives to the proposed surface water source;
2. the overall effectiveness of existing land use controls and other measures on the protection of the proposed surface water source and any other water sources used by the supplier of water;
3. the nature and extent of the risk of contamination to the proposed surface water source that would result from the granting of the variance; and
4. whether the variance is necessary to accommodate an overriding community, regional, state, or national public interest.
5. These factors need not be weighed equally, nor must all of these factors be present for the Department to grant a variance. The presence of any single factor may be sufficient for the granting of a variance.

(c) A variance granted pursuant to 310 CMR 22.20C(3) shall be conditioned on such monitoring, public education or other requirements as the Department may prescribe.

(d) Requests for variances shall be made in writing and clearly state the provision or requirement from which the variance is sought and the reasons and facts that support the granting of a variance, and shall include an evaluation of the reasonableness of alternatives to the proposed surface water source.

(e) Within 14 days of filing a request for variance under 310 CMR 22.20C(3)(a), the proponent filing the request shall notify persons served by the supplier of water by direct mail and by publication on not less than three consecutive days in a newspaper of general circulation in the service area of the supplier of water. The notice shall include:

1. the provision or requirement from which the variance is being sought;
2. the identity of the proponent of the surface water source;
3. the identity of the person requesting the variance, the address where a copy of the request for variance will be available for public inspection, and the times it will be available; and

4. a statement that the Department will receive written comments concerning the request from the public for a 30 day period commencing on the last date of newspaper publication.

(f) Each proponent submitting a request for variance shall submit to the Department a copy of the public notice required by 310 CMR 22.20C(3)(e) and affidavits attesting to the fact that the notices have been given. The Department will receive written comments concerning the request from the public for a 30- day period commencing on the last date of newspaper publication.

(g) Within 30 days of the close of the comment period, each proponent requesting a variance under 310 CMR 22.20C(3)(a) shall respond in writing to all reasonable public comments received by the Department.

(h) The Department may schedule a public hearing on any request for variance submitted in accordance with 310 CMR 22.20C(3) if it determines on the basis of the public comments received that such a hearing is in the public interest. In the event that the Department schedules a hearing, the proponent filing the request shall notify persons served by the supplier of water of the hearing by publication on not less than three consecutive days in a newspaper of general circulation in the service area of the supplier of water. In addition, the proponent filing the request shall notify each person who submitted written comment concerning the request to the Department by direct mail. The proponent filing the request shall submit to the Department a copy of the public notices required by 310 CMR 22.20C(3)(h), and an affidavit attesting to the fact that the notices have been given, prior to the hearing. Proponents filing a request for a variance under 310 CMR 22.20C(3) shall pay in full the cost of any hearing scheduled.

(i) Within 30 days of the grant of a variance under 310 CMR 22.20C(3), any proponent who receives a variance shall notify persons served by the supplier of water of the granting of the variance, including any conditions imposed by the Department, by direct mail and by publication on not less than three consecutive days in a newspaper of general circulation in the service area of the supplier of water. The proponent who receives the variance shall submit to the Department a copy of the public notices and an affidavit attesting to the fact that the notices have been given upon completion of the public notification.