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*Via Electronic Mail*

May 9, 2018

Mr. Dean Tagliaferro  
EPA Project Coordinator  
U.S. Environmental Protection Agency  
c/o Avatar Environmental  
10 Lyman Street, Suite 2  
Pittsfield, MA 01201

**RE: Proposed Hazardous Waste Landfill Sites in Lee and Great Barrington**

Dear Mr. Tagliaferro:

The Berkshire Regional Planning Commission as been working with the “Rest of River” towns to develop local information supporting EPA’s position requiring out-of-state disposal of the PCB contaminated material to be removed from the Housatonic River site. GE has proposed three possible landfill sites, two in the Town of Lee (Woods Pond/Lane Construction and Forest Street) and one in the Town of Great Barrington (Rising Pond). All three sites are contrary to long-standing adopted community plans and local zoning and all three have major environmental constraints which would preclude their use as landfill sites, hazardous or otherwise. We offer the following information to assist EPA Region 1 in following up on the Environmental Appeals Board (EAB) suggestion for “Further record development . . . on the potential impacts of a spill on environmental resources, business, and residences near the on-site disposal locations” (EAB Order, January 26, 2018, p. 136).

Specifically, this letter, with multiple attachments, addresses the following for each site as applicable:

- Town Master Plan and Open Space & Recreation Plan pertinent policy statements
- Town Zoning for Sites
- Other Pertinent Local Regulation
- Drinking Water & Aquifer Considerations
- Bedrock and Surficial Geology

**Woods Pond/Lane Construction Site - Lee**

1. Lee adopted its Master Plan in 2000 and that is the leading policy document concerning future land uses in town. Pertinent excerpts are shown in Attachment A. The plan specifically cites the unique

impact of the underlying limestone in parts of Lee (including the Woods Pond site). It cites the gravel mines in north Lee for their potential for redevelopment and reuse. The site (west of the powerline) is shown either for Industrial/Mining or Redevelopment Reuse. Specifically, the Plan calls to “Plan to redevelop industrial and commercial areas as they become vacant, underutilized or inappropriate, particularly gravel mining and heavy industrial sites. Depending on site conditions, planned redevelopment might encompass office/light industrial or specialized housing and recreation, if not conservation uses.”

2. Lee adopted its Open Space and Recreation Plan in January 2016 which provides a detailed compilation of facts regarding the topography, geology and natural environment and acts as a primary policy document regarding open space and natural resources. Pertinent excerpts are shown in Attachment B. The Plan specifically discusses the bedrock geology underlying the Woods Pond as “soft, carbonate rock formation” and the floor of the Housatonic Valley as underlain by Stockbridge Limestone of Ordovician Age. The surficial geology of the site as “the coarse grained, ice contact stratified drift deposits . . . immediately south of Woods Pond. These deposits have a significant impact on the groundwater potential for the area.” The Woods Pond Aquifer, which lies under the Woods Pond site, is one of two major aquifers in town. “The Woods Pond Aquifer currently yields in excess of two million gallons per day to four wells operated by a local industry. . . .” Because of the underlying bedrock geology of marble-limestone, the vegetation growing in the area is distinct, with many species occurring only in calcium-rich areas, which are very unusual in New England. Map 4: Soils and Geologic Features Map indicates most of the Lane Construction site between the actual proposed landfill site and Woods Pond and the Housatonic River consist of “Excessively Drained Soils.” This indicates that contamination leaching from the landfill will have an easy pathway to Woods Pond and the River.
3. Town of Lee Zoning Bylaws were first adopted in 1963, with a complete revision in 1974 which continues to be enforced. Pertinent portions of the Zoning Bylaw, including a map of the zoning with the landfill sites shown, are contained in Attachment C. Zoning in Massachusetts is intended to implement the community’s master plan. The Woods Pond site is primarily zoned Conservation-Residential (CR) with only a small western portion zoned “Industrial” (I) since at least 1974. The CR zone allows dwellings, farm, forestry or nursery, resorts, accessory uses to those, and municipal uses by-right. Some other uses are allowed by Special Permit granted by the Zoning Board of Appeals but these are closely related out-door recreation and farming uses. The I zone allows a variety of manufacturing and business uses by-right. Landfills of any sort are not listed as being permitted by-right or by special permit in either zoning district. Lee’s Zoning Bylaws do not “expressly permit variance for use”; therefore under Massachusetts General Laws, Chapter 40A, the Zoning Enabling Act, Section 10: Variances, use variances are not permitted (see Attachment D). The Town Land Use Clerk has confirmed that the Lee Zoning Board has never considered nor granted any use variances.
4. Drinking Water & Aquifer Considerations. In the late 1960s the USGS conducted a series of bedrock and hydrologic studies to identify areas where future exploration of groundwater aquifers would most likely provide high-yield, high-quality groundwater supplies. These included extensive studies of the Housatonic River Basin. The MassGIS Aquifer Mapping datalayer is based on these USGS hydrologic atlas series. These studies identified a 600-acre, medium yield aquifer south of Woods Pond, located in saturated sand and gravel in deposits of stratified glacial drift. The soils are porous and permeable. A medium yield-aquifer is one that yields 100-300 gallons per minute and has a transmissivity yield of 1400-4000 square feet per day. The location of this aquifer is shown on the

Water Resources Map (Lee Open Space and Recreation Plan (2015) (Attachment E). The previous *Lee Open Space and Recreation Plan*, published in 2000, cites that the Lee mill located south of Woods Pond withdrew two million gallons of water per day from this aquifer for its processes, verifying its potential use for industry (the mill subsequently closed and was included in an EPA Area-wide Plan). The towns of Lee and Lenox have been denied the use of this productive aquifer as a public drinking water source due to the high concentrations of PCBs in Woods Pond, and the concern for PCB contamination from infiltration of surface water into the aquifer. This is a significant loss for the Town of Lenox, which struggles to meet high demand for drinking water during the busy summer tourist season, resulting in the Town seasonally having to purchase water from the City of Pittsfield.

The Woods Pond site also encroaches on an Interim Wellhead Protection Area for a regulated Public Water Supply (also Attachment E). This serves the Maple Glade Campgrounds (DEP 1150012-01G). The Interim Wellhead Protection Area falls within the operating area of the Woods Pond site and just misses the landfill area. This PWS is a Transient Non-Community water system, which means a public water system that is not a community water system or a non-transient non-community water system but is a public water system which serves water to 25 different persons at least 60 days of the year.

5. Bedrock and Surficial Geology is a critical issue for the Woods Pond Site (as well as for the Rising Pond Site). As cited in the Lee Open Space and Recreation Plan, the bedrock under the Woods Pond Site is of the Stockbridge Formation. This is primarily marble and is identified by the USGS as a Karst type geology buried under greater than 50 feet of glacially derived insoluble sediments in a humid climate (Attachment F). The sediments in this case consist of sand and gravel (from which the Lane Construction gravel operation draws materials) and water permeates those with ease. The underlying Karst geology is also porous and therefore any contaminants easily seep through the sediment and then can flow through the marble bedrock for considerable distances. BRPC encountered this issue in a recent natural gas pipeline permitting process involving areas also with Karst geology within the Housatonic Basin further to the north and submitted comments to the Federal Energy Regulatory Commission (Attachment G). Due to the critical issues involving construction of pipelines in areas of Karst geology, FERC has special provisions requiring special consideration during the NEPA review process for proposed construction in them (Attachment H).

Carbonate rocks such as limestone, dolomite, and marble, are more easily eroded and prone to dissolution due to water movement and infiltration, creating fissures and channels that allow rapid flow of groundwater. The carbonate rock formations of the Western New England Marble Valleys ecoregion are categorized by the U.S. Geological Survey (USGS) as karst geology in metamorphosed limestone, dolostone, and marble. Karst is a geological formation that results when naturally acidic rain or surface water seeps through soluble minerals in the bedrock underneath the topsoil. This long-term combination of water and minerals results in an underground landscape shot through with cracks, fissures and other fragmented characteristics. The rocks are dissolved mostly along fractures and create caves and other conduits that act as underground streams and aquifers. Attachment I is a map published by the U.S. Geologic Survey (USGS) showing the Carbonate Rock Aquifer formations in New York and New England (Olcott, 1995). As noted by the USGS, numerous environmental and engineering problems arise in areas where natural geologic substrates are subject to erosion and solution, which can generate voids and fissures in the subsurface (Weary & Doctor, 2014, p. 1, Attachment J). Such areas are collectively known as karst.

Traditionally the term karst has been used to refer solely to regions of exposed soluble bedrock having surface landforms such as sinkholes, sinking streams and springs, that reflect the presence of subsurface voids or caves (Weary & Doctor, 2014). According to a USGS map, fissures, tubes and covers can be over 1,000 feet long and have an extent of 50-250 feet vertical (Tobin & Weary, 2004). Fissures are commonly conduits for subterranean streams. In addition, they can cause serious engineering problems, such as reservoir leakage and instability of cuts, bridge abutments, piers, and dam foundations and abutments (Davies, as cited in Tobin & Weary, 2004). Examples of the karst geology can be found in the natural springs scattered throughout the Housatonic River watershed, many of which have been used as drinking water sources for generations. Caves are well-known in certain areas of the watershed, some providing critical habitat for bat colonies. The openings are also conduits for water and refuse disposal from the surface or, in caves, for pollutants that can be carried for great distances (Davies, as cited in Tobin & Weary, 2004).

In addition to a karst geology, the soils that overly the bedrock are moderately- to excessively-draining soils, having been created by the erosion of the parent limestone and marble bedrock materials and deposition of materials during glacial movements. Throughout the Housatonic River watershed a thin mantle of unconsolidated glacial deposits covers the bedrock surface. These deposits are composed predominantly of till in the upland areas and stratified drift in the valleys, with the stratified drift composed of coarse-grained sediments that are highly porous and permeable (Gay & Frimpter, 1985, (Attachment K)). Where the saturated thickness of the stratified drift is deep, the drift can form an aquifer capable of sustaining municipal or industrial water supplies. This is the case at Woods Pond, where a moderate-yield aquifer underlies the site below the proposed landfill.

The general soils map unit of Woods Pond site is Copake-Hero-Hoosic soils, which are very deep, somewhat excessively drained and moderately well drained, nearly level to moderately steep, loamy soils formed in glacial outwash, found on outwash fans and terraces (Scanu, 1988, General Soils Map inset page) (Attachment L). These soils have rapid permeability, particularly in the substratum, which would allow rapid infiltration of PCB-contaminated leachate that may leak through landfill linings or other failures at the site into groundwater and into the Housatonic River. It is well documented that hazardous materials leachate can permanently contaminate groundwater sources, particularly when the chemical make-up of the hazardous material is resistant to detoxification processes, such as is the case here with GE's PCBs of the aroclor group. According to the USGS map, the soil here is greater than 50 feet in depth, but due to extensive gravel mining of this area, the depth to the water table and to bedrock have been compromised. This is evident in the many ponds that dot the gravel pit.

6. Rare Species and Natural Communities The site is within the Upper Housatonic River Area of Critical Environmental Concern. Additionally, as stated in *Rare Species and Natural Community Surveys in the Housatonic River Watershed of Western Massachusetts*, a recent publication by the Massachusetts Natural Heritage & Endangered Species Program (NHESP), the Housatonic River watershed is critical to biological conservation in Massachusetts. The Western New England Marble Valleys ecoregion that spans the lowlands of the Housatonic watershed is characterized by calcium-rich conditions that support some of the rarest plants, animals, and natural communities in the state (NHESP, 2010, p.1). The habitat area around Woods Pond has been categorized by the NHESP as

Highest Priority Areas (Areas #1) based on locations of clusters of Endangered or Threatened species and high priority natural community types (NHESP, 2010, pp. 22-25).

The entire Massachusetts length of the Housatonic River flows through the Western New England Marble Valleys ecoregion. Although the last glaciers of 10,000-14,000 years ago and the continuing erosive forces of water shaped the current landforms and soils in the watershed, it is the underlying marble that makes the Housatonic watershed one of the most biologically distinctive areas in Massachusetts. The principal characteristics of the Western New England Marble Valleys ecoregion are extensive groundwater aquifers and calcium-rich soil and water, which provide hydrological and chemical conditions preferred by plants and animals found nowhere else in the Commonwealth (NHESP, 2010, p.2).

7. Another Community Consideration for the Woods Pond Site is its proximity to residents in the Lenox Dale village in the abutting Town of Lenox (which shares Woods Pond with Lee). The closest residences are 1,660 feet from the site (0.3 miles); the center of the village is 1,857 feet away (0.35 miles). Lenox has no land use control over the Woods Pond site which lies in the Town of Lee but is much affected by it. Attachment M is a description provided by the Lenox Land Use Manager of the potential issues for Lenox Dale if a hazardous waste landfill were to be located at the Woods Pond site.

In summary, the Woods Pond site is inappropriate for a TSCA waiver, due to its karst geology and the excessively-drained soils, which would facilitate the rapid spread of contaminated leachate plumes into the interconnected groundwater and surface waters of the Housatonic River – the very natural resource that the GE cleanup is supposed to remediate. This rapid water movement could include any leachate plume that migrated from a landfill storing high concentrations of PCBs and other contaminants. Due to the close proximity of the proposed Woods Pond landfill site, contaminated leachate could readily contaminate the Housatonic River. The reason the rare species and priority natural communities are located in these areas are because of the soils derived from the calcium-rich bedrock, and contamination of those soils and the rapid movement of water between groundwater and surface water sources would be devastating to the biodiversity of the area. The difficulty in containing and remediating contaminated groundwater plumes is evident throughout New England, including several GE-contaminated groundwater plumes in Pittsfield.

Lee and Lenox residents and town officials have been consistently and vocally opposed to the siting of a potential PCB landfill at the Lane Construction site and have been central to the development of the Housatonic Rest of River Municipal Committee, an appellant in the EAB permitting process, and they expect to continue to be actively engaged in opposing the siting of a landfill.

### **Forest Street Site - Lee**

1. Lee adopted its Master Plan in 2000 which is the leading policy document concerning future land uses in town. Pertinent excerpts are shown in Attachment A. The plan specifically cites the significant impact of the location of more resistant rocks (such as at the Forest Street site) on development patterns in Lee. Under “Goals Objectives and Strategies for Natural Resources and Outdoor Recreation” a goal is to “Protect Mountain Ridges and Steep Slopes”; an objective is to “Protect erosion-sensitive areas, scenic hilltops and ridgetops by selectively guided acquisition and/or regulation”; and strategies are to “Adopt the Scenic Mountain Act (see Other Pertinent Local

Regulations, below) for defined areas generally above 1,500 feet and development protective regulation, and/or: Enact steep slope development standards under zoning to ensure that development in sensitive areas is curtailed and controlled.” In the Master Plan, the Environmental Constraints & Concerns on Land Development Map (Attachment N) shows the northward site on Forest Street to be a mixture of Land Considered Undevelopable or Potentially Undevelopable Land with Moderate Constraints. The southward site is almost entirely shown as Land Considered Undevelopable. The sources of the data used to make those determinations follow the map. The Future Land Use Map indicates this area should be Conservation, Municipal/Recreation.

2. Lee adopted its Open Space and Recreation Plan in January 2016 which provides a detailed compilation of facts regarding the topography, geology and natural environment and acts as a primary policy document regarding open space and natural resources. Pertinent excerpts are shown in Attachment B. The Plan states, when discussing the hills to the east, south (Forest Street sites) and west, “These steep slopes are the largest single physical element affecting the future development of Lee.” In discussing the Scenic Mountain Overlay District (see Other Pertinent Local Regulations, below) the Plan indicates:

The purpose of the law is to regulate land disturbance activities that could have a significant adverse effect on watershed resources or natural scenic qualities because of water quality pollution or destruction of vegetation. Most land disturbance activities that involve removal, filling, excavation, clearing or other alteration of land located within the district, including projects requiring a special permit and single family homes, will require the filing of a Notice of Intent with the Conservation Commission. Upon review, the Commission has the authority to apply special conditions to the development to avoid or minimize natural resource degradation.

The Plan also notes that the surficial geology in upland areas consists of a thin mantle of glacial till, a poorly sorted mixture of silt, sand, gravel, boulders and clay deposited directly by the glacial ice as it advanced. Much, if not all of both the northern and southern sites are shown as “Excessively Drained Soils” (due to the steep slopes and shallow depth to bedrock in these areas) in Map 4: Soils and Geologic Features in the Plan. Because of Lee's steep topography in this portion of town, the potential for soil erosion is always present, but is especially likely in areas with soils that are classified as “highly erodible” by the Natural Resources Conservation Service. Goose Pond Brook is identified as a Cold Water Fishery in the Plan (Attachment E) and landfills above the brook would create considerable issues of additional siltation and would increase water temperatures in the brook, negatively impacting that identified Fishery. The Plan has a goal “To Improve the Environmental Quality of the Town through Proper Land Resource Considerations & Management” and as a strategy to “Protect, through regulatory means such as the Scenic Mountain Act, erosion-sensitive areas, hilltops and scenic ridgetops from development impacts.”

3. Town of Lee Zoning Bylaws were first adopted in 1963, with a complete revision in 1974 which continues to be enforced. Pertinent portions of the Zoning Bylaw are contained in Attachment C. Zoning in Massachusetts is intended to implement the community’s master plan. The northernmost Forest Street site contains some legacy Industrial zoning consisting of less than 25% of the site (site of a long-abandoned mill which possibly still existed in 1963) but most of the site, uphill from Forest Street and Goose Pond Brook, is zoned Conservation-Residential. The entire southernmost site has been zoned Conservation-Residential. Landfills of any sort are not listed as being permitted by-right or by special permit in either zone. Lee’s Zoning Bylaws do not “expressly permit variance for use”;

therefore, under Massachusetts General Laws, Chapter 40A, the Zoning Enabling Act, Section 10: Variances, use variances are not permitted (see Attachment D). The Town Land Use Clerk has confirmed that the Lee Zoning Board has never considered nor granted any use variances.

4. The Other Pertinent Local Regulation is the Town of Lee Scenic Mountains Regulations (Attachment O). The Berkshire Scenic Mountain Act was accepted by Lee Town Meeting on May 10, 2001. The Regulations became effective on October 24, 2008. They were adopted in accordance with Massachusetts General Laws Pursuant to the Berkshire Scenic Mountains Act Chapter 131, Section 39A. As stated in Section 1.2 of the Regulations:

The purpose of the law is to regulate removal, filling, excavation, clearing of vegetation or other alteration of land within mountain regions designated by the town which is likely to have a significant adverse effect on watershed resources or natural scenic qualities because of the pollution or diminution of ground or surface water supply, public or private; erosion; flooding; substantial changes in topographic features; or substantial destruction of vegetation.

The Forest Street sites are entirely within areas regulated by the Conservation Commission of the Town of Lee under the Scenic Mountain Regulations (see Map: Attachment P).

Bedrock, Surficial Geology and Topography: The Forest Street site is located in the Lower Berkshire Hills ecoregion of the Housatonic watershed. This area is characterized by steep slopes and soils that are shallow to bedrock. The general soils map unit of the Forest Street Site is Tunbridge-Lyman-Peru which are well-drained somewhat excessively and moderately well drained soils; gently sloping to very steep loamy soils formed in glacial till derived from schist, gneiss and granite (Scanu, 1988, p. General Soils Map inset page) (see Attachment L).

The Forest Street sites consists of Gneiss bedrock with a very shallow layer of overlying glacial till. The overall topography is a 26.5% slope (164 foot rise over 620 feet) for the northward site and a 32.7% slope (157 foot rise over 480 feet) for the southward site (Source: MassGIS LiDAR Terrain Data 2015). It would be difficult, if not impossible, to stabilize any landfill on this geology and slope. The northernmost site has a stream running northward through it into Goose Pond Brook (MassDEP Wetlands GIS data). In summary, the Forest Street sites are inappropriate for a TSCA waiver, due to the very steep topography, very shallow depth to gneiss bedrock and therefore excessively-drained soils, which would facilitate the rapid spread of contaminated leachate plumes into the immediately downhill cold water fisheries of Goose Pond Brook and Greenwater Pond Brook and ultimately to the Housatonic River which is 6,895 feet from the site via the watercourses.

5. Environmental Constraints. Wetland resources are found on the site, including streams (riverfront, bank), a pond (land under water, bank), and isolated wetlands. The high-quality Goose Pond Brook (identified as a Cold Water Fishery by MassWildlife) steeply descends along a rocky substrate to discharge into the Housatonic River.

### **Rising Pond Site – Great Barrington**

The Town of Great Barrington has provided extensive comments via letter to you on May 9, 2018 (Attachment Q). The Town's letter provides considerable information regarding the site's status in the Great Barrington 2013 Master Plan and its zoning.

Bedrock and Surficial Geology: The following information reinforces the Town's comments regarding the potential landfill's impacts on the Existing Drinking Water Aquifer. Like the Woods Pond site, the Rising Pond site is part of the Western New England Marble Valleys ecoregion that spans the lowlands of the Housatonic watershed is characterized by calcium-rich conditions that support some of the rarest plants, animals, and natural communities in the state (NHESP, 2010, p.1). The watershed is critical to biological conservation in Massachusetts. The Western New England Marble Valleys ecoregion that spans the lowlands of the Housatonic watershed is characterized by calcium-rich conditions that support some of the rarest plants, animals, and natural communities in the state (NHESP, 2010, p.1).

The entire Massachusetts length of the Housatonic River flows through the Western New England Marble Valleys ecoregion. Although the last glaciers of 10,000-14,000 years ago and the continuing erosive forces of water shaped the current landforms and soils in the watershed, it is the underlying marble that makes the Housatonic watershed one of the most biologically distinctive areas in Massachusetts. The principal characteristics of the Western New England Marble Valleys ecoregion are extensive groundwater aquifers and calcium-rich soil and water, which provide hydrological and chemical conditions preferred by plants and animals found nowhere else in the Commonwealth (NHESP, 2010, p.2).

Carbonate rocks such as limestone, dolomite, and marble, are more easily eroded and prone to dissolution due to water movement and infiltration, creating fissures and channels that allow rapid flow of groundwater. The carbonate rock formations of the Western New England Marble Valleys ecoregion are categorized by the U.S. Geological Survey (USGS) as karst geology in metamorphosed limestone, dolostone, and marble. Karst is a geological formation that results when naturally acidic rain or surface water seeps through soluble minerals in the bedrock underneath the topsoil. This long-term combination of water and minerals results in an underground landscape shot through with cracks, fissures and other fragmented characteristics. The rocks are dissolved mostly along fractures and create caves and other conduits that act as underground streams. As noted by the USGS, numerous environmental and engineering problems arise in areas where natural geologic substrates are subject to erosion and solution, which can generate voids and fissures in the subsurface (Weary & Doctor, 2014, p. 1). Such areas are collectively known as karst.

Traditionally the term karst has been used to refer solely to regions of exposed soluble bedrock having surface landforms such as sinkholes, sinking streams and springs, that reflect the presence of subsurface voids or caves (Weary & Doctor, 2014). According to a USGS map, fissures, tubes and covers can be over 1,000 feet long and have an extent of 50-250 feet vertical (Tobin & Weary, 2004). Fissures are commonly conduits for subterranean streams. In addition, they can cause serious engineering problems, such as reservoir leakage and instability of cuts, bridge abutments, piers, and dam foundations and abutments (Davies, as cited in Tobin & Weary, 2004). Examples of the karst geology can be found in the natural springs scattered throughout the Housatonic River watershed, many of which have been used as drinking water sources for generations. Caves are well-known in certain areas of the watershed, some providing critical habitat for bat colonies. The openings are also conduits for water and refuse disposal from the surface or, in caves, for pollutants that can be carried for great distances (Davies, as cited in Tobin & Weary, 2004).

In addition to a karst geology, the soils that overlie the bedrock are moderately- to excessively-draining soils, having been created by the erosion of the parent limestone and marble bedrock materials. Throughout the Housatonic River watershed a thin mantle of unconsolidated glacial deposits covers the bedrock surface. These deposits are composed predominantly of till in the upland areas and stratified



drift in the valleys, with the stratified drift composed of coarse-grained sediments that are highly porous and permeable. Where the saturated thickness of the stratified drift is deep, the drift can form an aquifer capable of sustaining municipal or industrial water supplies.

According to the Soil Conservation Service, carbonate rocks are overlaid by less than or equal to 50 feet of glacially derived soil. The general soil map units of Rising Pond are Amenia-Pittsfield-Farmington: very deep and shallow, moderately well drained, well drained, and somewhat excessively drained, nearly level to very steep, loamy soils formed in glacial till derived from limestone; on uplands (Scanu, 1988, p. General Soils Map inset page).

In summary, the Rising Pond site is inappropriate for a TSCA waiver, primarily due to the fact that a landfill here would deprive the Town of Great Barrington of developing a critical public drinking water source. More generally the site is inappropriate for a waiver due to its karst geology and the excessively-drained soils, which would facilitate the rapid spread of contaminated leachate plumes into the interconnected groundwater and surface waters of the Housatonic River – the very natural resource that the GE cleanup is supposed to remediate. This rapid water movement could include any leachate plume that migrated from a landfill storing high concentrations of PCBs and other contaminants. Due to the close proximity of the proposed Rising Ponds landfill site, contaminated leachate could readily contaminate the Housatonic River. The difficulty in containing and remediating contaminated groundwater plumes is evident throughout New England, including several GE-contaminated groundwater plumes in Pittsfield.

Great Barrington residents and town officials have been consistently and vocally opposed to the siting of a potential PCB landfill at the Rising Pond site and have been central to the development of the Housatonic Rest of River Municipal Committee, an appellant in the EAB permitting process, and they expect to continue to be actively engaged in opposing the siting of a landfill. Residents from the Village of Housatonic and from across the community have held well-attended and well-documented public protests against the landfill, marching down Main Street in one particular protest event.

Sincerely,



Nathaniel W. Karns, AICP  
Executive Director

Cc, with attachments: Mr. Tim Conway, EPA Region 1  
Mr. Jim Murphy, EPA Region 1  
Mr. Martin Suubert, Commissioner, MassDEP  
Mr. Michael Gorski, Director, Western Regional Office, MassDEP  
Ms. Betsy Harper, Esq., Office of the Massachusetts Attorney General

## REFERENCES

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Weary, David J. and Doctor, Daniel H., 2014. *Karst in the United States: A Digital Map Compilation and Database, Open-File Report 2014-1156*, USDOI & USGS

## Attachments

- A. Comprehensive Master Plan, Lee, Massachusetts (2000) – Pertinent Excerpts
- B. Open Space and Recreation Plan for Lee, Massachusetts (January 2016) – Pertinent Excerpts
- C. Zoning Bylaw of the Town of Lee, Massachusetts
- D. Massachusetts General Laws, Chapter 40A, The Zoning Enabling Act, Section 10: Variances
- E. Town of Lee Open Space and Recreation Plan – Map 6: Water Resources
- F. Karst Geology
- G. FERC Environmental Impact Statement Scoping Comments, Northeast Energy Direct PF14-22-000
- H. Federal Energy Regulatory Commission Guidance Manual for Environmental Report Preparation, August 2002: 6.4 Geologic Hazards
- I. Location of Carbonate Bedrock NY and New England, Olcott, 1995
- J. USGS Karst in the United States: A Digital Map Compilation and Data Base, USGS
- K. Distribution of Polychlorinated Biphenyls in the Housatonic River and Adjacent Aquifer, Massachusetts, USGS
- L. Soil Survey of Berkshire County Massachusetts, Soil Conservation Service (Excerpts)
- M. Lenox Dale – Town of Lenox Land Use Manager
- N. Lee Master Plan – Environmental Constraints & Concerns on Land Development Map
- O. Town of Lee Scenic Mountains Regulations
- P. Town of Lee, Mass. Conservation Commission Scenic Mountains Act Regulations Mapped Mountain Regions
- Q. Town of Great Barrington, Letter dated May 9, 2018 to Mr. Dean Tagliaferro, EPA

## ATTACHMENT A

### **COMPREHENSIVE MASTER PLAN, LEE, MASSACHUSETTS – Pertinent Excerpts**

Adopted: 2000

#### **“North Lee-Lenox Dale Area**

Open spaces and natural resources make the town aesthetically appealing and provide a sense of connection to the natural world. Pedestrian-based opportunities need to be bolstered in order to contribute to community interaction and quality of life. This is particularly relevant to Lenox Dale, and recreational amenities surrounding Woods Pond, the Housatonic, and October Mountain State Park. Eco-tourism seeks to balance natural resource ecology with tourism. Developing the environmental potential with an ecotourism theme in combination with state or federal funding for infrastructure and recreation improvements could help maintain and revitalize the area.” Pg 48

Goals, Objectives & Strategies:

#### **“Continue to promote and support a strong local and regional base of tourism**

- *Continue efforts to extend access for and service by Berkshire Scenic Railway and consider ways of linking this initiative and Housatonic River Initiatives to benefit the Lenox Dale area; create linkages to Downtown Lee.” Pg 50*

### **IX. NATURAL RESOURCES, OPEN SPACE AND OUTDOOR RECREATION**

Chemical pollutants from industries in Lee and upstream have contaminated the Housatonic River, rendering the fish inedible and making it undesirable for swimming. New methods of wastewater treatment were instituted by local industries that still use the river, including several paper mills in Lee and South Lee. Starting in the 1960s, these methods began abating the further deterioration of the river. In the last few years local and regional environmental groups, including the recently formed Lee Land Trust and the Housatonic River Initiative, have worked to clean up the river and plan for its broadened recreational and scenic use. An initiative is also underway to create a natural greenway through Lee and a downtown park that could be utilized by bicyclists, hikers, canoeists and for nature activities. Pg 85

Pg 86 – Following maps on USGS Topography & Environmental Constraints & Concerns on Land Development

## Geology

The pattern of limestone deposits and location of more resistant rocks has a more significant impact on Lee than geological features usually do. The floor of the Housatonic Valley is underlain by Stockbridge Limestone of Ordovician Age. Pg 87

## **F. Goals Objectives and Strategies for Natural Resource and Outdoor Recreation**

### ***Protect Mountain Ridges and Steep Slopes.***

Protect erosion-sensitive areas, scenic hilltops and ridgetops by selectively guided acquisition and/or regulation.

- *Adopt the Scenic Mountain Act for defined areas generally above 1,500 feet and develop protective regulation, and/or;*
- *Enact steep slope development standards under zoning to ensure that development in sensitive areas is curtailed and controlled.*

Pg 92

## **X. SUSTAINABLE LAND USE**

### Various Land Use Challenges

- \* Mining operations will not last forever. Gravel areas in north Lee near Lenox Dale could potentially be redeveloped or reused in many ways given the setting. Thought should be given to this area's long term future, working cooperatively with the property owners.

Pg 101

### **General Patterns for Future Land Uses (map following Pg 106)**

Map shows area immediately east of power line across Lane site as Conservation, Municipal Recreation; Rest of Lane site (west of power line) as either Industrial/Mining or Redevelopment Reuse

The Forest Street sites are shown entirely as Conservation, Municipal/Recreation

### Utilize and Redevelop Non Residential Areas for Economic and Community Purposes

- \* *Participate/cooperate in efforts to enhance/revitalize/develop the Lenox Dale area (including northern Lee) and by directing appropriate investment opportunities there*
- \* *Plan to redevelop industrial and commercial areas as they become vacant, underutilized or inappropriate, particularly gravel mining and heavy industrial sites. Depending on site conditions, planned redevelopment might encompass office/light industrial or specialized housing and recreation, if not conservation uses.*

Pg 107

## ATTACHMENT B

### **OPEN SPACE AND RECREATION PLAN FOR LEE, MASSACHUSETTS – Pertinent Excerpts**

January 2016

#### **Section 1: Plan Summary**

8. More development will occur on marginal lands as the town gets closer to buildout. This will bring many environmentally sensitive areas into jeopardy. Much of the Lee landscape is vulnerable because of its geology, soils and topography. (p. 2)

#### **Section 3: Community Setting**

The town is nestled in the Housatonic River valley with hills to the east, south and west. These steep slopes are the largest single physical element affecting the future development of Lee. Approximately 6,500 acres (37% of the total land area) can be considered steep grade (15% or greater). (p. 6)

Because of Lee's steep, stony slopes, floodplain along the river corridor, usable and buildable land is at a premium. This restricts the town's population, economic development and development of recreational areas. At the same time, these natural characteristics are invaluable for their intrinsic unspoiled beauty. (p. 7)

Land use in Lee is controlled through the zoning by-laws, originally adopted in 1963 . . . (p.20)

In 2008, the town established a Scenic Mountain Overlay District, enabled by the Berkshire Scenic Mountain Act (MGL Ch. 131, Sec. 39A). The purpose of the law is to regulate land disturbance activities that could have a significant adverse effect on watershed resources or natural scenic qualities because of water quality pollution or destruction of vegetation. Most land disturbance activities that involve removal, filling, excavation clearing or other alteration of land located within the district, including projects requiring a special permit and single family homes, will require the filing of a Notice of Intent with the Conservation Commission. Upon review, the Commission has the authority to apply special conditions to the development to avoid or minimize natural resource degradation. (p.20)

Steep slopes are the largest single physical element affecting the future development of the community. Approximately 6,500 acres, 37% of the total area of 17,350 acres, can be considered steep slopes and not coincidentally, by their nature protect the scenic vistas which townspeople treasure. The largest area is to the east where the mountainsides of the New England upland have been deeply cut by mountain streams.

The bedrock geology of the town is characterized by the soft, carbonate rock formation which underlies the more developed, western portion of the community, and more resistant gneissic rocks which dominate in the upland areas. The pattern of limestone deposits and location of more resistant rocks has had a significant impact on the development of this community. The floor of the Housatonic Valley is underlain by Stockbridge Limestone of Ordovician Age. (p.22)

Surficial geology of the town reflects both deposits of glacial origin and more recent deposits associated with the flooding of the Housatonic River and its tributaries. The upland areas are covered with a thin mantle of glacial till, a poorly-sorted mixture of silt, sand, gravel, boulders and clay deposited directly by the glacial ice as it advanced generally from the northwest to southeast. As the glacier melted and retreated from the area about 18,000 years ago, meltwater streams deposited layers of sand and gravel. The most important materials left behind in this process in Lee were the coarse grained, ice contact stratified drift deposits that currently fill the valley of Greenwater Pond Brook and the area immediately south of Woods Pond. These deposits have a significant impact on the groundwater potential of the area. (p.22-23)

There are two major aquifers in the town of Lee: the Woods Pond Aquifer and the Greenwater Pond Brook Aquifer. Although each of these aquifers is capable of producing significant quantities of water, each also suffer from water quality problems. The Woods Pond Aquifer currently yields in excess of two million gallons per day to four wells operated by a local industry used exclusively in industrial processing. (p. 26)

Lee is partly located in an ecological area known as the Western New England Marble Valley. It is this calcareous bedrock that has made the town's marble and limestone industries so successful. Since rock formations including calcium-based marble are geologically different from the rest of the state, the chemistry of the water and soil of the area are also distinct. Vegetation growing on these soils is distinct, with many species that occur only in calcium-rich areas. Some of these species are under state protection because they are so uncommon in the state. The wetland vegetation in particular is different from most of the rest of New England, with an abundance of species that are specialized to calcium enriched, but otherwise nutrient poor, waters. Lee has several occurrences of calcareous fens, a riverside marsh and calcareous ledge in priority habitats. (p.32)

A second ACEC, the Upper Housatonic River ACEC, is in the northern portion of the Town. This ACEC, designated in 2009, encompasses a total of 12,280 acres, extending across portions of Pittsfield, Washington, Lenox and Lee. The boundaries generally follow a 13-mile corridor of the Housatonic River and its supporting watersheds, from southern Pittsfield to the northern portion of Lee. This section of the river includes a complex ecosystem, hosting the river, adjacent wetlands and floodplain forests, several coldwater fisheries, rare species habitat and steep forested slopes of October Mountain State Forest. As noted on the ACEC website, the regionally significant biodiversity and wildlife habitat in the designated area is indicated by the exceptional number of rare species (32), Certified and Potential Vernal Pools (46), and the combined total of 11,405 acres or 93% of the area delineated as viable habitat by the DFW's

Natural Heritage & Endangered Species Program (NHESP). Of this total, 7,869 acres (64%) of the ACEC is designated as BioMap Core Habitat and Supporting Natural Landscapes, 3,536 acres (29%) as Living Waters Core Habitat and Critical Supporting Watershed. Regulated areas of rare species Priority Habitats and Estimated Habitats total 3,130 acres or 25% of the ACEC, with the majority of these acres included in the BioMap and Living Waters areas. Approximately 1,614 of the ACEC is in Lee, extending from the state forest east of the Woods Pond and backwater areas of the river southward to the cove pond area in the vicinity of Columbia and Greylock Streets, and includes the Coddington and Washington Mountain Brook watersheds. The ACEC locations are found on Map 5, Unique Features Map in Appendix A. (p.33)

Two sites in the town of Lee have been identified by GE as potential permanent disposal sites for PCB-contaminated sediments that will be dredged from the Housatonic Rest of River during cleanup activities. The sites identified are Lane Construction Corporation Sand & Gravel and a site on Forest Street. The Town has stated unequivocally to GE, the EPA and the DEP that it will not accept the landfilling of PCB sediments within town borders. This stance is supported by the other five Rest of River communities.

The Rest of River Communities (Sheffield, Great Barrington, Stockbridge, Lee, Lenox and Pittsfield) submitted a joint letter responding to the EPA's cleanup plan which stated that they all adamantly oppose a local landfill for contaminated materials, and that GE should remain legally responsible for the contamination in perpetuity, that the municipalities should be provided full opportunity to review and provide input on site specific clean-up plans as they are developed, that GE should be responsible to deal with the impacts of its pollution on all third parties (property owners, businesses, and the municipalities), and that all hazardous waste disposal facilities, including temporary storage areas, haul roads, dewatering facilities, and loading facilities should be subject to the Massachusetts Hazardous Waste Facility Siting Act. (p.42)

### **Erosion**

Because of Lee's steep topography in some portions of town, the potential for soil erosion is always present. Serious erosion problems were experienced in the construction of October Mountain Village at the base of October Mountain; so the Town is more vigilant and strictly enforces erosion control measures before, during and after construction. The Town accepted the Berkshire Scenic Mountain Act in 2001, approved a map of the regulated areas in 2006 and formally filed the regulations in the Registry of Deeds in 2008. The regulations create uniform procedures regulating removal, filling, clearing of vegetation or other alteration of land within mountain regions designated by the town which are likely to have a significant adverse effect on watershed resources or natural scenic qualities.

The logging of stands of timber located on steep slopes can present erosion problems. (p. 45)

### **Ground and Surface Water Pollution**

Woods Pond Aquifer



A local industry is currently drawing in excess of 2 million gallons of water per day from the aquifer. Traces of PCB's were reported (Mass. DEQE, 1975) in water quality samples taken from the aquifer, suggesting that contamination may have seeped into the recharge area through induced infiltration from Woods Pond and the Housatonic River. This information led to a decision by the DEQE to discourage development of a public drinking water supply at the Woods Pond location despite significant quantities of groundwater. However, according to recent information from the Tri-Town Health Department, this aquifer is not contaminated. (p. 47)

The layers of sediment and the resulting shallow, warm water of Woods Pond and the backwaters upstream of it provides the perfect growth medium for non-native invasive aquatic plant species, including Eurasian Water Milfoil and water chestnut. Wetlands and uplands adjacent to the pond and river harbor vast acreage where purple loosestrife, Phragmites and other non-native species dominate. Also, because the pond and the Housatonic River upstream of it are a very popular paddling route, the chance that fragments and seeds can be transported from this area to other aquatic recreational areas is high.

The removal of contaminated pond sediments during the Rest of River cleanup offers the opportunity to remove the vast infestation of invasive species in the pond and upstream of it, with the added opportunity of replanting these areas with native plants. To achieve any measure of success, a long-term maintenance plan will be required to monitor these areas and quickly take action to remove new invasive plant infestations. The removal and control of invasive plants is an important yet understated benefit of the Rest of River cleanup plan for this reach of the watershed. (p.49)

**Goals are:**

- *Protect mountain ridges and steep slopes* (p. 70)

**A. Summary of Resource Protection Needs**

The protection of water resources ranked as a high resource protection need in the recent community survey. These include the protection of the town's drinking water supply as well as its lakes, rivers, streams, wetlands and aquifers. (p. 72)

Two sites in the town of Lee have been identified by GE as potential permanent disposal sites for PCB-contaminated sediments that will be dredged from the Housatonic Rest of River during cleanup activities. The sites identified are Lane Construction Corporation Sand & Gravel and a site on Forest Street. The Town has stated unequivocally to GE, the EPA and the DEP that it will not accept the landfilling of PCB sediments within town borders.

According to the *Cleanup of the Housatonic "Rest of River" Socioeconomic Impact Study* residential properties near a future PCB landfill could decline in value by 3.5 percent, and that commercial, industrial and agricultural properties could decline by 1.75 percent. Although the PCB landfills would not be "hazardous waste landfills" according to EPA's regulatory definition,

the hazardous waste price effect is appropriate to use given likely public attitudes toward these disposal facilities. The distance from the potential landfill locations over which this effect would apply is assumed to be 3 miles, which is the mean distance at which an effect was detected in the studies analyzed by EPA.

The Rest of River Communities (Sheffield, Great Barrington, Stockbridge, Lee, Lenox and Pittsfield) submitted a joint letter responding to the EPA's cleanup plan which stated that they all adamantly oppose a local landfill for contaminated materials, and that GE should remain legally responsible for the contamination in perpetuity, that the municipalities should be provided full opportunity to review and provide input on site specific clean-up plans as they are developed, that GE should be responsible to deal with the impacts of its pollution on all third parties (property owners, businesses, and the municipalities), and that all hazardous waste disposal facilities, including temporary storage areas, haul roads, dewatering facilities, and loading facilities should be subject to the Massachusetts Hazardous Waste Facility Siting Act. (p. 72-73)

### **Steep Slopes**

Steep slopes are the largest single physical element affecting the future development of the community. With over 37% of town's land mass situated on slopes over 15% in grade, and much of the future new development likely to occur in more marginal areas, soil erosion and sedimentation looms as a very real potential problem. This is all the more likely if one considers the percentage of soils that are classified as "highly erodible" by the Natural Resources Conservation Services.

In response to the need for the protection of steep slopes and scenic views, the Town accepted the Berkshire Scenic Mountain Act in 2001. A map of the regulated areas was approved in 2006, and the regulations were formally filed in the Registry of Deeds in 2008. The regulations create uniform procedures regulating removal, filling, clearing of vegetation or other alteration of land within mountain regions designated by the town which are likely to have a significant adverse effect on watershed resources or natural scenic qualities. Adverse effects include the pollution or diminution of ground or surface water supply, erosion, flooding, substantial changes in topographic features, and substantial destruction of vegetation. The regulations define three regions and two zones, which regulate activities based both on elevation and percent slope. (p. 74)

## **Section 8**

### Goals and Objectives

#### **A. Open Space**

Goal #1 - To Protect the Quality and Quantity of Water-related Resources and Protect the Health and Safety of the Citizens of Lee and Downstream Communities against Flood Inundation

- protect areas of significance to the water resources of Lee, such as:
  - a. lakes and ponds with their water supply, recreational, and aesthetic benefits;

d. recharge areas, necessary to maintaining ground water levels and quality in potential water supply aquifers;

Goal #2 - To Improve the Environmental Quality of the Town through Proper Land Resource Considerations & Management







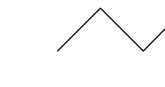


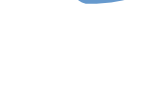

- protect, through regulatory means such as the Scenic Mountain Act, erosion-sensitive areas, hilltops and scenic ridgetops from development impacts; (p.80)

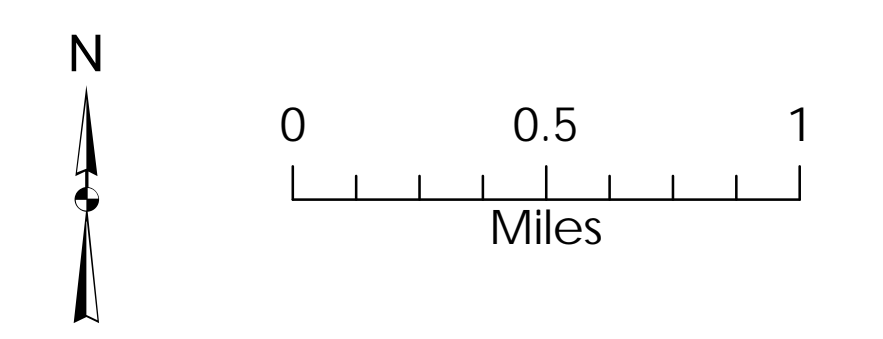
# Town of Lee

## Open Space and Recreation Plan

### Map 4: Soils and Geologic Features Map



-  Prime Agricultural Soils
-  Excessively Drained Soils
-  Poorly Drained Soils
-  Towns
-  Interstate
-  Major Road
-  Minor Road
-  Local Road
-  Stream
-  Wetland
-  Open Water



This map was created by the Berkshire Regional Planning Commission and is intended for general planning purposes only. This map shall not be used for engineering, survey, legal, or regulatory purposes. MassGIS, BRPC or the municipality may have supplied portions of this data.

ATTACHMENT C

**Zoning Bylaw of the Town of Lee, Massachusetts**

**§ 199-2. Authority.**

This chapter is adopted in accordance with the provisions of MGL c. 40A, as amended. § 199-3. Purpose.

The purpose of this chapter is to regulate the use of land, buildings and structures to the full extent of the town's independent constitutional powers as necessary to protect the health, safety and general welfare of the present and future inhabitants of the town. Protection of these interests shall include but not be limited to the following objectives:

A.. To prevent overcrowding of land, to secure safety from fire, flood, panic and other dangers and to lessen congestion in the streets.

B. To facilitate the adequate provision of transportation, water supply, drainage, sewerage, schools, parks, [open space](#) and other public requirements.

C. To conserve the value of land and buildings, including the conservation of natural resources and the prevention of blight and pollution of the environment.

D. To encourage the most appropriate use of land and bodies of water, including due consideration of:

(1) Protection of significant natural, scenic and aesthetic features.

(2) Conservation of natural resources and historic sites.

(3) The objectives of the town's Master Plan and growth policy.

(4) The objectives of the Comprehensive Plan of the Berkshire County Regional Planning Commission.

E. To preserve and increase amenities by the promulgation of these regulations to fulfill the above objectives in cooperation with other town agencies and measures they have taken under other legislative and town authority.

**ARTICLE II Establishment of Districts**

**§ 199-5. Types of districts.**

For the purpose of this chapter, the Town of Lee is hereby divided into the following types of use districts:

A. Residential: comprising R-20 and R-30 Districts.

B. Residential-Agricultural: comprising RA-40 Districts.

C. Residential-Multiple [Dwelling](#): comprising RM Districts.

D. Business-Multiple [Dwelling](#): comprising BM Districts.

**E. Conservation-Residential: comprising CR Districts.**

F. Business: comprising B Districts.

G. Rural Business: comprising RB Districts.

H. Office Park and Light Industrial: comprising OPLI Districts. [Added 6-17-1992 STM by Art. 8]

**I. Industrial: comprising I Districts**

J. Planned Commercial Village Center: comprising PCVC Districts. [Added 7-14-1994 STM by Art.4]

K. Commercial Business Corridor (CBC): Compromising the CBC District [Added 5-11-1995 ATM by Art. 23] and [deleted May 12, 2005 adding May 12, 2005 Art 48]

L. Downtown Commercial Business Corridor (DCBC): Compromising the DCBC District. [Added 2-9- 1995 STM by Art. 15] [ And deleted May 12, 2005 adding May 12, 2005 Art 48]

#### **§ 199-6. Location of districts; Zoning Map.**

The location and boundaries of these districts are hereby established as shown on a map entitled "Zoning Map of Lee, Massachusetts" dated April 16, 1974, and revised February 28, 1984, and revised May 27, 1992, and revised July 14, 1994, and revised February 9, 1995, and revised May 11, 1995, and revised November 22, 2004 and revised May 12, 2005, and revised May 8, 2006, bearing the signature of the members of the Planning [Board](#) and on file in the office of the Town Clerk, which map, with all explanatory matter thereon, is hereby made a part of this chapter.

#### **§ 199-7. Permitted and special permit uses; radioactive waste.**

A. No building or structure or land or part thereof shall be used for any purpose or in any manner other than for one or more of the uses hereinafter set forth as permitted in the district in which such building, structure or land is located or set forth as permissible by special permit in said district and so authorized.

**§ 199-12. Conservation-Residential District (CR).**

A. Permitted uses. Permitted uses shall be as follows:

- (1) Any use permitted and as regulated in a Residential District (R-20 and R-30), except multiple dwellings.
- (2) Farm, forestry or nursery, including the display and sale of natural products raised in town and the raising of stock as limited in Subsection B(2) below.
- (3) [Resort](#) as regulated in a Residential-Agricultural District (RA-40).
- (4) [Accessory use](#).
- (5) [Municipal use](#); provided, however, that no new [municipal use](#) shall be established and no existing [municipal use](#) shall be substantially expanded unless and until the representative town meeting votes an appropriation for said use.

B. Uses which may be permitted by the [Board](#) of Appeals in accordance with the regulations appearing in Section 199-34B(3) of this chapter, and in compliance with all applicable provisions of this chapter, shall be as follows:

- (1) Golf course, boat livery, riding stable and ski tow.
- (2) The raising of hogs, pigs, poultry or fur bearing animals, provided that such activity is carried on at least 300 feet from any property line.

**§ 199-8. Residential Districts (R-20 and R-30).**

A. Permitted uses shall be as follows:

- (1) Detached one-family [dwelling](#).
- (2) Detached two-family [dwelling](#) subject to the dimensional requirements set forth in the Table of Dimensional Requirements<sup>3</sup> and all other applicable provisions of this chapter.

(3) Multiple [dwelling](#) by special permit from the [Board](#) of Selectmen, subject to all applicable provisions of this chapter and in compliance with the special requirements set forth in Article IX herein, provided that no more than four [dwelling](#) units shall be built on a [lot](#).

(4) The use of land or structures for the primary purpose of agriculture, horticulture or floriculture on lots of five or more acres.

(5) Renting of rooms or furnishing of [board](#) for not more than three persons in a [dwelling](#) regularly occupied for residential purposes. [Amended 1-20-1994 STM by Art. 10]

(6) Accessory uses customarily incidental to a permitted main use on the same premises, including but not limited to the following:

(a) Use of a room or rooms in a [dwelling](#) for customary home occupations conducted by resident occupants, such as dressmaking or candy making, or for the practice by a resident of a recognized profession, provided that the maximum [accessory use](#) shall be no more than 20% of the square footage of the [dwelling](#), in compliance with off-street parking and all other applicable provisions of this chapter, and provided that there is no external evidence of any business other than a permitted [sign](#) and that no undue burden shall be placed on the neighborhood by parking on the [street](#) or an excess of traffic or other noises. [Amended 5- 17-1990 ATM by Art. 36]

(b) Use of premises or building thereon in connection with his or her trade by a resident carpenter, electrician, painter, plumber or other artisan, provided that no manufacturing or business requiring two or more employees on the premises, in compliance with off-street parking and all other applicable provisions of this chapter, and provided that all storage of materials, supplies and equipment shall be kept within the principal building or within a suitable [accessory building](#) and that no undue burden shall be placed on the neighborhood by parking on the [street](#) or an excess of traffic or other noises.

(7) [Municipal use](#); provided, however, that no new [municipal use](#) shall be established and no existing [municipal use](#) shall be substantially expanded unless and until the representative town meeting votes an appropriation for said use.

B. Uses which may be permitted by the [Board](#) of Appeals in accordance with the regulations appearing in Section 199-34B(3) of this chapter, and in compliance with all other applicable provisions of this chapter, shall be as follows:

(1) Private club not conducted for profit.

(2) Hospital, sanitarium and convalescent and nursing home.



(3) Golf course.

(4) Any [accessory use](#) to a by-right use, whether or not on the same parcel, which is necessary in connection with scientific research and development or related production, provided that the [Board](#) of Appeals finds that the proposed [accessory use](#) does not substantially derogate from the public good.

## § 199-16. Industrial District (I).

[Amended 1992, 1994, and 5-9-02 TM by Art. 47, 5-4-06 Art 52]

1 Purpose. The purpose of the Industrial District (I) is to provide locations for manufacturing and other activities which will:

A) Promote job creation and employment opportunities along with positive growth in the Town's tax base.

B) Promote economic development.

C) Encourage re-use of existing buildings, facilities and infrastructure.

D) Assist in the preservation of [open space](#), town character and its environment.

2

A) Uses permitted by right:

(1) Any manufacturing or industrial use, including processing, fabrication and assembly, provided that no such use shall be permitted which would be detrimental or offensive or tend to reduce values in the same or adjoining districts by reason of dirt, odor, fumes, smoke, gas, sewage, refuse, noise, excessive vibration or danger of explosion or fire. (See Environmental and Performance Standards, Article XII.)

(2) Accessory uses and structures customary to the preceding uses.

(3) Public and private nonprofit religious and educational institutions as required by MGL 6. 40A, Section 3.

(4) [Municipal use](#).

B) Uses permitted by right with site-plan approval Business offices, excluding retail, but including the following:

- (1) Financial.
- (2) Insurance.
- (3) Engineering, development and management.
- (4) Publishing and data processing.
- (5) Telecommunication (subject to provisions of the telecommunications bylaws.)
- (6) Environmental.
- (7) Real Estate.
- (8) Legal.
- (9) Medical and Dental Services.
- (10) Social Services.
- (11) Educational Services.

C. Retail sale of products manufactured, assembled or processed on site or product associated therewith. The retail space shall not exceed 20% of the total floor area.

D. Laboratories for the purpose of conducting research, or providing medical, dental and technical services, including offices accessory to these activities.

E. Distribution of commercial and industrial supplies and wholesale trade (except motor vehicles) provided that the space dedicated to storage of the product shall not exceed 70% of the total floor area and the total floor area does not exceed 100,000 square feet.

F. Uses permitted by MGL C. 40A 3, such as public and private nonprofit religious and educational institutions.

G. [Municipal use](#).

H. Accessory uses and structures customary to the preceding uses. 3 Uses Permitted by Special Permit.

A) Outside storage of materials not used in the manufacturing process may be allowed by special permit of the Planning [Board](#).

B) The following uses may be permitted by special permit of the Planning [Board](#) as part of the reuse of existing structures:

- (1) Retail.
  - (2) Apartments, lofts or other permanent residential uses.
  - (3) Warehousing.
  - (4) Hotel/conference center.
  - (5) New construction of facilities exceeding 100,000 square feet in floor space, where the facility will be used for distribution of commercial and industrial supplies and wholesale trade (except motor vehicles), provided that the space dedicated to storage of product shall not exceed 70% of the total floor area.
  - (6) In cases of special permits for building re-uses noted above, the special permit granting authority may authorize alteration or expansion of the existing building,
- C) [Adult Uses](#) by Special Permit from the Planning [Board](#).

B. Statutory powers of the Zoning [Board](#) of Appeals.

(2) Variances.

(a)The [Board](#) may authorize, upon appeal or upon petition with respect to a particular land or structure, a variance from the terms of this chapter where the [Board](#) specifically finds that, owing to circumstances relating to the soil conditions, shape or topography of such land or structure and especially affecting such land or structure but not affecting generally the zoning district in which it is located, literal enforcement of the provisions of this chapter would involve [substantial](#) hardship, financial or otherwise, to the petitioner or appellant and that desirable relief may be granted without [substantial](#) detriment to the public good and without nullifying or substantially derogating from the intent or purpose of this chapter.

#### **§ 199-72. Surface water runoff.**

The rate of surface water runoff from a site shall not show an increase after construction. If needed to meet this requirement and to maximize groundwater recharge, increased runoff from impervious surfaces shall be recharged on site by being diverted to vegetated surfaces for infiltration or through the use of detention ponds. Dry wells shall be used only where

other methods are not feasible and shall require oil, grease and sediment traps to facilitate removal of contaminants.

**§ 199-73. Erosion control.**

A. Whenever the existing contours of the land are altered during construction or otherwise, the land shall be left in a usable condition, graded in a manner to prevent the erosion of soil and the alteration of the runoff of water to or from abutting properties, and shall be suitably landscaped. Whenever a structure is involved, the remediation described above shall be accomplished within six months of occupancy of the structure.

B. Dust control shall be used during grading operations.

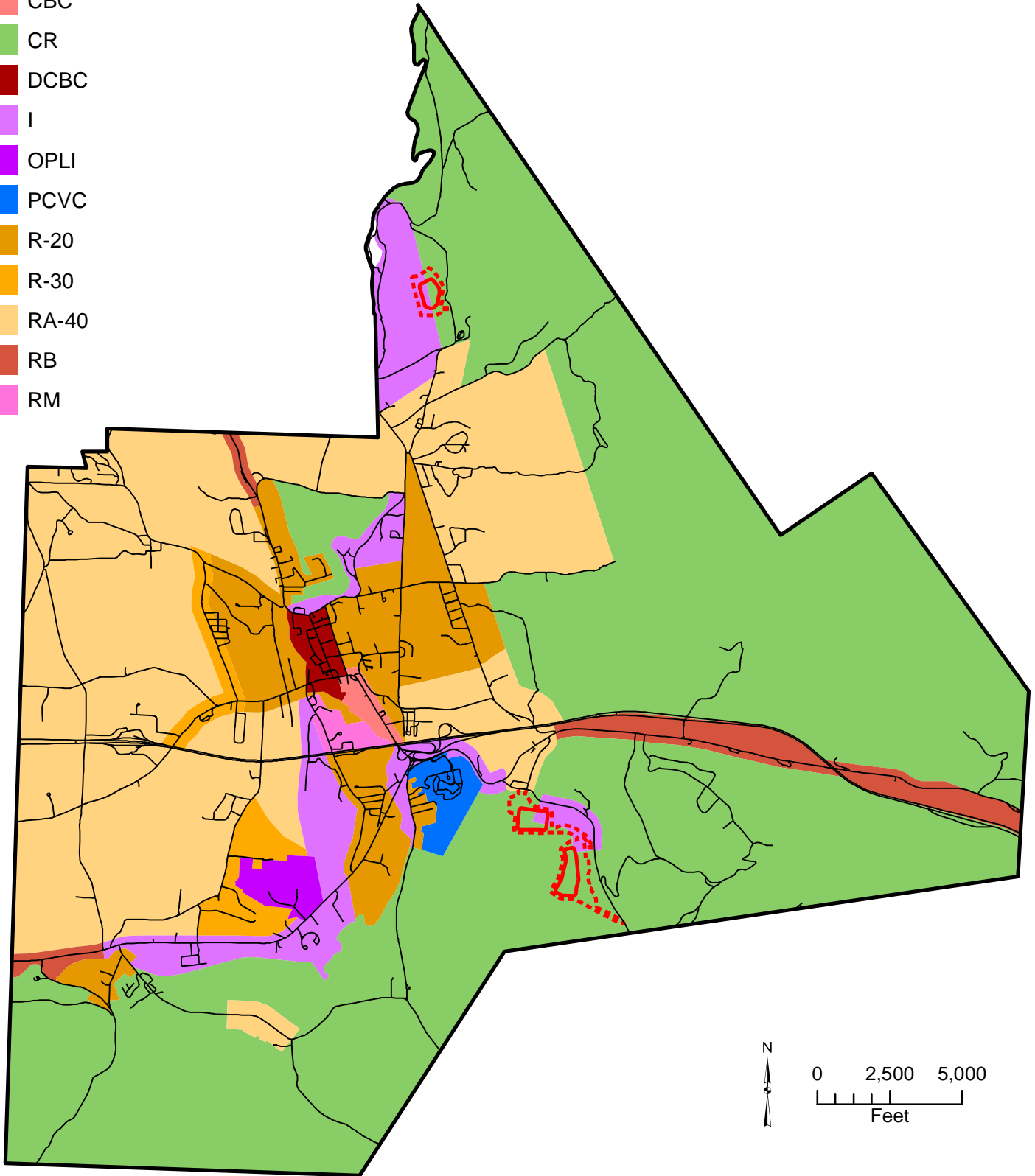
C. All requirements of the Lee Conservation Commission and the Massachusetts Department of Environmental Protection must be adhered to.

- Landfill Area
- Operational Area

**Zoning**

- CBC
- CR
- DCBC
- I
- OPLI
- PCVC
- R-20
- R-30
- RA-40
- RB
- RM

# Town of Lee Zoning



This map was created by the Berkshire Regional Planning Commission and is intended for general planning purposes only. This map shall not be used for engineering, survey, legal, or regulatory purposes. MassGIS, MassDOT, BRPC or the municipality may have supplied portions of this data.

## ATTACHMENT D

### Massachusetts General Laws, Chapter 40A, The Zoning Enabling Act

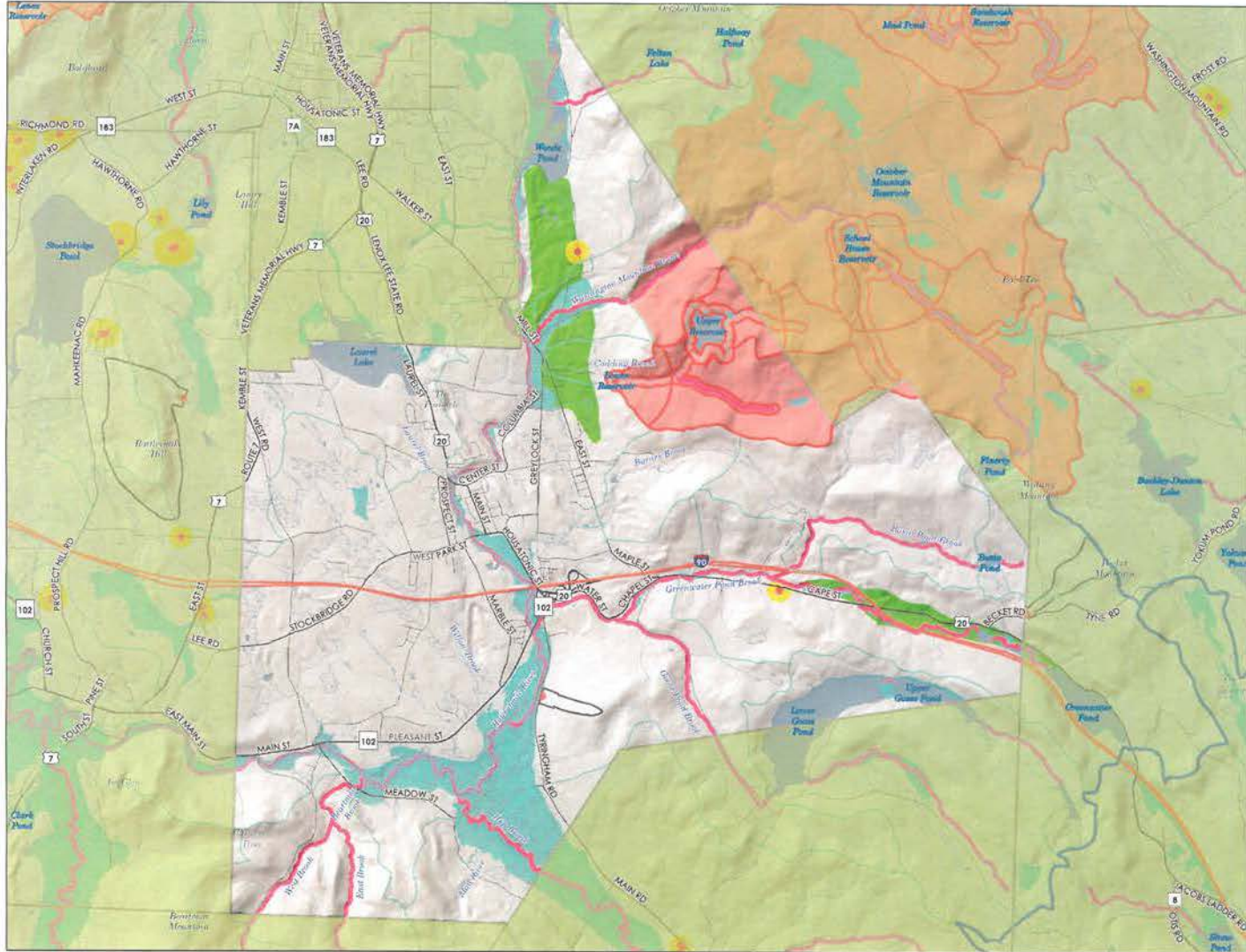
#### Section 10: Variances

Section 10. The permit granting authority shall have the power after public hearing for which notice has been given by publication and posting as provided in section eleven and by mailing to all parties in interest to grant upon appeal or upon petition with respect to particular land or structures a variance from the terms of the applicable zoning ordinance or by-law where such permit granting authority specifically finds that owing to circumstances relating to the soil conditions, shape, or topography of such land or structures and especially affecting such land or structures but not affecting generally the zoning district in which it is located, a literal enforcement of the provisions of the ordinance or by-law would involve substantial hardship, financial or otherwise, to the petitioner or appellant, and that desirable relief may be granted without substantial detriment to the public good and without nullifying or substantially derogating from the intent or purpose of such ordinance or by-law. **Except where local ordinances or by-laws shall expressly permit variances for use, no variance may authorize a use or activity not otherwise permitted in the district in which the land or structure is located;** provided however, that such variances properly granted prior to January first, nineteen hundred and seventy-six but limited in time, may be extended on the same terms and conditions that were in effect for such variance upon said effective date.

The permit granting authority may impose conditions, safeguards and limitations both of time and of use, including the continued existence of any particular structures but excluding any condition, safeguards or limitation based upon the continued ownership of the land or structures to which the variance pertains by the applicant, petitioner or any owner.

If the rights authorized by a variance are not exercised within one year of the date of grant of such variance such rights shall lapse; provided, however, that the permit granting authority in its discretion and upon written application by the grantee of such rights may extend the time for exercise of such rights for a period not to exceed six months; and provided, further, that the application for such extension is filed with such permit granting authority prior to the expiration of such one year period. If the permit granting authority does not grant such extension within thirty days of the date of application therefor, and upon the expiration of the original one year period, such rights may be reestablished only after notice and a new hearing pursuant to the provisions of this section.

# Attachment E



## Town of Lee Open Space and Recreation Plan Map 6: Water Resources

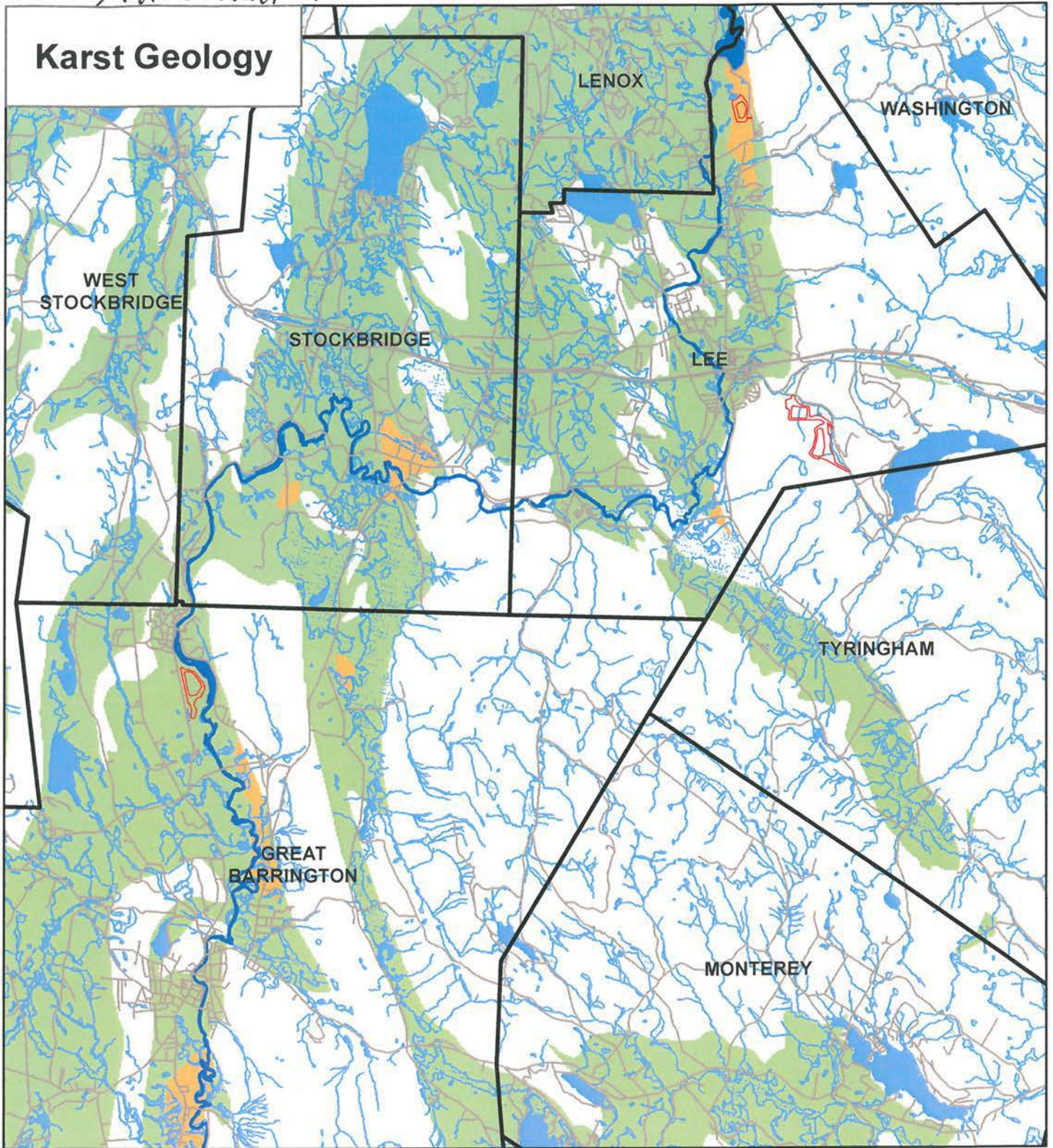
- Public Water Supply
- Interim Wellhead Protection Area
- Water Supply Zone II
- Surface Water Protection Zone
- Outstanding Resource Waters
- Aquifers
- Cold Water Fisheries
- FEMA 100yr Floodplain
- Watersheds
- Subwatersheds
- Towns
- Interstate
- Major Road
- Minor Road
- Local Road
- Stream
- Wetland
- Open Water



**Berkshire Regional Planning Commission**

This map was created by the Berkshire Regional Planning Commission and is intended for general planning purposes only. This map shall not be used for engineering, survey, legal, or regulatory purposes. MA01G, §81C or the municipality may have supplied portions of this data.

# Karst Geology



**Karst Type (Karst in the United States Map <https://pubs.usgs.gov/of/2014/1156/>)**

- Carbonate rocks buried under >50 ft of glacially derived insoluble sediments in a humid climate
- Carbonate rocks buried under ≤50 ft of glacially derived insoluble sediments in a humid climate
- Proposed Landfill Sites

- Housatonic River
- Stream
- Wetland
- Open Water
- Roads
- Towns



This map was created by the Berkshire Regional Planning Commission and is intended for general planning purposes only. This map shall not be used for engineering, survey, legal, or regulatory purposes. MassGIS, MassDOT, USGS or BRPC may have supplied portions of this data.





(<https://www.usgs.gov/>)

Mineral Resources (<https://minerals.usgs.gov/>) / Online Spatial Data (/) / Geology (/geology/) / by state (/geology/state/) / Massachusetts (/geology/state/state.php?state=MA)

## Stockbridge Formation

[XML \(/geology/state/xml/MACAsb;0\)](/geology/state/xml/MACAsb;0)   [.JSON \(/geology/state/json/MACAsb;0\)](/geology/state/json/MACAsb;0)

*Stockbridge Formation - Beige, tan, and dark-gray weathering quartzose dolomite marble containing interbeds of black, green and maroon phyllite and punky weathering blue quartz pebble quartzite.*

<b>State</b>	Massachusetts ( <a href="/geology/state/state.php?state=MA">/geology/state/state.php?state=MA</a> )
<b>Name</b>	Stockbridge Formation
<b>Geologic age</b>	Lower Cambrian
<b>Comments</b>	Part of Taconic-Berkshire Zone (Ordovician and Older Rocks)
<b>Primary rock type</b>	marble ( <a href="/geology/state/sgmc-lith.php?text=marble">/geology/state/sgmc-lith.php?text=marble</a> )
<b>Secondary rock type</b>	phyllite ( <a href="/geology/state/sgmc-lith.php?text=phyllite">/geology/state/sgmc-lith.php?text=phyllite</a> )
<b>Other rock types</b>	quartzite ( <a href="/geology/state/sgmc-lith.php?text=quartzite">/geology/state/sgmc-lith.php?text=quartzite</a> )
<b>Lithologic constituents</b>	<p>Major</p> <p>Metamorphic &gt; Metasedimentary &gt; Metacarbonate &gt; Marble     <i>quartzose dolomite marble</i></p> <p>Incidental</p> <p>Metamorphic &gt; Metasedimentary &gt; Metaclastic &gt; Phyllite</p> <p>Metamorphic &gt; Metasedimentary &gt; Metaclastic &gt; Quartzite     <i>punky weathering blue quartz pebble quartzite</i></p>
<b>Map references</b>	Unpublished Digital Geologic Map of Massachusetts received from Rudi Hon at Boston College in 1998.

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**Unit references** Zen, E-An (ed.), Goldsmith, R. (comp.), Ratcliffe, N.M. (comp.), Robinson, P. (comp.), Stanley, R.S. (comp.), Hatch, N.L., Jr., Shride, A.F., Weed, E.G.A., Wones, D.R., 1983, Bedrock Geologic Map of Massachusetts: U.S. Geological Survey, Reston, VA, scale 1: 250,000.

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**Counties** Berkshire (</geology/state/fips-unit.php?code=f25003>)

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[U.S. Department of the Interior \(https://www.doi.gov/\)](https://www.doi.gov/) | [DOI Inspector General \(https://www.doioig.gov/\)](https://www.doioig.gov/) | [White House \(https://www.whitehouse.gov/\)](https://www.whitehouse.gov/) | [E-gov \(https://www.whitehouse.gov/omb/e-gov/\)](https://www.whitehouse.gov/omb/e-gov/) | [Open Government \(https://www.whitehouse.gov/open\)](https://www.whitehouse.gov/open) | [No Fear Act \(https://www.doi.gov/pmb/eo/no-fear-act\)](https://www.doi.gov/pmb/eo/no-fear-act) | [FOIA \(https://www2.usgs.gov/foia\)](https://www2.usgs.gov/foia)

# FERC Environmental Impact Statement

## Scoping Comments

Northeast Energy Direct PF14-22-000

Submitted on October 15, 2015

by the

Berkshire Regional Planning Commission

on behalf of the Berkshire and Rensselaer Pipeline Working Group

### 7.4. Karst Geology

According to the U.S. Geological Survey, portions of the NED Project would traverse through carbonate karst in the Towns of Hancock, Lanesborough, and Cheshire within Berkshire County Massachusetts. <sup>3</sup> Carbonate karst in this region is classified as carbonate rocks buried under less than or equal to 50 feet of glacially derived insoluble sediments in a humid climate. When used in its broadest sense, the term encompasses many surface and subsurface conditions that give rise to problems in engineering geology. Most of these problems pertain to subterranean karst and pseudokarst features that affect foundations, tunnels, reservoir tightness, and diversion of surface drainage. Environmental aspects of karst lead to additional problems in engineering geology, especially in site selection. Subterranean openings may be the habitat of unique and, in some cases, endangered fauna. The openings are also conduits for water and refuse disposal from the surface or, in caves, for pollutants that can be carried for great distances. Many caves contain features of beauty and scientific interest that can be important esthetic factors in site selection for structures, transportation routes, and impoundments. The surface features of karst terrain, primarily sinkholes, solution valleys, and solution- sculptured rock ledges, are significant in engineering geology.

Common causes of ground subsidence include the presence of karst terrain. Karst features such as sinkholes, caves, and caverns can form as a result of the long-term action of groundwater on soluble carbonate rocks (e.g., limestone and dolostone). A field review of potential karst features should be completed and a Karst Mitigation Plan should be developed to address potential issues associated with the presence of shallow carbonate sedimentary (i.e., limestone) rock. The plan should include provisions for the use of geotechnical specialists, exploratory testing, and geophysical assessment as necessary to prevent or minimize potential impacts. TGP should employ a geotechnical expert to identify and develop mitigation measures (where applicable) regarding potential landslide hazards during construction of the pipeline.

## ATTACHMENT H

FEDERAL ENERGY REGULATORY COMMISSION

Office of Energy Projects

GUIDANCE MANUAL

FOR

ENVIRONMENTAL REPORT

PREPARATION

AUGUST 2002

Karst References...

### 6.4 Geologic Hazards

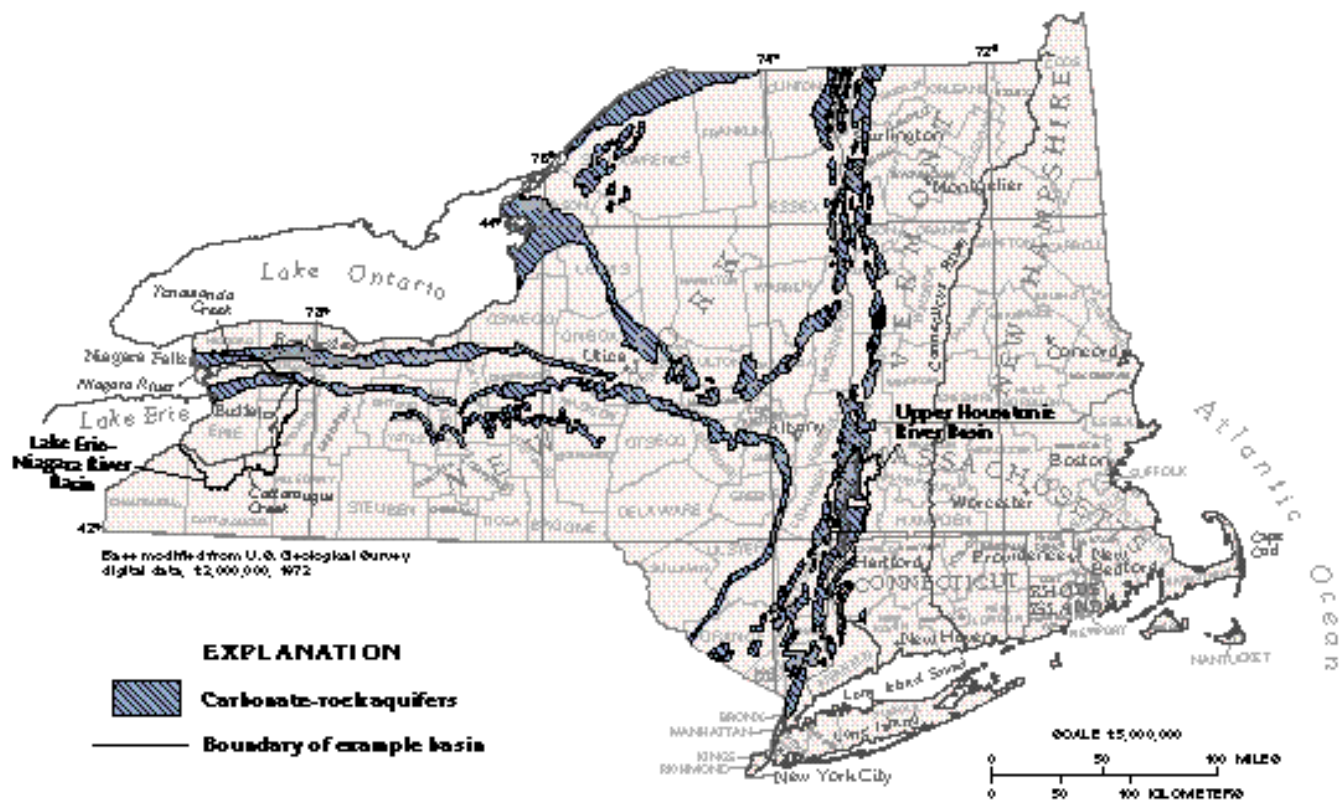
Describe by milepost the geologic hazards and areas of nonroutine geotechnical concern that exist or have the potential to develop in or near the project area using sources such as: USGS maps; surficial geology maps; NRCS soil surveys; other published information; comprehensive plans; aerial photographs; contacts with Federal, state, or local geologic survey personnel; or field surveys. Potential geologic hazards include . . . ground subsidence due to karst terrain . . . .

In areas where karst terrain is present, and ground subsidence is a potential hazard, provide locations of karst terrain by milepost or facility. State publications and field investigation will provide detailed site-specific information. . . All areas of geologic hazard should be identified by milepost. . . .

ATTACHMENT I

Location of carbonate bedrock NY and New England.

Source: Perry G. Olcott, 1995. *Ground Water Atlas of the U.S. Connecticut, Maine, Massachusetts, New Hampshire, New York, Rhode Island, Vermont*, USGS, HA 730-M. Found at [https://pubs.usgs.gov/ha/ha730/ch\\_m/M-text4.html](https://pubs.usgs.gov/ha/ha730/ch_m/M-text4.html)



**Figure 85.** Carbonate-rock aquifers underlie several areas of New York, Vermont, Massachusetts, and Connecticut.

Modified from:  
Heath, R.C., 1964, Ground water in New York: State of New York, Conservation Department, Water Resources Commission Bulletin GW-51, 1 sheet, scale 1:1,000,000.  
U.S. Geological Survey, 1985, National water summary, 1984—Hydrologic events, selected water-quality trends, and ground-water resources: U.S. Geological Survey Water-Supply Paper 2275, 462 p.



# Karst in the United States: A Digital Map Compilation and Database

By David J. Weary and Daniel H. Doctor

Open-File Report 2014-1156

U.S. Department of the Interior  
U.S. Geological Survey

Effects of late Cenozoic glaciations have a profound influence on the development and preservation of karst features in the northern and eastern parts of the contiguous United States. The line approximating the greatest extent of the last glaciation is shown in figure 1, and the thickness of glacially derived sediments overlying areas of soluble rocks is also integrated into the classification of map units. Glacial data used in this report are derived from Soller and others (2012).

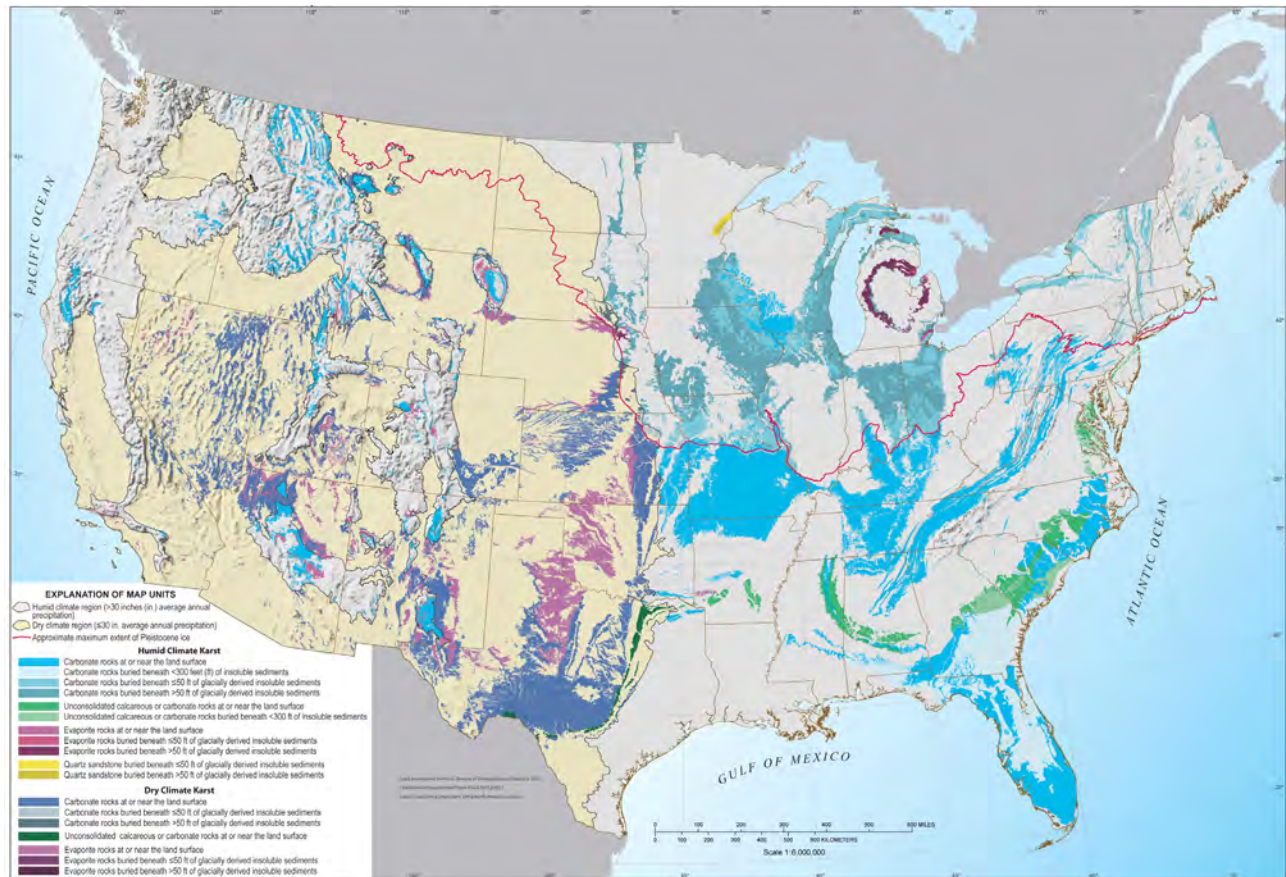


Figure 1. Karst and potential karst areas in soluble rocks in the contiguous United States.

## Karst map units

### Carbonate rocks at or near the land surface

These areas are underlain directly by carbonate bedrock, including unconsolidated calcareous sediments in the Atlantic and Gulf Coastal Plains, or by a veneer of sediments covering carbonate bedrock or sediments. In humid regions these units are typically karstified and contain varying densities of sinkholes, caves, and other karst features. Surface karst features such as solutional karren, solutionally enlarged fractures or pits in outcrops, and bedrock pinnacles surrounded by regolith comprise an *epikarst* that may be well developed locally, with relief in excess of 30 ft (9 m) in some areas. In semi-arid and arid regions, these rocks may exhibit very few large karst features, and sinkholes become rare. Rather, small-scale features such as karren become the most common types. It can be argued that many of these arid carbonate areas are not karstic under present climatic conditions; however, a number of deep-seated solutional karst and (or) paleokarst features may be exposed as a result of tectonic uplift and erosion (Palmer and Palmer, 2011).

*Attachment K*

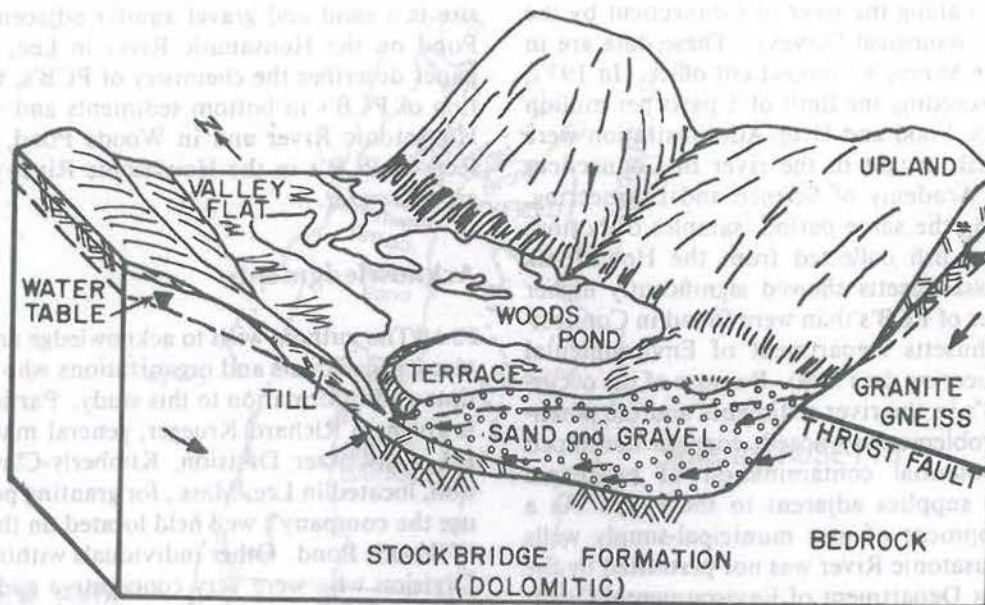
# Distribution of Polychlorinated Biphenyls in the Housatonic River and Adjacent Aquifer, Massachusetts

By FREDERICK B. GAY and MICHAEL H. FRIMPTER

Prepared in cooperation with the Commonwealth  
of Massachusetts, Water Resources Commission,  
Department of Environmental Quality Engineering,  
Division of Water Pollution Control, Technical  
Services Branch

U.S. GEOLOGICAL SURVEY WATER-SUPPLY PAPER 2266





#### EXPLANATION

← Direction of ground-water flow

Figure 2. Idealized pattern of ground-water flow under natural conditions.

Water that enters the ground from precipitation flows through the bedrock, till, and stratified drift and discharges into streams and ponds, as shown in figure 2. Wells that are finished in and pump from the stratified drift can intercept this ground-water discharge. A heavily pumped well adjacent to a stream or pond will intercept ground-water discharge and may also induce stream water to infiltrate through the streambed and enter the aquifer, as shown in figure 3.

#### CHEMISTRY OF POLYCHLORINATED BIPHENYLS

PCB is a generic name for a class of aromatic chlorinated organic compounds. PCB's are formed by first linking two benzene rings by covalent bonding between two carbon atoms to form a biphenyl molecule and then substituting chlorine atoms for one or more hydrogen atoms to form a chlorobiphenyl molecule, as shown in figure 4. PCB's

were manufactured in this country by Monsanto Chemical Company and marketed under the trade name "Aroclor," followed by a four-digit number, such as Aroclor 1254. The first two digits, "12," indicate a polychlorinated biphenyl compound and the last two digits, "54," indicate the approximate percentage of chlorine, by weight, in that compound. One exception is Aroclor 1016, which is a PCB compound containing 41 percent chlorine.

The more chlorine atoms in the chlorobiphenyl molecule, the more resistant the isomer to biodegradation. Most bacteria are incapable of degrading PCB compounds because their enzymes cannot shear the chlorine-carbon bond. However, there have been a few bacteria isolated from the environment that can degrade PCB's (Griffin and Chian, 1980).

PCB's are slightly soluble in water. In general, researchers have found an inverse correlation between solubility of PCB's in water and the number of chlorine atoms in the isomer. However, there is a wide range in published values of the solubility of the



United States  
Department of  
Agriculture

Soil  
Conservation  
Service

In cooperation with  
Massachusetts Agricultural  
Experiment Station

# Soil Survey of Berkshire County Massachusetts

B



low soil strength limits the use of equipment to periods when the soil is dry or frozen. Thinning minimizes windthrow by locating and orienting cuts to reduce wind effects by keeping residual stand density at or slightly above standard stocking levels, and by limiting changes in stand density to 30 percent or less.

Constructing buildings without basements and above the seasonal high water table helps to prevent the interior damage caused by wetness. Tile drains laid around foundations help to reduce wetness. Landscaping designed to drain surface runoff away from buildings provides added protection against damage caused by wetness. Constructing roads on raised, coarse textured base material and providing adequate side ditches and culverts help to prevent the damaged pavement caused by the seasonal high water table and frost action. The main limitations to use of the soil as sites for septic tank absorption fields are the seasonal high water table and the very slow or slow permeability. Placing the distribution lines in a suitable fill material help to increase the lateral and downward flow of effluent. Some areas of the included soils have fewer or more restricting limitations than those of the Brayton soil for the intended use. Onsite investigation is needed to determine the suitability of particular areas for any use.

This soil is in capability subclass VII.

**CoA—Copake fine sandy loam, 0 to 3 percent slopes.** This is a nearly level, very deep, somewhat excessively drained soil on slightly convex ridges. Individual areas are irregular in shape and range from 5 to 100 acres.

Typically, the surface layer is dark brown fine sandy loam about 4 inches thick. The subsoil is about 22 inches thick. In the upper 17 inches it is brown, very friable gravelly fine sandy loam, and in the lower 5 inches it is dark yellowish brown, very friable fine sandy loam. The substratum is dark brown, dark yellowish brown, and grayish brown, stratified loamy fine sand to very gravelly sand to a depth of 60 inches or more.

Included with this soil in mapping are small areas of Groton, Hero, and Fredon soils in slightly concave depressions. Also included, at the edge of a few map units, are soils that have slope of more than 3 percent. The included soils make up 10 to 15 percent of the map unit.

Permeability in the Copake soil is moderate or moderately rapid in the subsoil and very rapid in the substratum. The available water capacity is moderate. The root zone is restricted at a depth of about 48 inches by loose sand and gravel. In some years the soil is droughty in late summer. The soil is very strongly acid to neutral in the surface layer, strongly acid to neutral in the subsoil, and slightly acid to moderately alkaline in the substratum.

Most areas of this soil are used for cultivated crops. A few areas are woodland.

This soil is well suited to row crops and small grains (fig. 10). The main limitation is droughtiness in some years. Crops can be irrigated. Crop residue mixed into the soil helps to maintain or increase the organic matter content in the surface layer.

This soil is well suited to grasses and legumes for hay and pasture. Plants that tolerate droughtiness in late summer produce the highest yields. The main management concern is overgrazing, which causes surface compaction and reduces the hardness and density of plants. Proper stocking rates, timely deferred grazing, and, during wet periods, restricted grazing help to maintain the desirable species of pasture plants and to prevent surface compaction.

Potential productivity for eastern white pine on this soil is high. There are no major limitations to woodland management. Plant competition during regeneration is moderate if conifers are grown. Thinning crowded stands to accepted, standard stocking levels allows more vigorous growth. Shelterwood cutting, seed-tree cutting, and clearcutting establish natural regeneration or provide suitable planting sites. Removing or controlling competing vegetation is needed for the best growth of newly established seedlings. Pruning improves the quality of white pine.

There are no major limitations to use of this soil for building site development. Constructing roads on well compacted, coarse textured base material helps to prevent the damaged pavement caused by frost action. Ground water contamination is a hazard if the soil is used as sites for septic tank absorption fields. The soil readily absorbs effluent but does not adequately filter it.

This map unit is in capability subclass I.

**CoB—Copake fine sandy loam, 3 to 8 percent slopes.** This is a gently sloping, very deep, somewhat excessively drained soil on slightly convex ridges. Individual areas are irregular in shape and range from 5 to 200 acres.

Typically, the surface layer is dark brown fine sandy loam about 4 inches thick. The subsoil is about 22 inches thick. In the upper 17 inches it is brown, very friable gravelly fine sandy loam, and in the lower 5 inches it is dark yellowish brown, very friable fine sandy loam. The substratum is dark brown, dark yellowish brown, and grayish brown, stratified loamy fine sand to very gravelly sand to a depth of 60 inches or more.

Included with this soil in mapping are small areas, in slightly concave depressions, of Groton, Hero, and Fredon soils. Also included, at the edge of a few map units, are some areas of soils that have slope of more than 8 percent. The included soils make up about 5 to 10 percent of the map unit.

Permeability in this Copake soil is moderate or moderately rapid in the subsoil and very rapid in the substratum. The available water capacity is moderate. The root zone is restricted at a depth of about 48 inches

to accepted, standard stocking levels provides more vigorous growth. Shelterwood cutting, seed-tree cutting, and clearcutting establish natural regeneration or provide suitable planting sites. In some areas removing or controlling competing vegetation is needed for the best growth of newly established seedlings.

Constructing buildings without basements and above the seasonal high water table helps to prevent the interior damage caused by wetness. Tile drains laid around foundations help to reduce wetness. Landscaping designed to drain surface runoff away from buildings provides added protection against damage caused by wetness. Constructing roads on well compacted, coarse textured base material helps to prevent the damaged pavement caused by frost heave. The main limitations to use of the soil as sites for septic tank absorption fields are the seasonal high water table and the rapid or very rapid permeability. Ground water contamination is a hazard if the soil is used as sites for septic tank absorption fields. The soil does not filter adequately the effluent. Placing distribution lines in a suitable fill material help to increase the lateral and downward flow of effluent and thus adequately filter the effluent.

This map unit is in capability subclass IIe.

**HgA—Hero Variant gravelly loam, 0 to 3 percent slopes.** This is a nearly level, very deep, moderately well drained soil in the slightly convex areas at the base of steeper sloping soils. Individual areas are irregular in shape and range from 5 to 15 acres.

Typically, the surface layer is very dark grayish brown, friable gravelly loam about 9 inches thick. The subsoil is about 13 inches thick. In the upper part it is yellowish brown, friable gravelly sandy loam. In the lower part it is dark yellowish brown, friable gravelly sandy loam. The substratum is olive, friable, stratified silt and very fine sand to a depth of 60 inches or more.

Included with this soil in mapping are a few areas of soils that have less silt and clay in the substratum. Also included, in most map units, are small areas of Hero soils. Also included are areas of Fredon and Halsey soils in concave depressions and, at the edge of a few map units, areas of soils that have slope of more than 3 percent. The included soils make up about 5 to 10 percent of the map unit.

Permeability of this Hero Variant soil is moderate or moderately rapid in the subsoil and moderately slow in the substratum. The available water capacity is high. The surface layer is easily tilled under proper moisture conditions. The root zone is somewhat restricted at a depth of about 18 inches by the seasonal high water table. The seasonal high water table is at a depth of 1 1/2 to 3 feet from November through April. The soil ranges from moderately acid to neutral in the surface layer, moderately acid to mildly alkaline in the subsoil, and neutral to moderately alkaline in the substratum.

Most areas of this soil are cultivated. A few areas are mixed brushland and woodland.

This soil is well suited to row crops and small grains. The main limitation is the seasonal high water table. The main management concern is restricted access to fields caused by wet soil conditions. Crop residue returned to the soil helps to increase or maintain the organic matter content of the surface layer.

This soil is well suited to grasses and legumes for hay and pasture. In some areas drainage is needed and water-tolerant plants produce the highest yields. The main management concern is overgrazing, which causes surface compaction and reduces the hardiness and density of plants. Proper stocking rates, timely grazing, and, during wet periods, restricted grazing help to maintain the desirable species of pasture plants and to prevent surface compaction.

Potential productivity for northern red oak on this soil is moderate. There are no major limitations to woodland management. Plant competition during regeneration is moderate if conifers are grown. Thinning crowded stands to accepted, standard stocking levels allows more vigorous growth. Shelterwood cutting, seed-tree cutting, and clearcutting establish natural regeneration or provide suitable planting sites. In some areas removing or controlling competing vegetation is needed for the best growth of newly established seedlings.

Constructing buildings without basements and above the seasonal high water table helps to prevent the interior damage caused by wetness. Tile drains laid around foundations help to reduce wetness. Landscaping designed to drain surface runoff away from buildings provides added protection against damage caused by wetness. Constructing roads on a well compacted, coarse textured base material helps to prevent the damaged pavement caused by frost heave. The main limitations to use of this soil as sites for septic tank absorption fields are the seasonal high water table and the moderately slow permeability. Placing distribution lines in a suitable fill material help to increase the lateral and downward flow of effluent and thus adequately filter the effluent.

This map unit is in capability subclass IIw.

**HgB—Hero Variant gravelly loam, 3 to 8 percent slopes.** This is a gently sloping, very deep, moderately well drained soil in convex areas on outwash plains and terraces. Individual areas are irregular in shape and range from 5 to 15 acres.

Typically, the surface layer is very dark grayish brown friable gravelly loam about 9 inches thick. The subsoil is about 13 inches thick. In the upper part it is yellowish brown, friable gravelly sandy loam. In the lower part it is dark yellowish brown, friable gravelly sandy loam. The substratum to a depth of 60 inches is olive, friable, stratified silt and very fine sand.

needed for the best growth of newly established seedlings.

There are no major limitations to use of this soil as sites for buildings and for local roads. Ground water contamination is a hazard if the soil is used as sites for septic tank absorption fields because of the very rapid permeability. The soil readily absorbs the effluent but does not adequately filter it.

This map unit is in capability subclass III<sub>s</sub>.

**HoC—Hoosic gravelly fine sandy loam, 8 to 15 percent slopes.** This is a strongly sloping, very deep, somewhat excessively drained soil in elongated and irregularly shaped, rolling areas. Slopes are convex and as much as 300 feet long. Individual areas range from 5 to 40 acres.

Typically, the surface layer is very dark grayish brown gravelly fine sandy loam about 4 inches thick. The subsoil is about 16 inches thick. In the upper 6 inches it is dark brown, very friable gravelly sandy loam. In the next 7 inches it is dark grayish brown, friable gravelly sandy loam. In the lower 3 inches it is olive brown, very friable gravelly loamy sand. The substratum is dark grayish brown, stratified very gravelly sand to a depth of 60 inches or more.

Included with this soil in mapping are areas of soils where the volume of slate fragments make up less than 35 percent of the substratum. Also included, at the base of many slopes, are areas of Deerfield soils. The included soils make up about 5 to 10 percent of the map unit.

Permeability of this Hoosic soil is moderately rapid in the subsoil and very rapid in the substratum. The available water capacity is low. The surface layer is easily tilled under proper moisture conditions. The root zone is restricted by loose sand and gravel at a depth of about 20 inches. The soil is droughty in late summer. It is very strongly acid in the surface layer and the subsoil and very strongly acid to moderately acid in the substratum.

Most areas of this soil are used for cultivated crops, hay, and pasture. Some areas are mixed brushland and woodland.

This soil is poorly suited to row crops and small grains. Erosion is a hazard. The main limitation is droughtiness. Conservation tillage, crop rotation, contour farming, or a combination of these practices helps to control erosion.

This soil is fairly well suited to grasses and legumes for hay and pasture. Plants that tolerate drought in late summer produce the highest yields. The main management concern is overgrazing, which causes surface compaction, increases surface runoff, and reduces the hardiness and density of plants. Proper stocking rates and timely grazing help to maintain the desirable species of pasture plants, to prevent surface compaction, and to reduce runoff.

Potential productivity for northern red oak on this soil is moderately high. There are no major limitations to woodland management. Plant competition during regeneration is moderate if conifers are grown. Thinning crowded stands to accepted, standard stocking levels allows more vigorous growth. Shelterwood cutting, seed-tree cutting, and clearcutting establish natural regeneration or provide suitable planting sites. In some areas removing or controlling competing vegetation is needed for the growth of newly established seedlings.

Buildings designed to conform to the natural slope of the land help to overcome the slope limitation and to control the erosion in disturbed areas. Land shaping is needed in some areas. Constructing roads on the contour, if possible, and planting roadbanks to well adapted grasses help to control erosion. Ground water contamination is a hazard if the soil is used as sites for septic tank absorption fields because of the very rapid permeability. The soil readily absorbs the effluent but does not adequately filter it.

This map unit is in capability subclass III<sub>e</sub>.

**HoD—Hoosic gravelly fine sandy loam, 15 to 25 percent slopes.** This is a moderately steep, very deep, somewhat excessively drained soil in elongated and irregularly shaped, hilly areas. Slopes are convex and as much as 300 feet long. Individual areas range from 5 to 40 acres.

Typically, the surface layer is very dark grayish brown gravelly fine sandy loam about 4 inches thick. The subsoil is about 16 inches thick. In the upper 6 inches it is dark brown, very friable gravelly sandy loam. In the next layer it is dark grayish brown, friable gravelly sandy loam. In the lower 3 inches it is olive brown, very friable gravelly loamy sand. The substratum is dark grayish brown, stratified very gravelly sand to a depth of 60 inches or more.

Included with this soil in mapping are areas of soil where most of the original surface layer has been removed by erosion. Also included, at the base of slopes, are areas of Deerfield soils. The included soils make up about 5 to 10 percent of the map unit.

Permeability of this Hoosic soil is moderately rapid in the subsoil and very rapid in the substratum. The available water capacity is low. The surface layer is easily tilled under proper moisture conditions. The root zone is restricted by loose sand and gravel at a depth of about 20 inches. The soil is droughty in late summer. It is very strongly acid or strongly acid in the surface and the subsoil and very strongly acid to moderately acid in the substratum.

Most areas of this soil were used for farmland now mixed brushland and woodland. A few areas are used for hay and pasture.

This soil is poorly suited to row crops and small grains. Erosion is a hazard. Conservation tillage, crop rotation,

if suitable outlets are available. Proper timing of farming operations, water-tolerant plant species, and planting after spring flooding are suitable management practices. Crop residue returned to the soil helps to maintain or increase the organic matter content of the surface layer.

This soil is well suited to grasses and legumes for hay and pasture. The main management concern is restricted access to fields caused by wet soil conditions. Proper stocking rates, deferred grazing, and rotation grazing help to maintain the desirable species of pasture plants.

Potential productivity for red maple on this soil is moderate. The main management concerns are the seasonal high water table, high seedling mortality, and the windthrow hazard. The low soil strength limits the use of equipment except when the soil is dry or frozen. Thinning should be designed to minimize windthrow by locating and orienting cuts to reduce wind effects, by keeping residual stand density at or slightly above standard stocking levels, and by limiting changes in stand density to 30 percent or less.

This soil is generally not suitable for use as sites for buildings and septic tank absorption fields because of flooding and the seasonal high water table. Sites on soils that are better suited to the intended uses are generally nearby. Constructing roads on raised, coarse textured fill material and providing adequate side ditches and culverts help to prevent the damaged pavement caused by flooding, the seasonal high water table, and frost heave.

This map unit is in capability subclass IIIw.

**LtE—Lyman-Tunbridge association, steep, extremely stony.** This map unit consists of shallow, somewhat excessively drained Lyman soils and moderately deep, well drained Tunbridge soils. It is about 45 percent Lyman soils, 45 percent Tunbridge soils, and 10 percent other soils. These soils are on the mountainous uplands (fig. 14). Lyman soils are typically on the upper steep slopes and Tunbridge soils are in the less sloping areas or in pockets between Lyman soils and rock outcrops. Rock outcrops and many stones and boulders cover the surface. Slopes range from 15 to 45 percent. Areas of the individual soils are large enough to map separately, but in considering the present and predicted use they were mapped as one unit. Areas of the map unit are irregular in shape and range from 50 to 350 acres.

Typically, the surface layer of Lyman soils is very dark brown, friable fine sandy loam about 3 inches thick. The subsoil is about 13 inches thick. In the upper 7 inches it is dark brown, friable loam. In the lower 6 inches it is yellowish brown, friable loam. The underlying bedrock, which is schist, gneiss, and granite, is fractured at the surface but solid underneath.

Typically, the surface layer of Tunbridge soils is black, very friable, fine sandy loam about 1 inch thick. The

subsoil is about 19 inches thick. In the upper 7 inches it is dark brown, friable loam. In the next 6 inches it is dark yellowish brown, friable fine sandy loam. In the lower 6 inches it is dark yellowish brown, friable fine sandy loam. The substratum is dark yellowish brown, friable fine sandy loam to a depth of 26 inches. The underlying bedrock, which is schist, gneiss, and granite, is fractured at the surface but solid underneath.

Included with these soils in mapping are areas of rock outcrops and areas of Berkshire soils on steep hillsides and mountainsides. Also included are some poorly drained and very poorly drained mineral and organic soils in depressions or in pockets in the lesser sloping areas. The included areas make up about 10 to 15 percent of the map unit.

Permeability is moderately rapid in Lyman soils and moderate or moderately rapid in Tunbridge soils. The available water capacity in both soils is moderate. The root zone in both soils is restricted by bedrock. In both soils the surface layer and the subsoil are extremely acid to moderately acid. The substratum in Tunbridge soils is strongly acid to slightly acid.

Most areas of these soils are woodland.

These soils are generally not suitable for cultivated crops, hay, or pasture because of depth to bedrock, rock outcrop, and slope.

Potential productivity for sugar maple on these soils is moderate. The main management concerns are shallow depth to bedrock, the low available water capacity of the soils, and slope. Growth and survival are poor. The use of equipment is limited because of rock outcrops and slope. Thinning is generally not a good practice because windthrow is a moderate hazard. Minimizing soil disturbance and retaining the sponge-like mulch of leaves help to increase the absorption of precipitation, to reduce runoff, and to control erosion.

The main limitations to use of the soil as sites for buildings are slope and the shallow depth to bedrock. Extensive land shaping and blasting of bedrock are generally necessary. Constructing roads on the contour, if possible, and planting roadbanks to well adapted grasses help to control erosion. The underlying bedrock hinders road construction in some areas. The main limitations to use of the soil as sites for septic tank absorption fields are the shallow depth to bedrock and slope. Installing the distribution lines across the slope is generally needed for proper operation. In some areas bedrock hinders installation.

Some areas of the included soils have fewer or more restricting limitations than those of the Lyman and Tunbridge soils for the intended use. Onsite investigation is needed to determine the suitability of particular areas for any use.

This map unit is in capability subclass VIIc.

**Ly—Lyons mucky silt loam.** This is a nearly level, very deep, very poorly drained soil in depressions and



Figure 14.—A typical area of Lyman-Tunbridge association, steep, extremely stony.

drainageways. Individual areas are irregular in shape and range from 3 to 20 acres.

Typically, the surface layer is very dark gray, friable mucky silt loam about 9 inches thick. The subsoil is about 27 inches thick. In the upper 13 inches it is dark gray, friable loam, and in the lower 14 inches it is dark gray, friable fine sandy loam. The substratum is olive gray, friable fine sandy loam to a depth of 60 inches or more.

Included with this soil in mapping are areas of Kendaia soils on slight convex rises. Also included are a few areas of soils where cobblestones are in the surface layer and a few areas of soils where stones cover about 1 percent of the surface. The included soils make up about 5 to 10 percent of the map unit.

Permeability of this Lyons soil is moderate or moderately slow in the surface layer and the subsoil and slow or very slow in the substratum. The available water capacity is moderate. The seasonal high water table is at or near the surface in fall and spring or after periods of heavy rain. Root growth is impeded by the seasonal high water table. The soil ranges from moderately acid to

neutral in the surface layer, slightly acid to mildly alkaline in the subsoil, and mildly alkaline or moderately alkaline in the substratum.

Most areas of this soil are mixed brushland and woodland.

This soil is poorly suited to row crops and small grains. The main limitation is the seasonal high water table.

This soil is poorly suited to grasses and legumes for unimproved pasture because of the seasonal high water table. Water-tolerant plants produce the highest yields. The main management concern is overgrazing or grazing when the soil is too wet, which reduce the hardiness and density of plants. Proper stocking rates, timely grazing, and, during wet periods, restricted grazing help to maintain the desirable species of pasture plants.

Potential productivity for red maple on this soil is moderate. The main management concerns are the seasonal high water table, high seedling mortality, and the windthrow hazard. Growth and survival are poor. The low soil strength limits the use of equipment except when the soil is very dry or frozen. Thinning should be designed to minimize windthrow by locating and orienting

## ATTACHMENT M

### **Lenox Dale**

Lenox Dale is a village within Lenox in the town's south east corner. Developed along the Housatonic River, the village contains a mix of uses present in the neighborhood historically: residences, commercial businesses, town land and services, and industry. Across the Housatonic River rises October Mountain, and the Department of Conservation and Recreation's October Mountain State Forest. Wood's Pond provides recreation opportunity, and Post Farm to the North (owned by the Town of Lenox) provides ample area for hunting. Lenox Dale looks and feels like a tight-knit community. Property values tend to be lower in Lenox Dale, and this has helped keep the neighborhood affordable relative to other parts of Lenox. Today, the former school houses employees of Canyon Ranch, one of the community's largest businesses and employers. The Berkshire Montessori School serving toddlers through adolescents is also located in Lenox Dale. Lenox Dale serves as a gateway into Lenox for visitors entering town the back way from Lee.

***The neighborhood of Lenox Dale will be directly impacted by the siting of a PCB landfill facility so close by.*** Though the facility site is proposed just over the town line in Lee, the location is viewable from Lenox Dale. Residents already can see the Lane gravel pit, and comment on the noise, odor and dust from the facility.

***Neighborhood and town goals are not compatible with a PCB landfill facility.*** The neighborhood and the community seek new use and activity in vacant commercial and industrial properties along Crystal and Mill Streets. The neighborhood offers physical connectivity to beautiful open spaces and recreation opportunity. The neighborhood also provides a number of employment opportunities through active manufacturing and processing businesses. The local goal is to increase smaller lot workforce housing opportunity in Lenox Dale, and increase local services and amenities through reuse of vacant commercial and industrial sites. This is documented in many local planning documents and has been discussed at length at several recent neighborhood meetings. The 1999 Master Comprehensive Plan describes eco-tourism as a way to promote quality of life and visitorship in the neighborhood. As the community wraps up a preservation plan, the concept of heritage landscapes and heritage tourism has been discussed and identified.

***The community, in order to best promote the general welfare of the Town and to protect the health and safety of its inhabitants, has adopted a Zoning Bylaw. This Zoning Bylaw prohibits the storage of harmful or toxic waste in all of the town, but specifically in Lenox Dale.***

Furthermore, the community has opted to make allowable uses it feels will promote appropriate, smart land use, and to increase the amenities of the town and the Lenox Dale neighborhood by encouraging adaptive reuse of large commercial or industrial sites—indoor recreation, custom manufacturing of artisanal or craft goods, multi-family through the Zoning Bylaw.



***The Zoning Bylaw does not grant the Zoning Board of Appeals the right to grant a use variance. Uses not listed are prohibited.***

Recent improvements to the neighborhood include investment in Tilloston Park, a baseball field and play ground; upgrades to the Henry Ave pump station, the repaving of Crystal Street. The repaving, creation of sidewalk and a bike lane along the length of Walker Street will physically connect pedestrians and cyclists to the Lenox village west of the Route 7 bypass. The Town intends to improve the lower section of Housatonic Street to achieve the same goal.

***The neighborhood already uniquely bears the impact of industrial use, activity and legacy.*** The former town landfill is directly to the north along Willow Creek Road, and the Schweitzer Maudit landfill is to the south. The Niagara Mill property has an Activity and Use Limitation. An active rail line runs through the neighborhood. The Town of Lenox's wastewater treatment plant is in Lenox Dale. The neighborhood lives with a designated Superfund site in their front yard. The clean up of Woods Pond itself will have impacts on the neighborhood. To also site a PCB landfill down river and directly across from the Lenox Dale neighborhood is unfair.

***The neighborhood is the most densely populated neighborhood in Lenox to live on the Housatonic River and the potential health impacts of consistent proximity and exposure to PCBs.***

The E.P.A. defines environmental justice as the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations and policies. ***Environmental Justice is achieved when everyone enjoys the same degree of protection from environmental and health hazards,*** and equal access to the decision-making process to have a healthy environment in which to live, learn, and work.

***Siting a PCB landfill across the already contaminated Housatonic River, in a neighborhood and close by to a neighborhood which already bear the impacts of environmentally harmful land use and activities over the centuries and today will not mitigate or achieve environmental justice.***

Two vulnerable populations call Lenox Dale home: the very old, and the very young. In addition, an active school is within the neighborhood. ***The siting of a PCB storage facility in the neighborhood of Lenox Dale will create unfair impacts to vulnerable populations.***

## **Neighborhood Characteristics**

The village of Lenox Dale is considered to be the area bound by East Street, Housatonic Street, and Route 20 in the southeast corner of Lenox. The pattern of development differs in Lenox Dale: smaller lots with smaller "worker" housing stock. The density in the village center is high, and many of the lots are nonconforming—while the minimum lot size is 15,000 sq. ft, many parcels can't meet that and would benefit from a reduced lot size of 10,000 sq. ft or so.

In terms of demographics, Lenox Dale mirrors the larger community of Lenox in terms of percentage of children under the age 19 (20.7%) and in terms of elderly residents (31.4%). These population groups

are more vulnerable to environmental health stressors. The neighborhood does not have racial or ethnic diversity. There is much greater participation in the labor force in the small village of Lenox Dale than the rest of the community—nearly 84% of the village’s residents, versus only 47.5% in the rest of Lenox. Lenox Dale is middle class. Most of the work force is employed in construction, retail or educational, health care and social services. Lenox Dale has a greater proportion of households making median income, or below, than households earning more. Per capita income in Lenox Dale is low: \$22,493 versus \$47,343.

In terms of housing, Lenox Dale is thought of as a more affordable neighborhood to live in Lenox. Renters tend to not be as housing cost burdened as they may be in the rest of the community, and market rents tend to be lower and more affordable for the average wages received for the jobs available in Lenox. While home prices are lower in Lenox Dale, there is still housing cost burden: 18.8% of home owners pay 35% or more of their income toward housing cost; and 23% of homeowners are on the verge of housing cost burden, paying between 25% to 29.9% of their income toward housing cost.

Housing values in Lenox Dale tend to be lower, and the housing stock itself is older. Properties in Lenox Dale either sell quickly because they are affordably priced in a housing market with not enough workforce housing inventory, or sit on the market for long periods of time because they need a great deal of work and investment to update.

Because Lenox Dale is the only neighborhood in Lenox with an industrial zoning district, residents of the neighborhood are already uniquely impacted by existing and potential land use and activity. The high density of residences in the village center also means that the neighborhood is uniquely impacted by the Housatonic River and its clean-up, as well as by the potential siting of a PCB landfill. Between 500 and 700 people live in Lenox Dale; this represents 9% of the Lenox population. They will bear the brunt of the impact of remediation as well, and will deal directly with the impact of a PCB landfill directly across river from their neighborhood. Residents already worry about the health impacts of the gravel pit and asphalt across the river. Lenox Dale also has vacant commercial and industrial properties. The way these properties are reused matters to the neighborhood and the entire town. Having a PCB landfill directly across the river from the neighborhood will impact the desirability of these vacant properties and make it challenging to market and sell them for positive re-use scenarios, such as converting the former mill into a brewery or other craft food processing facility; or turning some of the vacant commercial sites into a café or restaurant to serve local residents. Because the neighborhood already has smaller residential lots than other areas in Lenox, the Town has been exploring how it can further encourage the creation of small lot, workforce housing units in the neighborhood. The Town wants to encourage this, but would have serious challenges to encouraging and supporting the creation of new housing stock knowing that property owners may be placed in harms way and directly impacted by a PCB landfill. That would have Environmental Justice ramifications. The Town will also be further challenged to promote and support economic development in Lenox Dale with a PCB landfill nearby.

## Historic Resources

There are four inventoried historic properties in Lenox Dale.

## Natural Resources

Lenox Dale and the land across the river in Lee is part of the Housatonic River ACEC.

## Current Zoning

A landfill for PCBs in the vicinity of Lenox Dale is in conflict with local Lenox zoning regulations. The Lenox Dale neighborhood is the only neighborhood within Lenox home to an Industrial zoning district. This makes sense, as industry originally developed along the river for the purpose of easy, cheap power, and was subsequently directly served by the railroad. However, the type of industrial activity allowed in Lenox Dale does not include the storage of contaminants harmful to humans and the environment.

*Section 3.3.2 of the Lenox Zoning Bylaw describes the powers of the Board of Appeals*; including the authority to issue variances in accordance w/ Massachusetts G.L. c. 40A, Section 10. This does not allow them to grant variances from the Schedule of Uses.

In the past, language did allow the Board of Appeals to grant variances; even with this authority, in reviewing a list of Zoning Board hearings held between 2001 and today, there is one instance of a use variance in the village center for the creation of a multi-family building and none for industrial or other business uses.

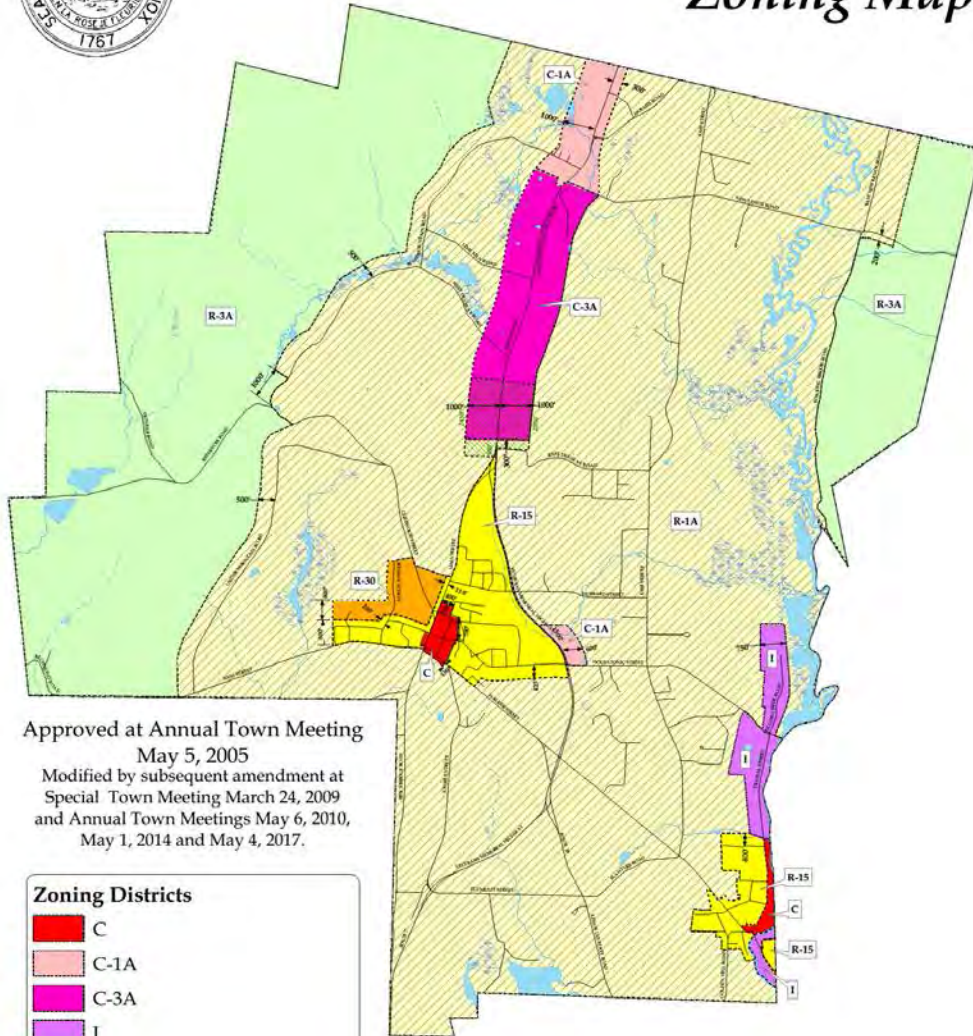
*Section 5.1, "Use Regulations" of the Lenox Zoning Bylaw contains "General Requirements":*

### *5.1.1, Prohibited Uses*

1. Any use not listed in Section 5.2, Schedule of Uses, or provided for elsewhere in this Zoning Bylaw shall be deemed prohibited.
2. All uses that pose a present or potential hazard to human health, safety, welfare or the environment through emission of smoke, particulate matter, noise or vibration, or through fire or explosive hazard, or glare are expressly prohibited in all zoning districts.



# Town of Lenox Zoning Map



Approved at Annual Town Meeting  
May 5, 2005  
Modified by subsequent amendment at  
Special Town Meeting March 24, 2009  
and Annual Town Meetings May 6, 2010,  
May 1, 2014 and May 4, 2017.

### Zoning Districts

- C
- C-1A
- C-3A
- I
- R-15
- R-1A
- R-30
- R-3A
- Open Space Flexible  
Development Overlay District
- Gateway Mixed Use  
Development Overlay District

For the Flood Plain District see the Town of Lenox  
Flood Insurance Rate Map (FIRM), dated July 5,  
1982 and Flood Boundary Floodway Map (FBFM),  
dated July 5, 1982.



0 3,000 6,000 9,000  
Feet

1:18,000

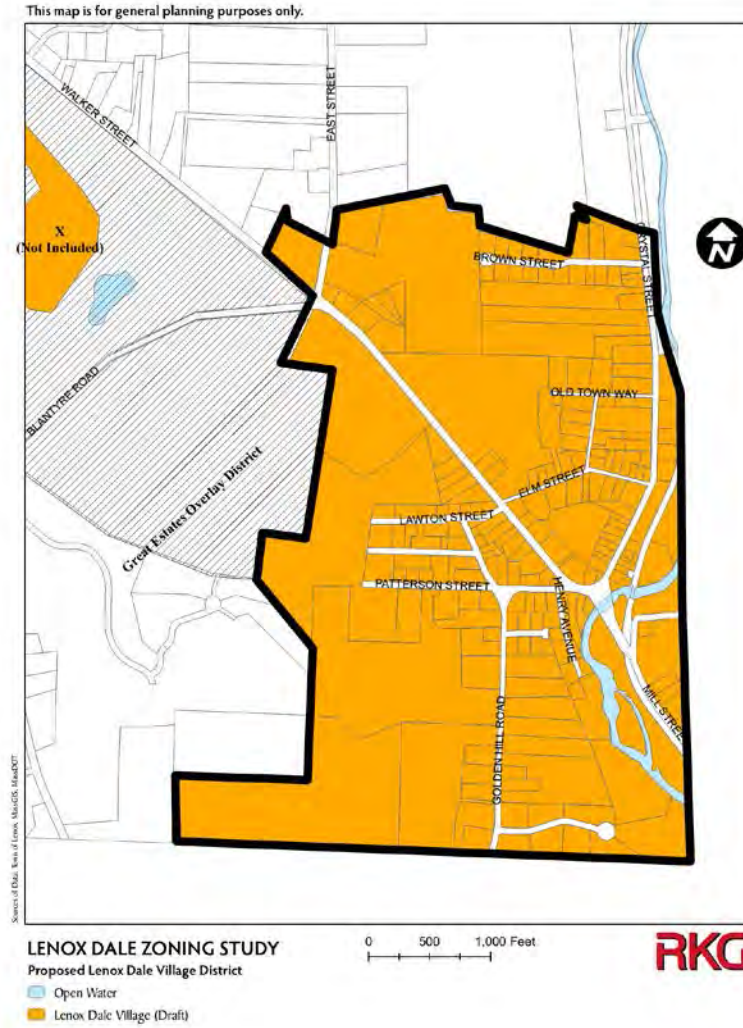
1 inch = 1,500 feet  
Massachusetts State Plane Meters  
North American Datum 1983



- Town Boundary
- Roads
- Lake / Pond
- Wetland / Marsh
- Perennial Stream
- Intermittent Stream

## Future Zoning

The Town has strongly considered adopting a unique zoning regime for Lenox Dale in order to encourage further mixed use development and more housing in small lots. This goal would be greatly hindered by the siting of a PCB landfill across the river.



## Community Plans, Goals and Vision

A landfill for PCBs located across the Housatonic River from the village of Lenox Dale is in direct conflict with many of the Town of Lenox's visions for its future. Lenox Dale possesses physical connections to excellent open space and recreation opportunity, and has strong pedestrian infrastructure. There are also larger, residentially zoned properties which the Town of Lenox has expressed interest in purchasing for additional open space and recreational opportunity and workforce housing. These two efforts would form the backbone of a shared-use path in Lenox, and it would also provide much-needed housing opportunity for low-to-moderate income households. The siting of a PCB landfill direct conflict with goals and needs described by Lenox Dale residents in a series of recent planning meetings, which took place in:

1. **November 2016:** Residents described wanting to attract greater visitorship to Lenox Dale, and to provide local services that would benefit visitors and residents, such as a café or pizzeria. When discussing the Niagara Mill, a number of ideas were discussed: a craft brewery and restaurant, some kind of museum, or a mix of retail and office space. A resident described the impacts of the gravel pit across the river, and explained that while the industrial activity in the neighborhood provides good jobs for residents, she would not want to see another gravel pit or industrial use that would impact her quality of life, the neighborhood character, and the public health of the neighborhood. There was general agreement with this.
2. **June 2017:** Residents participated in a "Walk Audit", identifying areas that could be improved for the safety and enjoyment of pedestrians, cyclists and drivers sharing the road. The neighborhood desire of wanting to retain the character of Lenox Dale while working on beautification and Complete Streets efforts was reiterated in this process.
3. **February 2018:** Residents participated in a meeting regarding the Town of Lenox's Community-wide Historic Preservation Plan. Lenox Dale has a number of historic properties, some of which have been inventoried. Many have not. The neighborhood residents discussed the desire to not let Lenox Dale dip by the wayside in terms of long-term planning and the promotion of uses and activities which could contribute to the local economy but also directly benefit residents. They discussed having pop-up activities to test out the types of activities and uses they would like to see in the village, including at commercial properties directly on Crystal Street and the Niagara Mill. There was consensus that no matter what happens with the Rest of River clean up, the neighborhood wants to be a great place to live and work, and take the steps to do so—including pursuing zoning amendments.
4. **May 2018:** Residents met with the Town Planner and consultants for the Communitywide Historic Preservation Plan. Residents discussed the desire to improve the awareness of historic buildings in Lenox Dale, and to have resources available to help residents maintain and improve the historic features of their homes. The group also discussed the desire to maintain a vibrant year-round village with services to support the village, like a restaurant or café. Concern was expressed about vacant space and how to fill it.

Community planning documents describe goals incompatible with the siting of a PCB landfill within or near Lenox Dale:

### ***2017 EPA Equitable Development Workshop***

In a two day workshop conducted with assistance from the E.P.A., community members explicitly selected locations in Lenox Dale as priority areas for infill development.



### ***2017 Housing Production Plan***

The Town of Lenox plans to implement the following strategies involving Lenox Dale to create affordable housing:

- Make it easy as possible to create apartments over commercial spaces in business zoned areas such as Lenox Dale
- Diversify and increase the mix of housing available in Lenox Dale
- Create a zoning bylaw that would allow the by-right development of non-conforming parcels for deed restricted affordable housing in Lenox Dale

- Adopt pocket neighborhood zoning in Lenox Dale to mimic traditional density and increase the mix of housing to meet income needs and also meet the desire of older residents to age in place and have single floor living opportunities.

### *2017 Lee Northern Mills Area-wide Brownfields Plan*

This plan contemplates potential reuse scenario for the Niagara Mill in Lenox Dale. The market study prepared identifies potential space demands that align well with the community and neighborhood's goals: independent craft businesses, information/tech businesses, maker industries, small-scale or custom manufacturing, small producer, and household and personal services. This is what the neighborhood wants—not more industrial or harmful uses such as PCB landfill.

The stakeholder group adopted a 6-point vision—which would not be furthered or achieved by the location of a PCB landfill in the neighborhood:

- Mills had a long and rich history providing jobs and these sites should continue to be job generating sites.
- Quality jobs are desired over larger quantities of low-wage jobs with a goal toward expansion and continued growth.
- The bikeway from south Lee to Lenox Dale proposed by the Lee Bikeway Committee is an amenity that should be incorporated into the reuse scenarios for the mill sites.
- The Housatonic River and open spaces should be embraced as assets for these sites and opportunities for outdoor recreation should be maximized.
- New housing developments are a low priority for the community, but mixed-use development that incorporates housing could be embraced.
- Reuses should not negatively impact the surrounding area and residential neighbors of the sites. Uses that would significantly increase traffic, create truck traffic, and result in idling vehicles would be of concern.

The desirability and attractiveness of the Niagara Mill for its reuse as described in the plan would be hindered by the location of a PCB landfill so close by.



## Niagara Mill Reuse and Redevelopment

The Niagara Mill's location on the river and potentially at the terminus of a bikeway makes this site desirable as a destination. The concept of a micro-brewery received support through the Community Visioning and the Stakeholder Group. The concept was viewed especially favorably in the hopes that the site could potentially provide a location for expansion of an existing local micro-brewery. A micro-brewery could include a restaurant/pub component, retail, tours, tastings etc. However, the focus of a micro-brewery would be to produce and distribute a product—beer. This concept could easily be swapped out for other types of production particularly ones that focus on locally produced food.

The Niagara Mill offers significantly more space than a typical micro-brewery would require. In fact, a micro-brewery would likely utilize just 1/3 of the available space. In Spring 2016, interest was expressed by a newly forming non-profit to potentially purchase the Niagara Mill for redevelopment as a museum and exhibition space. The proposal is inspired by the success of the Massachusetts Museum of Contemporary Art (Mass Moca) in North Adams, but on a much smaller scale. This reuse concept is consistent with the concept of a destination location and is generally supported by the community vision and the market analysis. The concept that is currently being explored includes a café and potentially a gift shop. These uses could be compatible with a micro-brewery or craft food production.

In addition, this site could provide amenities that make the area a desirable place to live and work, such as a kayak/canoe launch. Parking is available on the southern portion of the site, which could provide an ideal location for accessing the river and/or the bikeway. The bikeway would connect the site to Lenox, downtown Lee, and the three other mill sites. A kayak/canoe launch and bikeway together with a museum and café would provide a day trip for visitors and residents within walking or biking distance of Lee and Lenox.

### Top Reuse Scenarios

Business Opportunity	Space Type
Brew Pub/Micro-brewery	<ul style="list-style-type: none"> <li>• Production</li> <li>• Distribution</li> <li>• Retail</li> <li>• Hybrid outlet</li> </ul>
Exhibition space/ Museum	<ul style="list-style-type: none"> <li>• Lifestyle Space</li> <li>• Retail</li> <li>• Hybrid Outlet</li> </ul>
Small business center/ medical center	<ul style="list-style-type: none"> <li>• Office</li> <li>• Knowledge Worker Spaces</li> </ul>
Restaurant	<ul style="list-style-type: none"> <li>• Retail</li> <li>• Shared Kitchen</li> </ul>

## Reuse and Redevelopment Options at Niagara Mill



### *2015 Open Space and Recreation Plan*

None of the ten overarching goals of the Open Space and Recreation Plan adopted by the Town of Lenox and approved by the Commonwealth of Massachusetts are furthered by the location of a PCB Landfill in or near Lenox Dale.

The plan highlights that Woods Pond is over an aquifer. An industrial water-supply well is described in a 1985 US Geological Survey study. At this point in time, the Town is not considering this aquifer as a potential water source due to contamination concerns, though further studying its potential and safety as such is recommend in our Open Space and Rec plan.

### ***2006 Community Dialogue***

The community expressed the goal of keeping Lenox Dale tight-knit and residential—not expanding its industrial intensity or footprint.

### ***2004 Community Development Plan (CDP)***

Lenox Dale is identified as a priority area for economic and business development within Lenox. Continued improvement to pedestrian infrastructure and connecting residents with the open space and recreational opportunities in the neighborhood is recommended.

### ***1999 Comp. Master Plan***

“Guide the development, enhancement and conservation of the town to create a more diverse yet tightly woven community that pridefully sustains its rich cultural base and excellent amenities as it meets the economic and social needs of present and future residents” .

“Preserve communal qualities and enrich opportunities for social diversity and interaction among the population and with nature”

“Increase level of affordable housing for singles, young families and moderate income retirees, preferably in or near the pedestrian services and amenities of the Villages”.

“Encourage sustainable growth and development to help maintain an overall high quality of life:

-keeping the historic Lenox town center and existing neighborhoods vibrant

-revitalizing industrial and commercial areas as necessary

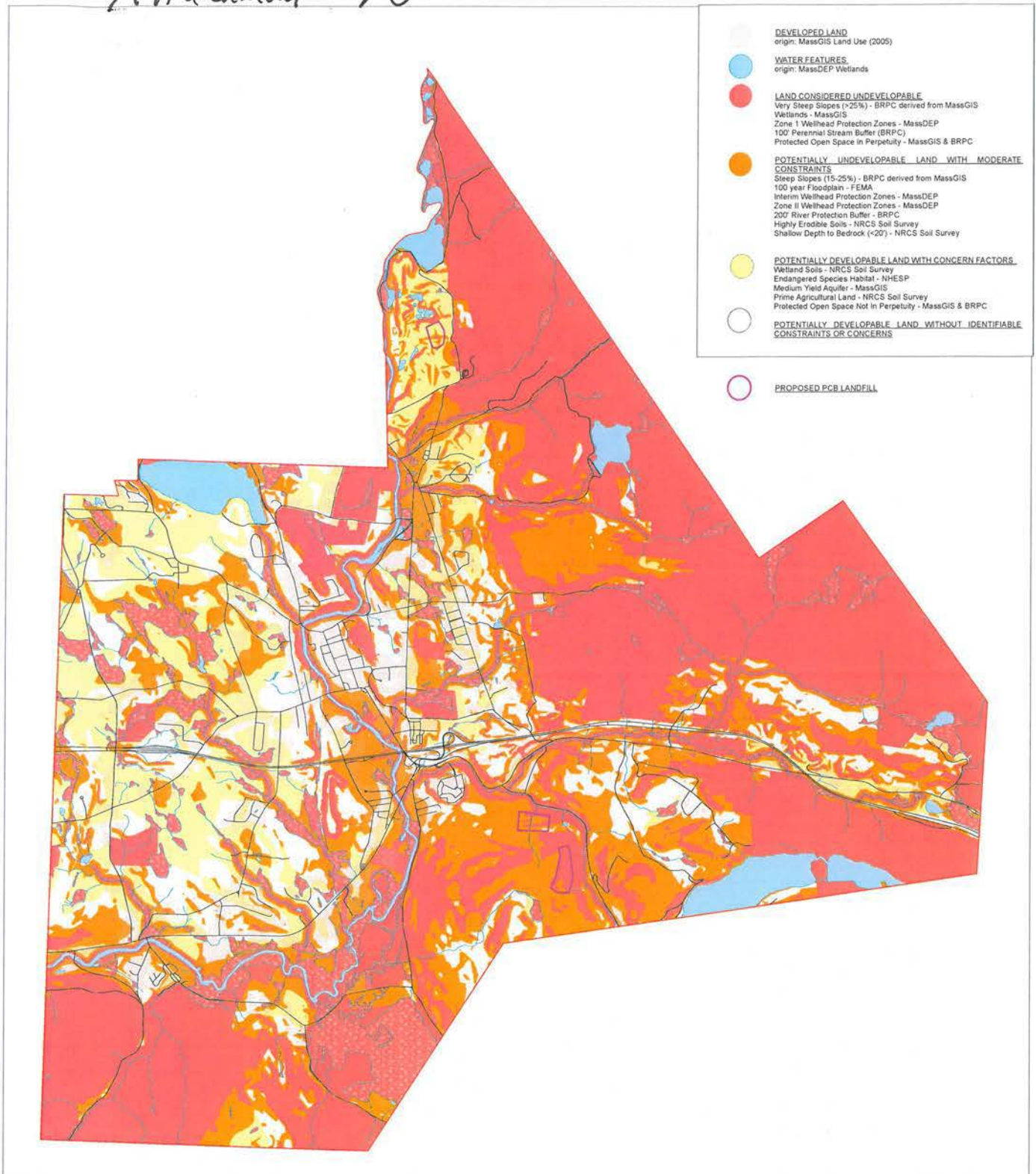
Carefully guiding the location and form of new commercial and business clusters

Providing ways for new residential development to meet community needs and desires”

***In terms of Economic Development and Business:*** “The existing base of industry here provides significant employment for many persons, including those who have not attained a high level of advanced education. ...stakeholders seem receptive to improving the physical infrastructure and upgrading the landscaping and building facades. Open spaces and natural resources make the town aesthetically appealing, contribute to the economy, and provide a sense of connection to the natural world. Pedestrian based opportunities need to be bolstered in order to contribute to community interaction and quality of life. This is particularly relevant to Lenox Dale, and recreational amenities surrounding Woods Pond, the Housatonic and October Mountain State Forest. Eco-tourism seeks to balance natural resource ecology with tourism. Utilizing and developing the environmental potential of this area through enhancement funding with an eco-tourism theme could help maintain and revitalize the area”.

*In terms of Housing:* It may be feasible to build mixed type/market housing within pedestrian distances of both Lenox Village AND Lenox Dale. Potentially buildable, more reasonably priced land for building is more likely to be found near Lenox Dale, where opportunities may be greater for market based moderate priced housing”.

# Attachment N



- DEVELOPED LAND**  
origin: MassGIS Land Use (2005)
- WATER FEATURES**  
origin: MassDEP Wetlands
- LAND CONSIDERED UNDEVELOPABLE**  
Very Steep Slopes (>25%) - BRPC derived from MassGIS Wetlands - MassGIS  
Zone I Wellhead Protection Zones - MassDEP  
100' Perennial Stream Buffer (BRPC)  
Protected Open Space in Perpetuity - MassGIS & BRPC
- POTENTIALLY UNDEVELOPABLE LAND WITH MODERATE CONSTRAINTS**  
Sleep Slopes (15-25%) - BRPC derived from MassGIS  
100 year Floodplain - FEMA  
Interim Wellhead Protection Zones - MassDEP  
Zone II Wellhead Protection Zones - MassDEP  
200' River Protection Buffer - BRPC  
Highly Erodible Soils - NRCS Soil Survey  
Shallow Depth to Bedrock (<20') - NRCS Soil Survey
- POTENTIALLY DEVELOPABLE LAND WITH CONCERN FACTORS**  
Wetland Soils - NRCS Soil Survey  
Endangered Species Habitat - NHESP  
Medium Yield Aquifer - MassGIS  
Prime Agricultural Land - NRCS Soil Survey  
Protected Open Space Not in Perpetuity - MassGIS & BRPC
- POTENTIALLY DEVELOPABLE LAND WITHOUT IDENTIFIABLE CONSTRAINTS OR CONCERNS**
- PROPOSED PCB LANDFILL**

## LEE MASTER PLAN:

## Environmental Constraints & Concerns on Land Development Map Updated April 2018



This map is intended for general planning and educational purposes only. It shall not be used for engineering, survey, legal, or regulatory purposes.

All data provided by MassGIS. See legend for summarized origin

This project was funded partially through a grant from the Massachusetts Office of Environmental Affairs and through funds from the Towns of Lee and Lenox.



## Sources:

### Land Considered Undevelopable

Very Steep slopes (> 25%): Slope derived by BRPC from MassGIS Digital elevation Model (1:5000)  
<https://docs.digital.mass.gov/dataset/massgis-data-digital-elevation-model-15000>

Wetlands: MassDEP Wetlands (from MassGIS) <https://docs.digital.mass.gov/dataset/massgis-data-massdep-wetlands-2005>

Zone 1 Wellhead Protection Zones: MassDEP Wellhead Protection Areas from MassGIS  
<https://docs.digital.mass.gov/dataset/massgis-data-massdep-wellhead-protection-areas-zone-ii-zone-i-iwpa>

100' Perennial Stream Buffer: Buffer derived by BRPC using MassDEP Wetlands (from MassGIS) line segments (streams) <https://docs.digital.mass.gov/dataset/massgis-data-massdep-wetlands-2005>

Protected Open Space In Perpetuity: MassGIS Protected and Recreational Open Space (Protected land only) <https://docs.digital.mass.gov/dataset/massgis-data-protected-and-recreational-openspace> and updated by BRPC based on assessor records for ownership and boundaries.

### Potentially Undevelopable Land with Moderate Constraints

Steep Slopes (15-25%): Slope derived by BRPC from MassGIS Digital elevation Model (1:5000)  
<https://docs.digital.mass.gov/dataset/massgis-data-digital-elevation-model-15000>

100 year Floodplain: FEMA Q3 Flood Zones from Paper FIRMS  
<https://docs.digital.mass.gov/dataset/massgis-data-fema-q3-flood-zones-paper-firms>

Interim Wellhead Protection Zones: MassDEP Wellhead Protection Areas from MassGIS  
<https://docs.digital.mass.gov/dataset/massgis-data-massdep-wellhead-protection-areas-zone-ii-zone-i-iwpa>

Zone II Wellhead Protection Zones: MassDEP Wellhead Protection Areas from MassGIS  
<https://docs.digital.mass.gov/dataset/massgis-data-massdep-wellhead-protection-areas-zone-ii-zone-i-iwpa>

200' River Protection Buffer: Buffer derived by BRPC using perennial streams from MassDEP Hydrography (1:25,000) <https://docs.digital.mass.gov/dataset/massgis-data-massdep-hydrography-125000>

Highly Erodible Soils: NRCS SSURGO-Certified Soils from MassGIS  
<https://docs.digital.mass.gov/dataset/massgis-data-nrcs-ssurgo-certified-soils>

Shallow Depth to Bedrock (<20') : NRCS SSURGO-Certified Soils from MassGIS  
<https://docs.digital.mass.gov/dataset/massgis-data-nrcs-ssurgo-certified-soils>

Jennifer Tabakin  
Town Manager

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## TOWN OF GREAT BARRINGTON MASSACHUSETTS

OFFICE OF THE TOWN MANAGER

*Via Electronic Mail*

May 9, 2018

Mr. Dean Tagliaferro ([tagliaferro.dean@epa.gov](mailto:tagliaferro.dean@epa.gov))  
EPA Project Coordinator  
U.S. Environmental Protection Agency  
c/o Avatar Environmental  
10 Lyman Street, Suite 2  
Pittsfield, MA 01201

**Re: Impacts of a Proposed Hazardous Waste Landfill at Rising Pond**

Dear Mr. Tagliaferro:

The Town of Great Barrington would like to take this opportunity to provide additional information in order to follow up on the Environmental Appeals Board (EAB) suggestion for "Further record development ... on the potential impacts of a spill on environmental resources, businesses, and residences near the on-site disposal locations" (EAB Order, January 26, 2018, p. 136).

Specifically, this letter addresses three items with regards to GE's proposed landfill site at Rising Pond. First, the presence of a hazardous waste landfill site is not in keeping with the Town's land use vision, Master Plan, or zoning for this particular area. Second, a spill from a landfill would have dramatic, severe, and permanent damage to a major drinking water aquifer. And third, the mere presence of a hazardous waste landfill at the site would deepen the environmental justice issues and cumulative burdens facing the community in the vicinity.

### **The Town's Land Use Vision, Master Plan, and Zoning Regulations**

Master Plan:

In 2013 after nearly three years of public input and community meetings, the Great Barrington Planning Board and Selectboard unanimously adopted a Community Master Plan. Several common themes emerged from that process, including the following, identified in the cover letter to the Master Plan:

Our town is a successful and vibrant community, one whose fundamental asset is natural beauty. People are attracted to live and visit by the open space and wonderful scenery. The town's historic character, arts and cultural amenities, and close-knit community feeling are the envy of the region. Residents and visitors enjoy our lively downtown, with its mix of locally owned restaurants and

retailers. Maintaining our unique rural-urban configuration and traditional-modern eclectic will preserve our appeal as a model small town for a long time to come. *This special balance defines our character, and must be given our consideration in all future decisions.*

The Master Plan process produced a land use vision map that identifies the area of GE's proposed landfill for "Natural Resource Protection" intending "low density residential development that conserves natural resources and agriculture, preserves natural and working landscapes, encourages sensitive development, clusters new residences, and promotes agriculture and agricultural services." The Master Plan also identifies this area as a "Conservation Area" needing preservation and protection from development.

#### Zoning:

The zoning district in which GE's proposed Rising Pond landfill site is located is zoned for residential use on lots of not less than one acre ("R2"), specifically because higher density development and industrial development including hazardous waste sites would threaten the aquifer and the Town's vision for the revitalization of Housatonic Village and the area around Rising Pond.

Zoning was adopted in Great Barrington in 1932, at which point the proposed landfill site was zoning for single family residential use. This was the case until 1960, when the area was rezoned and designated Industrial. The subject site has never been developed. Groundwater management reports (see Motts 1982) including early drafts Dr. Mott's 1990 report, specifically recommended one-acre residential zoning and *the prohibition of hazardous waste landfills in order to protect the underlying aquifer*. As a direct result of these recommendations, Great Barrington voters at a Special Town Meeting in November 1989, by a vote of 110 in favor, 1 against, rezoned the area west of Rising Pond, including the subject site, from Industrial to residential R2. The subject site remains R2 today.

Great Barrington's Zoning Bylaw lists allowed uses in Section 3.1, and specifically states "Any building or use of premises not herein expressly permitted is hereby prohibited." Hazardous waste landfills are not listed in the Bylaw and are therefore prohibited. The few industrial uses that can be considered in Great Barrington are specifically prohibited from R2 districts. Finally, there is no legal way under the Town's Zoning Bylaw or under the Commonwealth's zoning act, Massachusetts General Law Chapter 40A, to vary from these prohibitions. Chapter 40A Section 10 specifically states that municipalities cannot allow use variances unless the local Bylaw specifically permits them. Great Barrington does not permit them, and never has since zoning was first enacted.

***Siting a hazardous waste landfill in this location would be contrary to the Town's Master Plan and in violation of its long standing Zoning Bylaws.*** And as described further below, it would also threaten the Town's future water supply and impose additional environmental and health burdens on an already struggling neighborhood.

#### **Impacts on the Existing Drinking Water Aquifer**

Contamination of a drinking water aquifer is an existential threat to any community. In this instance, there is a significant and extremely productive aquifer under this section of the Housatonic River and it is one of two groundwater sources for high-quality drinking water for the Town. It is absolutely critical that this quality aquifer be protected. This section provides some background about the aquifer, why it must be protected, and ongoing efforts of the Town's drinking water provider to develop the aquifer as a drinking water source.

Since the 1960s, the Town has been studying and working to preserve, explore, and develop the vast aquifer that lies in the glacial sediment and the bedrock that underlie the Housatonic River in the vicinity



of Rising Pond, south past Division Street. Numerous reports and other studies, including a 1990 Hydrogeologist Ward S. Motts, detail the extent and productivity of the aquifers in this area. Reports by Motts in 1982 and 1990 include recommendations for an aquifer protection zone extending for about two miles south of the Rising Dam (see Motts 1990 map Figure 7), and the Town instituted by enacting the R2 one-acre residential zoning in this area. Further, a table on page 42 of the 1990 report entitled "Toxic and Hazardous Wastes that Can Severely Contaminate Ground Water Supplies" specifically lists PCBs.

In fact, in an undated memo (presumed to be about 1989 or 1990) from Ward S. Motts to the Massachusetts Executive Office of Environmental Affairs, and included in the 1990 Motts report, Dr. Motts argues that any dumping of dam materials and sediment from Rising Pond should require a complete and detailed Environmental Impact Study.

The Great Barrington Fire District Water Department ("GBFD" or "Fire District"), which provides the public water supply for nearly 1,700 service connections in Great Barrington, serving in excess of 4,000 people including the bulk of the Town's commercial tax base, including all of downtown and critical institutions such as the regional hospital, is under an order by Massachusetts DEP to develop an additional water source, and this aquifer is the most promising location for that source. If the Fire District fails to find an additional source this is likely to impact the Town's existing real estate and future development capacity. The value of real property in the Fire District as of the current fiscal year is \$728,634,783, and the value of personal property is \$18,950,186.

The Fire District's main supply is from an aquifer under the Green River valley; water is collected in an infiltration gallery about one mile west of downtown. This aquifer is a shallow sand and gravel aquifer with no evidence of a confining clay unit (or other "hydrogeological barrier") in the vicinity of the source that can prevent contaminant migration from the ground surface. The aquifer is therefore considered highly vulnerable to contamination. Therefore, the Fire District has always considered options for another water source in the event of an emergency at the primary source. One emergency source could be the extant surface water reservoir on East Mountain. The pipes would need to be reconnected and the treatment units restarted, and it would only provide a few days of water at best. Another emergency source could be a direct overland connection from the Fire District system to the Housatonic Water Works (HWW) system, which is supplied by surface water supply of Long Pond. However, use of this system would also have to be extremely limited in quantity and duration, since taking water from the HWW would impact the HWW's 1,400 services (primarily in the Village of Housatonic but also in the Towns of West Stockbridge and Stockbridge). (See attached Figure 2: Location of Water Supply Facilities and Test Wells, Great Barrington Fire District.)

Because of the vulnerability of the primary source and the limited quantity of emergency sources, for many years, since at least 2000, the Fire District has been exploring other aquifers throughout Town for a secondary water source, to provide necessary and critical redundancy (in terms of quality and capacity) to the current main and emergency supply system. Massachusetts DEP has required the Fire District to find and develop another water source. In a set of requirements in its December 2011 Sanitary Survey Compliance Plan, DEP directs the Fire District as follows (emphasis in the original): "**DEP requires GBFD continue to pursue a second active source to improve flexibility in the water system.** In part due to the limited flexibility of the water system, with its single active source, the Department has determined that GBFD must continue to pursue a second active source prior to the next Sanitary Survey in 2014, or risk being downgraded to Conditional Capacity." The Fire District's search is focused on the aquifer area immediately downgradient from GE's proposed Rising Pond landfill site. The Fire District has been actively exploring this aquifer for almost 20 years, well before GE acquired the property adjacent to Rising Pond in 2008.

### Exploration of Possible Aquifer Sources:

While other groundwater resources exist in Great Barrington, none of them are as yet proven, likely as large in quantity, as accessible (i.e., landowners willing to allow access), or as close to the Fire District system infrastructure, as the wells in the aquifer underlying the Housatonic River in the vicinity of Division Street and GB-1. (For recent discussion of potential water sources, see HydroSource Associates, 2014.)

In about 2002, the Fire District drilled a test well, “Well GB-1,” on property of Taft Farms, just south of Division Street on the west bank of the Housatonic River just north of the confluence with the Williams River (see attached Figure 1 for location of Well GB-1), and one mile south of GE’s proposed landfill site. This test well was the result of nearly \$500,000 of investment. The well was over 600 feet deep, and though its recharge area was unknown, Mass DEP had given permission to develop the well. However, since the well was on land restricted by the Massachusetts Agricultural Preservation Program (APR) program, the Fire District was not granted permission from the APR program to develop the well.

Since that time, the Fire District has continued its intense and expensive effort to find another source. Just south of Well GB-1, on land owned by “6M,” and also along the Housatonic River, the Fire District drilled another test well, finally finding sufficient water at over 900 feet deep. But the resulting water was not clear enough. This testing cost approximately \$1 million.

The most recent testing was done just west of land of 6M, on the west bank of the River, on land owned by Ballygill. The Ballygill exploration lasted over a year, and four wells were explored. Two, at 150 feet deep, filled with sand and would not clear. Two others, at over 400 feet deep, also filled with sand, even with finer filtration screens. This testing was stopped and abandoned last year after a cost of approximately \$500,000. (See attached Figure 2: Location of Water Supply Facilities and Test Wells, Great Barrington Fire District.)

Nevertheless, based on decades of technical studies and test wells conducted from 2001 through 2016, and based on the very high yields of private wells in similar hydrogeological settings at the Monument Mills (Cook’s Garage, 426 Park Street) in Housatonic and the Rising Mill (295 Park Street), the aquifer in this area is obviously the most promising location for a second water source for the Town. It is also an area where well exploration is of relatively known and controllable cost—important for a small town water department. And, just as critical, landowners in the general area have been cooperative and willing to allow for the exploration of wells and development of productive wells. Even if other aquifers in Town were as good, access to them might not be possible, and distance from the Fire District system could make costs to connect it infeasible.

Therefore the Fire District is still pursuing well GB-1, a new well adjacent to or in the vicinity of GB-1. An aquifer, and bedrock, once contaminated, cannot be easily, quickly, or cheaply remediated. A spill from GE’s landfill site could have dramatic, severe, and permanent damage to this aquifer. This highly favorable aquifer zone should be protected, and the use and storage of hazardous wastes in this area should not be permitted under any circumstance. ***A spill from a hazardous waste landfill in this area would threaten nearly 4,000 people, three-quarters of a trillion dollars of real property value (over half of the Town’s tax base) and foreclose the Town’s economic growth.***

### **Impacts on Existing Vulnerable Populations / Environmental Justice**

The area surrounding GE’s proposed Rising Pond landfill site is already burdened by the presence of brownfields and the accumulation of contaminants. As outlined below, this area is also more diverse, lower income, and lower value than the rest of the Town. The area also has a higher percentage of

vulnerable populations, such as seniors and children than the rest of the Town, and is already burdened by brownfields. A hazardous waste landfill in this area would have a negative impact on this area by increasing the environmental burdens on sensitive populations, decreasing already low property values, and further stifling the area's prospects for economic recovery.

The Town was awarded a US EPA Brownfields Assessment Grant in 2017 for specific "target area," in part because of these very issues. The "target area" of the Grant is the area surrounding and near the proposed GE landfill. As part of the Grant workplan, the Town prioritized five brownfields sites within this area for further assessment. These brownfields sites are located within the heart of Housatonic, a densely developed, blue collar community, at the edge of town. Four of the five sites are located in a designated Slum and Blight<sup>1</sup> area, within one-quarter mile of the Housatonic Community Center, and a public park within a low-moderate income community that is already struggling with high rates of poverty, unemployment and deteriorating housing. The fifth site, the Rising Mill, adjacent to Rising Pond, is located on the bank of the Housatonic River surrounded by predominantly lower value residential neighborhoods.

Contaminants identified and/or suspected at these sites include petroleum of varying grades, chlorinated solvents, polycyclic aromatic hydrocarbons, lead and asbestos in soil, groundwater and/or in building materials. The dilapidated and vacant condition of these brownfields poses specific and cumulative safety and environmental concerns. The presence of brownfields, vacant mills, and blighted property detract from the community character which creates a sense of disinvestment, disregard and neglect that discourages investment in the community.

According to HUD, 59.3% of the population within the Housatonic Census Designated Place (see map in Figure 3, attached) is low to moderate income, many of which are engaged in service industry work in other parts of the town or county. Data from the Census Bureau's 2013 American Community Survey (ACS 2013) reflect a significantly lower median household income in the area (\$28,750) compared to \$66,768 for the state.

Housatonic CDP is primarily made up of young families and seniors. Over 60% of the population within the area is over 65 years, under 18 years, or women of child bearing age – all of which are sensitive populations. Data from the Bureau of Labor Statistics is not available for the CDP, but data from ACS 2015 reflect a much higher rate of unemployment (16.3%) than the County (8.9%), State (7.6%) or the Nation (8.2%). In addition, the poverty rate is higher at 16.6% compared to the County (13%), State (11.6%), and Nation (15.5%). According to the Massachusetts Department of Housing and Community Development, incomes of the elderly are especially low: 85% of elderly households in Housatonic are low or moderate income.

Over 60% of the people within the area belong to a sensitive population as indicated by the chart in Table 1 below. Sensitive populations include minorities, elderly, children, and women of child-bearing age. Within the area one of five households are single parent households. The area has a higher percentage of persons over 65 years (18%) compared to the State and the Nation (14.7% and 14.1%), a trend which is expected to continue.<sup>2</sup> According to the report *Unequal Exposure to Ecological Hazards* (Faber and Krieg, 2005), working class families, such as those in the area, and people of color face a "triple unequal exposure effect" to toxic pollution and other environmental hazards in comparison with higher-income residents.

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<sup>1</sup> Designated by the Massachusetts Department of Housing and Community Development under US Dept. of HUD guidelines

<sup>2</sup> U.S. Census Bureau 2014-2015 American Community Survey

Table 1: Percentage of Residents within the Target Area Belonging to a Sensitive Population	
Minorities	11.8%
Over 65 Years Old	18%
Children	20.5%
Women of Child Bearing Age	23.1%
<i>Source: US Census American Community Survey 2015</i>	

In the area, 54% of homes are more than 65 years old. A 2014 windshield survey, conducted by town staff, assessed 66 homes in the area and found that 59% require more than minor rehabilitation. Each house was rated on five items (e.g., foundation, roofing, siding, windows, electrical), and the scores were added together to determine an overall structural rating (e.g., sound, minor, moderate, substantial, and dilapidated). Of the 66 homes surveyed, only 3% were ranked as sound, 38% appeared to need minor repairs, 52% need moderate or substantial repairs, and 8% are completely dilapidated. This data leads to lower area housing values, as shown in Table 2 below.

Table 2: Single Family Home Values, 2018				
Assessor's Map No.	Median Value (\$)	Town-wide Median Value (\$)	Difference (\$)	Percent of Median
Map 1	214,500	301,000	86,500	71%
Map 2	242,800	301,000	58,200	81%
Map 3	228,300	301,000	72,700	76%
Map 4	224,250	301,000	76,750	75%
Map 5	185,200	301,000	115,800	62%
Map 6	211,050	301,000	89,850	70%
Map 7	235,500	301,000	65,500	78%


The value of homes in the area is also significantly less than the value of homes in the Town. The 2018 assessed value of single family homes located in Great Barrington Assessor's Maps 1 – 7, which surround GE's proposed landfill site and correspond roughly to the Housatonic CDP.

The presence of brownfields in any area creates a sense of disregard and neglect that discourages investment. ***The presence of additional contaminants and hazardous sites in the form of GE's proposed PCB landfill in this area would compound and magnify existing environmental, health, and economic burdens.***

Conclusion

Thank you for this opportunity to provide additional information about why a PCB landfill should not be permitted at Rising Pond. The reports and studies included with this letter provide additional information. Please do not hesitate to contact me or my Town Planner Christopher Rembold directly at (413) 528-1619, x.7, to discuss any of this in more detail.

Sincerely,

  
 Jennifer Tabak,  
 Town Manager

cc, with attachments: Tim Conway, EPA Region 1  
Jim Murphy, EPA Region 1  
Martin Suuberg, Commissioner, Massachusetts DEP  
Michael Gorski, Director, Western Regional Office, Massachusetts DEP

Attachments:

Figure 1 – Well GB-1. Great Barrington, Massachusetts. Map by HydroSource Associates.

Figure 2: Location of Water Supply Facilities and Test Wells, Great Barrington Fire District. Planning Department, Town of Great Barrington, MA. 3/9/2018.

Figure 3: Housatonic, MA CDP map. US Census Bureau. 2010.

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Tighe & Bond. 2006. “Site Selection Summary – Bedrock Well Exploration Project.” May 23, 2006.

Town of Great Barrington Master Plan, 2013. Access at <https://www.townofgb.org/planning-department>

Town of Great Barrington Zoning Bylaw and Map, 2017. Access at <https://www.townofgb.org/planning-department>

**TOWN OF LEE  
SCENIC MOUNTAINS REGULATIONS**

Act Accepted by Town Meeting

May 10, 2001

Map Approved by the Selectmen

March 14, 2006

Regulations and Map Approved by the Massachusetts Dept. of Conservation and Recreation

July 21, 2008

Regulations Filed in Registry of Deed and Effective on October 24, 2008

**REGULATIONS UNDER THE BERKSHIRE SCENIC MOUNTAINS ACT  
MASSACHUSETTS GENERAL LAWS CHAPTER 131, SECTION 39A**

1. GENERAL PROVISIONS

1.1 Authority

The Conservation Commission, of the Town of Lee, having been designated as hearing authority under M.G.L. Ch. 131, Sec. 39A at the Annual Town Meeting on May 10, 2001 promulgates these regulations pursuant to the authority granted it under said Act.

1.2 Purpose of Law

The purpose of the law is to regulate removal, filling, excavation, clearing of vegetation or other alteration of land within mountain regions designated by the town which is likely to have a significant adverse effect on watershed resources or natural scenic qualities because of the pollution or diminution of ground or surface water supply, public or private; erosion; flooding; substantial changes in topographic features; or substantial destruction of vegetation.

1.3 Purpose of Regulations

These regulations are promulgated to create uniform procedures and to clarify the provisions of the Act by establishing standard definitions and procedures. They, and the Act, shall take effect when the following events have happened: The regulations have been approved by the Commissioner and a map and text delineating the boundaries of the mountain regions subject to regulation have been adopted by the Board of Selectmen and recorded in the Berkshire Middle District Registry of Deeds as specified in the Act.

1.4 Statement of Jurisdiction

These regulations apply to the areas delineated in the Town of Lee and shown on the approved map entitled “Town of Lee, Scenic Mountain Act Mapped Mountain Regions.”

1.5 General Outline of the Mapped Mountain Regions:

The areas of the town which are subject to the provisions of the Berkshire Scenic Mountain Act (M.G.L. Ch. 131, Section 39A) are defined by the map and text adopted for that purpose by the Lee Board of Selectmen. In general, and subject to the exemptions specified in section 11 below, these areas include land in three “regions” of town as shown on the map and described below. Each region has two zones – Zone 1 is the Base Elevation above which all land in the region is regulated; Zone 2 is any area within 30 Meters (about 98 feet) vertically below Zone 1 and that has steep slopes as defined herein. In some areas, the Zone 1 Base Elevation line is defined as a setback or offset from a street or other physical feature as described below. Zone 2 in these areas is measured as being 100 feet horizontally beyond (lower than) Zone 1. (Note: Lines that are parallel to roads are measured from the nearest edge of the right of way of the road as of the date this regulation becomes effective.)

<u>Region</u>	<u>Zone 1 Elevation</u> Meters (Feet)	<u>Zone 2 Elevation</u> Meters (Feet)
“A”	300 M (984 Ft)	270 M (886 Ft)
“B”	360 M (1181 Ft)	330 M (1083 Ft)
“C”	390 M (1280 Ft)	360 M (1181 Ft)

Region “A” is located in the southwest corner of the town and includes portions of Beartown State Forest. Nearby roads include Willow Street, Pine Street, Beartown Mountain Road, Meadow Street, and Fernside Road. Zone 1 follows contour elevation 300 Meters from the Stockbridge Town Line in a general easterly direction, crossing Beartown Mountain Road, and continuing easterly and southeasterly generally parallel to and uphill from Meadow Street and Fernside Road to the intersection of the Tyringham town line.

Region “B” is located in the southeasterly corner of the town and includes the Goose Pond area and Appalachian Trail Corridor. Nearby roads include Tyringham Road, Cape Street (Route 20), and Mass. Turnpike. Forest Street, Antelope Drive, and the Leisure Lee development are mostly within this region. Zone 1 follows contour elevation 360 Meters from the Tyringham Town Line northerly and easterly, crossing Forest Street and intersecting with Antelope Drive (the Leisure Lee entrance road). Zone 1 then continues easterly in a line parallel to and 300 feet southerly of the rights of way of Cape Street (Rt. 20) and the Mass. Turnpike to the intersection of the Becket Town Line.

Region “C” is located in the northeasterly corner of the town and includes large areas of October Mountain State Forest and Town Water Supply lands. Zone 1 begins at the Becket town line northerly of the Mass. Turnpike and Rt. 20 at the intersection of the centerline of the existing power transmission lines, and then continues westerly along the power lines to the intersection of a line 300 feet northerly of and parallel to the right of way of Mass. Pike, which it follows westerly to the centerline of Chestnut Street. Zone 1 then follows the centerline of Chestnut Street northerly to Zone 1 Contour Elevation 390 Meters, and follows this contour westerly past the existing gravel pit to the centerline of the power transmission lines. Zone 1 then follows the centerline of the power lines northerly to a line 150 feet northerly of and parallel to the right of way of Washington Mountain Road. Zone 1 runs easterly in the 150 foot offset line until it intersects with Zone 1 Contour Elevation 390 Meters, and continues northerly along the 390 Meter contour to the town line near the corner of Lenox and Becket.

1.6 Relationship to other required Permits:

The following activities requiring other permits shall be permitted subject to regulation under The Scenic Mountains Regulations:

- a. Any project requiring a Special Permit or Variance as required by the Zoning By-Laws of the Town of Lee:
- b. Creation of reasonable infrastructure for residential projects including but not limited to: roadways, driveways, drainage structures, water, sewer, electric, telephone, and cable TV distributions systems above or below ground;
- c. Any subdivision that requires approval under the Massachusetts Subdivision control Law, M.G.L. Ch. 41.
- d. Construction of new, expanded or replacement on-site septic system or well.

2. DEFINITIONS

- 2.1 Abutter means the owner of land, as determined by the most recent Assessors’ records, which abuts the property line hosting the proposed activity and any other land within three hundred (300) feet of the proposed activity or one hundred (100) feet from the boundary of the property hosting the activity, whichever is farther. Abutter includes land which lies directly across any street or road from the said property.
- 2.2 Activity is any removal, filling, excavation, clearing or other alteration of any land situated within the mapped mountain region which is not specifically exempt from the provisions of this Act.
- 2.3 Activity subject to M.G.L. Ch. 131, Sec. 40 (Mass. Wetlands Protection Act) which is exempt under this act, is any activity subject to a valid and enforceable Order of Conditions or positive Determination of Applicability issued under the Wetlands Protection Act.



- 2.4 Alter or Alteration includes, but is not limited to, one or more of the following activities within the mapped mountain regions, which is not otherwise exempted:
- a. removal, filling, excavation, blasting, or dredging of soil, or blasting sand, gravel, rock, or aggregate material of any kind;
  - b. changing of pre-existing drainage characteristics, sedimentation patterns or flow patterns;
  - c. disturbance of existing drainage, water courses or water table;
  - d. substantial change in topographic features;
  - e. erection, alteration or demolition of any building or structure requiring a building permit; (small structures less than 120 s.f. that do not require a building permit are exempted)
  - f. dumping or discharging of any material, except where necessary to temporarily stockpile materials to conduct the project, such as loam, mulch, gravel, lumber, etc.
  - g. removal or destruction of plant life, including clearing of trees in excess of ¼ acre (10,890 sq. ft.) of aerial coverage in the aggregate,
  - h. Construction and/or paving of any new road, driveway or parking lot larger than 500 square feet.
- 2.5 Aerial coverage is the ground area equivalent of the tree canopy in full leaf.
- 2.6 Area subject to regulation under the Act is an area within the Town which is subject to the provisions of the Act and is designated on the map referred to in the Regulations. An area subject to the Act shall be synonymous with “mapped mountain region.”
- 2.7 Blasting use of any explosive devices to remove rock.
- 2.8 Bona fide purchaser of land without notice is a buyer for value who has not been informed verbally or in writing or who had no actual knowledge that activities have been done on the purchased property in violation of the Act or these regulations.

- 2.9 Certificate of Compliance is a form issued by Conservation Commission that establishes all conditions set forth in the Order of Conditions have been met.
- 2.10 Clearing is cutting or otherwise removing fifty (50) percent or more of aerial coverage of trees.
- 2.11 Commencement of activity is commencement of physical work on the premises, and does not include surveying or site testing.
- 2.12 Commission is the Lee Conservation Commission.
- 2.13 Commissioner is the Commissioner of the Department.
- 2.14 Compliance with the Forest Cutting Practices Act shall be demonstrated by submission to the Conservation Commission of a copy of a permit issued in accordance with that Act.
- 2.15 Day. All time periods of ten days or less specified in M.G.L. c. 131 Section 39A and these regulations shall be computed using business days only, Monday through Friday, excluding Saturday, Sunday and legal holidays. All other time periods shall be computed on the basis of calendar days, unless the last day falls on a Saturday, Sunday, or legal holiday, in which case the last day shall be the next business day following.
- 2.16 Department is the Massachusetts Department of Conservation and Recreation or its successors.
- 2.17 Determination of Applicability is a written finding by the Conservation Commission as to whether the land or proposed activity shall or shall not require the filing of a Notice of Intent under the Act. It shall be made on Form B of these regulations.
- 2.18 Environmental Impact Statement is a full scale Environmental Impact Statement issued under the National Environmental Policy Act or a full scale Environmental Impact Report issued under the Massachusetts Environmental Policy Act.
- 2.19 Excavation is the disturbance of any material to lower the surface or create a cavity of any kind, either temporarily or permanently.
- 2.20 Filling is the placing of any material that raises, either temporarily or permanently the elevation of any area subject to the Act.
- 2.21 Flooding is a local, temporary inundation, or a rise in the surface of a body of water, however caused, such that it covers land not usually under water.

2.22 Forms

- Form A – Request for Determination of Applicability,
- Form B – Determination of Applicability
- Form C – Notice of Intent
- Form D – Abbreviated Notice of Intent
- Form E – Order of Conditions
- Form F – Certificate of Compliance
- Form G – Extension Permit

2.23 Hearing Authority shall mean the Commission.

2.24 Mapped mountain region is an area within the town which is subject to the provisions of the Act and is designated on the map referred to in these Regulations.

2.25 Notice of Intent is a detailed written and/or graphical description of any proposed activity to be performed in a mapped mountain region and that is submitted to the Conservation Commission. It shall be made on the Form provided with these regulations, and includes plans and other attachments.

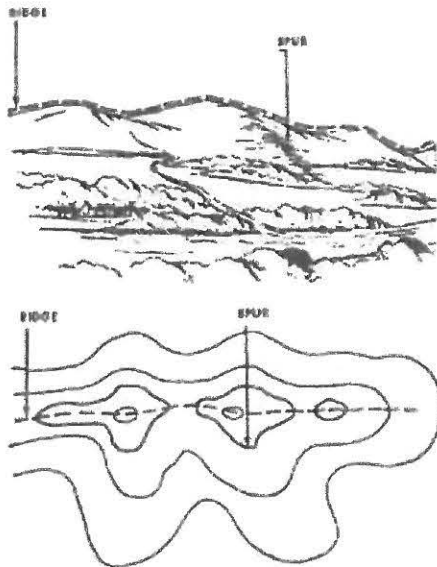
2.26 Order of Conditions is a document issued by the Conservation Commission or on appeal by the Commissioner, stating ways in which the activity shall be conducted, modified, regulated, forbidden or otherwise controlled to protect the interests of the Act. It shall be made on Form E of these regulations.

2.27 Owner of Land is the person appearing as the owner of record in the most recent records of the tax assessor.

2.28 Permits, variances and approvals required by bylaw or ordinance – The requirement under the Act to obtain or apply for all obtainable permits, variances and approvals required by local bylaw with respect to the proposed activity shall mean only those which are feasible to obtain at the time in Notice of Intent is filed. Permits, variances, and approvals required by local bylaw may include, among others, zoning variances, permits from boards of appeals, permits required under floodplain or wetland zoning bylaws and gravel removal permits. They do not include, among others, building permits under the State Building Code, M.G.L. Chapter 23 B, Section 16, or subdivision control approvals under the State Subdivision Control Law, M.G.L., Chapter 41, Sections 81K-81GG, which are issued by local authorities. When an applicant for a comprehensive permit (under M.G.L., Chapter 40B, Sections 20-23) from a board of appeals has received a determination from the board granting or denying the permit and, in the case of a denial, has appealed to the Housing Appeals

Committee (established under M.G.L., Chapter 23B, Section 5A), said applicant shall be deemed to have applied for all permits obtainable at the time of filing.

- 2.29 Person includes any individual, group of individuals, association, partnership, corporation, company, business, organization, trust, estate, the Commonwealth or any political subdivision thereof, administrative agency, public or quasi-public corporation or body, authority, or any other legal entity or its legal representative, agents or assigns.
- 2.30 Person aggrieved is the applicant, any individual affected by the order, an owner of abutting land, or any ten residents of the Town affected by the Conservation Commission's Order or failure to act, and such person aggrieved must specify the reasons and facts as to how the person is affected.
- 2.31 Preservation of natural scenic qualities is the protection of the existing features of the environment by regulating activities to minimize potential adverse effects due to pollution or diminution of ground or surface water supply; flooding; substantial changes in topographic features or substantial destruction of vegetation.
- 2.32 Project of Minimum Impact is one that affects less than 2,500 square feet of surface area of the ground and any structure to be erected does not exceed one story in height or more than 18 feet in height measured from the average ground plane surrounding the structure to the highest point of the roof, not including a chimney.. A Project of Minimum Impact is eligible to file an Abbreviated Notice of Intent (Form D) application.
- 2.33 Regulated Activities shall mean the removal, filling, excavation or other alteration of land within mapped mountain regions which are likely to have a significant adverse effect on watershed resources or natural scenic qualities.
- 2.34 Removal is the act or process of taking away any type of material that changes the elevation, either temporarily or permanently, from any area subject to regulation under the Act.
- 2.35 Ridgeline is the ground surface (not the tops of trees) along the top of a hill or mountain, as illustrated in the following figure. The ridgeline may slope up or down as it connects high points of different elevations. Spurs may branch off of ridgelines, and plateaus or hills downslope from the ridgeline may have a similar ridgeline form, but only the upper-most ridgeline is regulated herein.



**Figure 2.35 Illustrative Elevation and Plan View of Ridgeline**

- 2.36 Scenic is the visual characteristic of the natural and/or manmade environment, including but not limited to sweeping vistas, hillsides and mountaintops, open spaces, woodlands, agricultural lands, fields, meadows, streams, ponds, wetlands, groups of buildings, and similar features, when viewed from one or more public locations such as roadways, parks, trails, recreational lands, overlooks, or other public vantage points.
- 2.37 Significant is that which is important and of consequence, as determined by the Commission.
- 2.38 Slope is the measurement in percent of the natural change in elevation as expressed in the ratio of the change in elevation over a measured horizontal distance.
- 2.39 Steep slope is defined as an area with slopes averaging 15% or greater over a horizontal distance of at least 200 feet. An area will be classified as having a Steep Slope if there is any point having an elevation thirty (30) feet higher or lower within a radius of two hundred (200) feet.
- 2.40 Substantial is that which is of considerable worth or value and is important with regard to the essential elements being considered, as determined by the Commission.

- 2.41 Topographic features comprise the configuration of the land's surface including its relief and relative elevation.
- 2.42 Tree Canopy coverage is the horizontal area covered by the foliage of a tree in full vegetation.
- 2.43 Vegetation is the plant life or total plant cover of a given area, including but not limited to grass, ground cover, shrubs and trees.
- 2.44 Vista Pruning is the selective thinning of tree branches or understory shrubs, to establish a specific "window" to improve visibility. Vista Pruning does not include the cutting of trees that would reduce the leaf canopy to less than 90% of the existing aerial coverage of tree canopy.
- 2.45 Watershed is an area within which water drains to a particular watercourse or body of water.

3. REQUEST FOR DETERMINATION OF APPLICABILITY

- 3.1. Any person who believes that the Act does not apply to a particular area or to the proposed work for one or more of the reasons listed below may submit a written Request for Determination of Applicability to the Conservation Commission.

Possible Reasons for Request for Determination:

- a. land is not within the mapped mountain regions; or
- b. proposed work is exempt under the Act; or
- c. proposed work is not removal, filling, excavation or other alteration of land; or
- d. proposed work is not likely to have a significant adverse effect on watershed resources or natural scenic qualities, or
- e. proposed work includes adequate mitigation measures so the work will not have a significant adverse impact on watershed resources or natural scenic qualities.

- 3.2. Three copies of the completed Request for Determination, using Form A with applicable attachments, shall be submitted to the Conservation Commission by certified mail or hand-delivery. The date of filing shall be the date of the next regularly scheduled meeting of the Conservation Commission at which a complete filing is received. The time periods set forth in the Act and in these regulations shall commence from this date.
- 3.3. Plans submitted with the Request for a Determination must reasonably describe the nature and scope of the proposed activity, but need not be detailed engineering or architectural plans. Any activity performed shall be limited to what is described in the plans and application documents as approved.
- 3.4. Upon receipt of a completed Request for Determination, the Conservation Commission shall designate a file number and hold a public meeting on the Request for a Determination of Applicability and send to the applicant a written Determination of Applicability, signed by a majority of the Commission, within 21 days following receipt of the completed request. A copy of the Determination shall be sent to all persons so requesting. If the Request for a Determination was submitted by an agent other than the owner, a copy shall be sent to the owner. The Determination shall be made on Form B of these regulations.
- 3.5. The Conservation Commission may rescind a Determination and hold a public hearing to consider the Request for Determination of Applicability if any owner of land abutting the land upon which the proposed activity is to be conducted or any ten residents of the town where the land is located files an appeal requesting a public hearing on the project. An Appeal shall be made in writing filed within ten days after the issuance of the Determination by certified mail or hand delivery to the Commission at Town Hall.
- 3.6. If an appeal is not filed within 10 days after issuance of the Determination, and if the applicant is not notified of a request for department action within fourteen days, then the applicant may commence to perform the work, if any, permitted by the Determination, but not before fourteen days after issuance.

#### 4. NOTICE OF INTENT

- 4.1. The applicant may meet with the Commission or its representative to discuss which items under Section 7 hereunder are necessary or appropriate for documentation of a proposed project Notice of Intent.
- 4.2. Any Person proposing an activity subject to the Act (unless the Commission has issued a Negative Determination of Applicability allowing the proposed project to proceed) shall send to the Conservation Commission by certified mail or hand delivery two (2) copies of a completed Notice of Intent, including

plans and other required information described below. Each notice must be accompanied by a filing fee of \$25 payable to the town. In addition to the filing fee of \$25, an applicant shall also reimburse the Conservation Commission for the costs for the public notice.

- 4.3. The date of filing of said notice shall be the date of a regular scheduled meeting of the Conservation Commission at which a complete filing is submitted. All time periods set forth in the Act shall commence from this date.
- 4.4. The Notice of Intent shall be filed on Form C of these regulations, unless the applicant chooses to file an Abbreviated Notice of Intent on Form D because the project is one of minimum impact.
- 4.5. No Notice of Intent shall be submitted before all permits, variances, and approvals required by local law or bylaw with respect to the proposed activity have been applied for, in accordance with section 2.28.
  - 4.5.1 If the Conservation Commission rejects a Notice of Intent because of a failure to obtain or apply for all permits, variances and approvals required by local bylaw, it shall specify in writing the permit, variance or approval that has not been applied for. A ruling by the municipal agency within whose jurisdiction the issuance of the permit, variance or approval lies, or by the town counsel concerning the applicability or obtainability of such permit, variance or approval shall be accepted by the Conservation Commission. In the absence of such a ruling, other evidence may be accepted.
- 4.6. Upon receipt of a complete Notice of Intent application, the Conservation Commission shall designate a file number.
- 4.7. The applicant must submit any other information later requested by the Conservation Commission. If such information is not submitted, the Commission may, after public hearing, issue an Order prohibiting the activity. An Environmental Impact Statement or Report, acceptable to the Commission, filed by the applicant for the proposed activity shall be deemed sufficient to comply with the Act.

## 5. ORDER OF CONDITIONS

- 5.1. Within 21 days after the close of the hearing or a continued hearing, the Conservation Commission shall issue a written Order which may impose conditions on the proposed activity in an effort to prevent pollution of public or private water supply, erosion or flooding, to control changes in topography or destruction of vegetation, and to preserve the natural scenic qualities of the mapped mountain regions. If, in the Commission's opinion, the project cannot



be so conditioned to mitigate the adverse impacts, the Commission shall deny issuance of an Order of Conditions and the work may not proceed. The Order shall be made on Form D of these regulations.

- 5.2. The Order shall be signed by a majority of the Conservation Commission, and a copy thereof shall be sent by certified mail to the applicant, the owner of the land if other than the applicant, and the Department.
- 5.3. Within one day after issuance, a copy of the Order shall be filed with the Town Clerk.
- 5.4. A Request for Review may be made to the Department within ten days after the Conservation Commission has acted or failed to act, as specified in section 9. If the applicant is not notified of a Request for Review by the Department within fourteen days after the issuance of the Order of Conditions, the applicant shall record the Order at the Berkshire Middle District Registry of Deeds. No activity shall commence until after the 14 day Period has elapsed, and the Order has been recorded in the Registry of Deeds and indexed to the subject property, and the receipt for this recording from the Registry of Deeds has been sent by the applicant to the Commission.
- 5.5. The Order of Conditions shall be valid for one year unless extended or revoked in accordance with the provisions of the Act or these regulations. Extension of the OOC requires written application of Form F with the hearing authority prior to the expiration of the existing OOC. The applicant may request an extension of an Order before it expires. The Commission may grant two extensions of the Order, each for a period of no longer than one year. Extensions shall be made on Form F of these regulations.

## 6. PERFORMANCE STANDARDS

- 6.1. Applicants seeking approval under these regulations must meet all applicable state standards intended to implement the provisions of M.G.L. CH. 131, Section 39A. Said standards are herein incorporated by reference. The Commission further finds that protection of the interests identified in these regulations requires that applicants address compliance with the following additional standards. In considering any application for work, within the mapped mountain regions, the Commission shall make the following presumptions:
  - a. Manmade protuberances above ridgelines damage natural scenic qualities;
  - b. Clearing of contiguous lands totaling one-half (1/2) acre or more damages natural scenic qualities and/or causes erosion;

- c. Alteration of steep slopes causes erosion, promotes flooding, damages water quality, and degrades scenic qualities.
- 6.2. The presumptions listed above may be rebutted by the applicant upon submission of a preponderance of the evidence to the satisfaction of the Conservation Commission that:
- 6.2.1 one or more of the presumptions does not apply to the site of the proposed work; or
  - 6.2.2 the proposed work will be mitigated in such a way that it will have no unacceptable or significant adverse effects upon the watershed resources or natural scenic qualities.
- 6.3. The Order of Conditions issued by the Commission shall impose conditions on the proposed work to protect the interests of the Act. If any proposed work does not meet the Performance Standards, or any Presumptions are not rebutted to the satisfaction of the Commission, the Commission may deny the project or may require modifications and mitigation measures to achieve the required protections.
- 6.4. Septic systems
- 6.4.1 Any septic system that is to be constructed in compliance with requirements of 310 CMR 15.000 *Subsurface Disposal of Sanitary Sewage (Title 5)*, or more stringent local board of health requirements, proposed within the regulated areas described herein shall be presumed to protect the interests identified herein, except as noted in subparagraph 6.4.3 below.
  - 6.4.2 Any emergency septic system repairs installed with the approval of the Board of Health does not require advance approval under these Scenic Mountains Regulations, provided the work is limited to the area immediately required for the septic system improvements.
  - 6.4.3 Only the construction impacts of the proposed new or replacement septic system are regulated under these regulations. The location for the proposed new or replacement septic system, to the extent feasible, shall be selected to minimize the amount of clearing and impacts on scenic qualities.

6.5. Drainage

6.5.1 General Conditions for Site Design and Construction of all projects that are subject to an Order of Conditions.

- a. Construction on any site subject to these regulations shall be managed to control stormwater runoff and to prevent erosion and sedimentation, both during construction and after completion of construction.
- b. The Owner shall operate and maintain all permanent drainage and erosion control measures in good working condition.
- c. Erosion and sedimentation control measures shall be installed at the beginning of site work, and shall be maintained throughout the construction period until the site is stabilized. The measures used shall conform to the Best Management Practices (BMP's) included in the sources listed in Section 6.5.4 following. The applicant shall demonstrate to the Conservation Commission that the selected BMP's are appropriate for the project.
- d. Any area proposed for removal of vegetation where soil will be exposed for more than 14 days shall be mulched or otherwise treated to prevent erosion and sedimentation.
- e. Any culverts such as driveway cross culverts, shall be at least 12" diameter and have a slope of at least 1% with a preferred slope of 2%.

6.5.2 Site work on all projects shall be designed to:

- a. minimize the amount of land disturbance;
- b. retain natural vegetation where possible;
- c. use existing and newly planted trees and shrubs as a vegetative buffer to minimize visual impact of new buildings or substantial changes in topography when viewed from off-site roads;
- d. avoid or minimize cutting or substantial thinning of trees along ridgelines or creating a "notch" in the tree line along a mountain top;
- e. minimize the amount of impervious surfaces and maximize the use of permeable materials such as porous pavement in parking areas;
- f. disperse site drainage as much as possible;
- g. avoid concentrating storm water runoff and discharging it at one point;
- h. avoid discharging drainage onto steep slopes;
- i. utilize open vegetated or rock-lined drainage swales wherever possible;
- j. minimize the use of piped drainage systems;
- k. provide for stabilized drainage outlets, aprons, stilling basins, or similar scour protection measures where drainage discharges onto the ground.

6.5.3 Drainage Requirements for larger projects.

- a. Any construction project subject to these regulations that will disturb a total of one (1.0) acre or more of land surface shall, unless waived by the Conservation Commission, require the submission of hydrologic calculations and plans for storm water mitigation measures designed by a registered professional engineer.
- b. Hydrologic calculations shall be submitted comparing the existing drainage conditions on the site before construction (pre-development condition) with proposed post-development condition and shall include the following design storms: 2-year, 10-year, 25-year, and 100-year intervals. Calculations shall include a description of the methodology used, and a narrative description of the soil conditions, slopes, vegetative cover, and runoff curve numbers for each sub-drainage area affected by the project.
- c. All components of the piped drainage system shall be designed with capacity to handle at least the peak runoff from a 25-year storm in the post-development condition.
- d. Storm water management measures shall be installed so that the post-development project will not increase the peak rate of runoff from the site during the 10-year and 25-year design storms compared to pre-development conditions.

6.5.4 General Guidelines and typical performance standards and engineering practices acceptable for grading, drainage, and erosion and sedimentation control measures to be performed under the Act are contained in the following list and copies of these publications are on file with the Conservation Commission. This list shall not be exclusive, nor construed as prohibiting or discouraging use of new or innovative methods of achieving low impact sustainable development. However, applicants proposing to use alternative Best Management Practices (BMP's) must identify the deviations from the referenced methods and demonstrate to the satisfaction of the Commission that the alternate BMP's are superior.

- a. U.S. Dept. of Agriculture, Soil Conservation Service. Erosion and Sediment Control in Site Development: Massachusetts Conservation Guide Volume I, September 1983.
- b. U.S. Dept. of Agriculture, Soil Conservation Service. Vegetative Practices in Site Development: Massachusetts Conservation Guide, Volume II,
- c. U.S. Dept. of Agriculture, Soil Conservation Service. Soil Survey of Berkshire County, Massachusetts, February 1988.
- d. U.S. Dept. of Agriculture, Soil Conservation Service. Guidelines for Soil and Water Conservation in Urbanizing Areas of Massachusetts,

- e. Massachusetts Stormwater Management, DEP, Boston, MA, March 1997, Volume One and Two.

7. PLANS AND APPLICATION MATERIALS

- 7.1. Plans and other application materials included with the Notice of Intent shall include grading, drainage, landscaping, and erosion controls to demonstrate that the proposed work will not adversely affect the interests of these regulations. Unless otherwise allowed by the Commission, the Plans and other application materials sent with a Notice of Intent shall include the following:
- a. locus map; noting True North and Magnetic North;
  - b. an 8 ½ X 11 color copy of a U.S. Geological Survey Quadrangle Sheet showing the location of the proposed area and Scenic Mountain region; noting North, and graphic scale;
  - c. maps showing Estimated Habitats of Rare Wetland Wildlife, and Priority Habitats of Rare and Endangered Species, as provided by National Heritage;
  - d. all names of nearest roads;
  - e. outline of the watershed areas related to the proposed activity;
  - f. storm drainage system; erosion and sedimentation control measures;
  - g. a written “alternatives analysis” demonstrating that the proposed location and configuration of the intended scope of the proposed project on the subject property is in compliance with these regulations and performance standards, and that the proposed location will not cause more environmental damage than other alternative sites or configurations of the project on the property;
  - h. engineering drawings as listed below;
- 7.2. Engineering drawings to the extent possible should be drawn to a scale no smaller than 1” = 50’, and shall include a graphic scale and north arrow on each plan view, and include a title block with the name of the project, project location, and the name(s) of the persons preparing the drawings and the date prepared, including all the revision dates. Unless the Conservation Commission otherwise decides, the drawings shall be stamped by a registered professional engineer, architect, landscape architect, or registered land surveyor of the Commonwealth.

7.3. Engineering drawings include the following:

- a. present and proposed contours of the entire work site and affected adjacent areas (generally 2 ft. contours will be satisfactory);
- b. all brooks, creeks, rivers, streams, ponds, lakes and wetlands, whether continuous or intermittent, natural or man-made; regulated by the Massachusetts Wetlands Protection Act General Laws 131 Section 40 within 200 feet of any work area(s);
- c. areas subject to the 100-year flood, as indicated on maps provided under the National Flood Insurance Program or other competent authority;
- d. proposed alteration to waterways, including present and proposed location, elevation and invert of all drains, ditches, culverts and other conductors immediately up and downstream of the site;
- e. location, extent and area of all present and proposed paved areas, roads driveways and parking areas;
- f. location of existing and proposed water retention areas;
- g. location of areas to be removed, dredged, filled or otherwise altered in any way;
- h. location of underground utilities, rights of way or easements of any kind;
- i. locations and elevations of cellars or floors and bottoms of septic systems and leaching fields together with alternative sites for leaching fields;
- j. cross sections showing slope, bank and bottom treatment of each watercourse to be altered; locations of cross sections shall be specified;
- k. soil characteristics in representative portions of the site, including the type of soil found in building sites, site of septic tank and well site, if applicable; sampling sites shall be specified;
- l. maximum ground water elevation at the time of year when the ground water table is at it highest, including dates of measurements, sampling and tests, if any;
- m. information describing the effects of the proposed activity on soil and water;
- n. all property lines and zoning setbacks;

- o. all existing and proposed structures, including height thereof to the highest point of the structures;
- p. lowest floor elevations of any proposed structures;
- q. location of any areas on-site where soils or rock are proposed to be excavated for reuse elsewhere (borrow area) and/or excess or unsuitable material will be disposed (spoil area);
- r. existing and proposed water supplies for proposed activities;
- s. existing and proposed sewage disposal systems specifically showing the location and type to be used;
- t. erosion and sedimentation prevention plans for during and after construction;
- u. description of the potential impact on natural scenic qualities of the mapped mountain region, such as stone walls, fences, rock outcropping and large trees;
- v. proposed alteration of tree canopy relative to height of proposed structures.

7.4. The above requirements are not intended to be a complete and final list of what a plan should show. The applicant may submit, or the Conservation Commission may require, any further information which will assist in the review and which is deemed necessary to determine the effect of the proposed activity on the mapped mountain regions.

## 8. HEARINGS

8.1. The Conservation Commission shall hold a public hearing on the proposed activity within 21 days after receipt of the Notice of Intent at the next regularly scheduled meeting.

8.2. Notification of the time and place of the hearing shall be given by the Conservation Commission, at the expense of the applicant, not less than five days prior to such hearing, by publication in a newspaper of general circulation in the County of Berkshire and certified mail or hand delivery a copy of the notice to the applicant, Board of Health, Planning Board and any other board or commission that the Commission may determine. The applicant shall notify abutters of the hearing by certified mail not less than 5 days prior to such hearing (Posting by Town Clerk)

8.3. The hearing shall be open to the public and all interested persons shall be allowed to testify.

8.4. A hearing may be continued for good cause by the Conservation Commission provided that notice of continuance to a specific date is given at the public hearing or, where a specific date is not set at the hearing, publication of the continued hearing is made by the Commission at the expense of the applicant.

9. REQUEST FOR DEPARTMENTAL REVIEW

9.1. A Request for Review may be made to the Department within ten days after the Conservation Commission has acted, or failed to act as follows:

- a. if the Commission has issued an Order;
- b. if the Commission fails to hold a hearing within 21 days after receipt of the Notice of Intent;
- c. if the commission holds a hearing but fails to issue an Order within 21 days after the closing of the hearing.

9.2. A Request for Review may be initiated by any of the following:

- a. the applicant;
- b. any person aggrieved by the Order;
- c. any owner of land abutting the land upon which the proposed activity would be carried out; or
- d. any ten residents of the town where such land is located.

9.3. The person(s) requesting a review may request the Department to determine if other reasonable conditions should be imposed, or if the conditions issued by the Conservation Commission should be modified, in order that the proposed activity will protect the interests and achieve the purposes named in the Act.

9.4. The Request for Review shall be sent by certified mail to the Department within ten days after the Commission has acted or failed to act. At the same time, the person(s) requesting review shall send copies to the Conservation Commission and, if the person(s) requesting review is other than the owner and applicant, to the owner and applicant. Upon receiving a copy of the request for review, the Commission shall within seven days forward a complete copy of the contents of the file on the matter to the Department.



- 9.5. Any Order issued by the Department after a Request for Review shall supersede the prior Order of the Conservation Commission and all work shall be done in accordance therewith.
- 9.6. A copy of the Superseding Order shall be sent to the applicant, to the Conservation Commission, and to the person(s) who requested the review (if not the applicant).
- 9.7. If the applicant is not notified of a Request for Review by the Department within fourteen days after issuance of an Order of Conditions by the Conservation Commission, the applicant may proceed under the Commission Order, but not before.
- 9.8. Any person aggrieved by an Order of the Department may appeal under the provisions of M.G.L. Chapter 30A. Such rights of appeal shall be exclusive.

#### 10. CERTIFICATION OF COMPLIANCE

- 10.1. Upon completion of an activity in compliance with an Order, an applicant may request a Certificate of Compliance from the agency which issued the Order. The request shall be in writing.
- 10.2. When a project has been completed in accordance with plans stamped by a registered professional engineer, architect, landscape architect, or land surveyor, a written statement by the aforesaid professional person, certifying compliance with the plans, shall accompany the request for a Certificate. The request for Certificate of Compliance shall be submitted to the Commission prior to the expiration of the Order or Conditions. The request shall indicate if any portion of the work has not been completed, or if there were any deviations from the approved plans and Order of Conditions, and the reasons for such omissions or deviations.
- 10.3. After receipt of the request for a Certificate, the Commission may request an on-site inspection by the applicant and the Commission.
- 10.4. Where the work is not in compliance with the Order, the Commission shall refuse to issue a Certificate, and issue conditions necessary to bring the site into compliance with the Order of Conditions.
- 10.5. The Certificate shall certify in recordable form that the activity described in the Notice of Intent and plans has been completed in accordance with the Order. Any continuing conditions shall be listed on the Certificate of Compliance, and those continuing conditions will remain in effect after the Certificate of Compliance has been recorded. The Certificate of Compliance shall be made on Form E of these regulations.

- 10.6. The applicant shall record the certificate at the Berkshire Middle District Registry of Deeds, indexed with the subject property, and shall return to the Commission a receipt of the recording.
- 10.7. Upon completion of a portion of work under an Order of Conditions, the commission may issue a Certificate of Compliance as to that portion, if the applicant so requests.

**11. VIOLATIONS AND ENFORCEMENT**

- 11.1. Any person, other than a bona fide purchaser without notice, who purchases or otherwise acquires land upon which an activity has been done in violation of this Act, shall forthwith comply with the Order of Conditions or restore the land to its condition prior to the violation. Failure to do so is in itself a violation of the Act.
- 11.2. The Conservation Commission, its agents, officers, and employees, may enter upon privately owned land for the purpose of carrying out the provisions of this Act and may issue cease and desist order to anyone found in violation of the Act.
- 11.3. If an applicant fails to commence work within one year following the date of issuance of an Order, such inaction shall constitute an abandonment of the project, and, pending a public hearing by the commission, the Order of Conditions may be revoked.
- 11.4. The applicant may request an extension of an order prior to its expiration, which shall otherwise take place one year after issuance. The Commission may, in its discretion, grant two extensions of the Order, each for a period of no longer than one year. (Note: The Commission will consider a second extension of an Order only under circumstances which, in its opinion, are extraordinary.) Extensions shall be made on Form F of these regulations.
- 11.5. The Conservation Commission may revoke an Order if it finds that the applicant has exceeded the scope of the activity as set forth in the Order or has not complied with the conditions set forth in the Order, or if it determines that facts not available or not brought to its attention at the time the Order was issued warrant such revocation.
- 11.6. No revocation shall be made without notice to the applicant of the facts or conduct which warrants the intended revocation and a hearing at which the applicant is given an opportunity to present competent evidence.
- 11.7. Any court having equity jurisdiction may restrain a violation of this section and enter such Orders as it deems necessary to remedy such violations, upon the petition of the Attorney General, the Commissioner, the town, and owner or

occupant of property which may be affected by such violation, or any ten residents of the Commonwealth under General Laws Chapter 214, Section 7A.

- 11.8. Whoever violates any provisions of the Act shall be punished by a fine of not more than one thousand dollars or by imprisonment for not more than six months or both. Each day or portion thereof of continuing violation shall constitute a separate offense.
- 11.9. The Act shall be enforced by officers of the Executive Office of Environmental Affairs.

## 12. EXEMPTIONS

- 12.1. The Act does not apply to the cutting of forest products on land devoted to forest purposes whose owners have complied with the provisions of the Forest Cutting Practices Act, M.G.L. Chapter 132, by obtaining a permit there under and which has been submitted to the Conservation Commission prior to cutting for review.
- 12.2. The Act does not apply to any activity on the property which is subject to the provisions of the Wetlands Protection Act, M.G.L. Chapter 131, Section 40. (However, any other activities on the site not subject to approval under the Wetlands Protection Act are still subject to approval under the Scenic Mountains Regulations.)
- 12.3. The Act does not apply to the following activities:
  - a. Any activity conducted in connection with the construction or maintenance of any facility as defined in M.G.L. Chapter 164, Section 69C (Energy Facility Siting Council); or
  - b. any activity conducted in connection with construction or maintenance of any electrical, transmission or distribution facilities used in transmission of intelligence by electricity or by telephone or otherwise for which location in the public ways has been approved by the Selectmen or under M.G.L. Chapter 166, Section 22; or
  - c. construction or maintenance of any electrical distribution facilities required to serve a building or structure whose construction has been approved under the Act.
- 12.4. The Act does not apply to:
  - a. Normal use and/or maintenance, repair, reconstruction, replacement, or enlargement which is not of a substantial nature, or change in use, of any

lawfully located and constructed structure or use, provided, however, that this work does not involve clearing one quarter (1/4) acre or more of contiguous lands or substantial alteration of the site as defined herein.

- b. Vista pruning, provided the activity conforms to the limitations specified in the definition in Section 2.
- c. Planting of native non-invasive species of trees, shrubs or groundcover.
- d. Maintenance of woodlots for personal use.
- e. Farming, horticulture, viticulture or other bona fide agricultural practices.