

# AZIMUTH LAND DESIGN, LLC

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## DEVELOPMENT IMPACT STATEMENTS

As part of an application for a Special Permit, every applicant must submit development impact statements which address various effects of a project and compare those effects to the effects of a development not requiring Site Plan review.

In this case, in the R-1 zoning district, the comparison would be to a conventional residential subdivision. A conventional single family home subdivision on this property would propose a cul-de-sac roadway perhaps 750 feet long and create approximately 15 new lots. Such a development would not significantly differ from the proposed Rice Pond Village development in overall site alteration. But it would create a roadway which the Town would be asked to accept and maintain in perpetuity.

### Wetland impacts

The proposed Rice Pond Village development does not require any alteration of wetland resource areas on site. There are no priority habitats of endangered species or certified vernal pools on site that might be affected by the project. A copy of a map printed from the Mass GIS Oliver web site showing this is included in the Appendix following this report. A conventional subdivision would not improve on that.

The proposed Rice Pond Village development will meet or exceed all 10 of DEP's Stormwater Management standards. In particular, the project design includes infiltration of nearly all runoff from impervious surfaces, be they roofs, individual driveways or the proposed Hillcrest Circle. Infiltration of runoff from impervious surfaces will easily exceed the DEP Stormwater Management Standard of infiltrating runoff from 65% of impervious surfaces. A conventional subdivision would not improve on that.

### Historic impacts

A search of the Massachusetts Historical Commission's MACRIS database shows no historic properties, structures or other resources on this site. A copy of the results of that database search is included in the Appendix. So, the proposed Rice Pond Village development is the equivalent of any theoretical conventional subdivision in having no impact upon such resources.

### Visual impacts

Another impact that a development may create is to change or significantly diminish vistas presently available to abutting properties but which a proposed development

blocks. The Rice Pond Village development would not have such impacts as the abutters to the south overlook the existing unnamed pond and look up toward the ridge line of the property and that will be unchanged with this development as it would with a conventional subdivision. The abutter to the north is a railroad.

### Noise impacts

Noise impacts generated during the construction process will be typical earth moving and construction noise. These activities will be limited by Town determined work hours to not burden abutters.

Noise impacts after construction are expected to be negligible for a residential development such as this.

It may be reasonably asked whether the proposed development will alter the site in such a way that abutters would then begin to experience excessive and unreasonable noise from the railroad on the north side of the site. The proposed Rice Pond Village development will not alter the landscape such that noise from the train will be given an unimpeded path to any abutters. In fact, proposed residences may absorb and reflect sound waves better than the existing vegetated landscape.

In terms of the noise produced by the trains, Federal and state transportation authorities have developed a measure called "Leq" to quantify the equivalent steady state sound level of infrequent noises such as passing trains which only go by once or twice a day. A loud noise heard twice a day is not insignificant but is more easily tolerated than a consistently generated noise such as interstate highway traffic.

For two events a day, even as loud as a 90 decibel train, the equivalent noise impact of a steady state sound level is approximately 53 decibels, which does not reach the threshold at which noise reduction measures at residential properties are typically recommended, Leq of 67 or higher. A copy of the calculation results is included in the Appendix.

But, even if the applicant wanted to propose a noise reduction barrier for Rice Pond Village, it would be impractical because the proposed residences will sit on a hill overlooking the railroad tracks. The first floor elevation of every proposed unit is 15 feet or more above the railroad tracks. This would be true for residences in a conventional subdivision as well.

### Traffic impacts

A Traffic Impact Study was prepared for Rice Pond Village by AK Associates. This study considered the proposed development as well as expected background growth of traffic in the area and compared 2026 build and no build conditions.



This Study found that the expected traffic generation from the project will not result in any area intersections falling below Level of Service (LOS) B in the morning or evening peak hours.

Level of Service B is defined as an average 10-15 second delay at an unsignalized intersection and is regarded as a condition of stable flow of traffic not needing remedial action.

The Study also finds that sight distance at the proposed intersection is good and that the available data history of traffic accidents in the area does not indicate any particular problem which additional traffic would exacerbate.

### Fiscal Impacts

#### Benefits

The existing property is being taxed this year on valuations of \$335,500 and \$118,500 for the two assessor parcels. So, the net tax payment to the Town of Millbury will be \$7,099.34.

The applicant expects to sell the two and three bedroom floor plan units to a combination of first time buyers, move up buyers and empty nest couples for approximately \$400,000.

52 units at \$400,000 and with Town's tax rate of \$15.43 per thousand would yield total property tax payments to the Town of \$320,944.

This is a net increase of real estate tax payments of \$313,844.66.

There would also be additional motor vehicle excise tax payments to the Town for all the vehicles owned and operated by the new residents. The Town taxes vehicles at \$25 per thousand dollars of valuation. If we assume an average of two cars per unit and make a conservative assumption of an average 4 year old car that initially sold for \$20,000, then the total receipts to the Town of these payments would be  $(52 \times 2 \times 20 \times .25 \times 25)$  another \$13,000.

There are also sanitary sewer fees. Staff at the Department of Public works informed us that they typically expect sanitary sewer fees (based upon water usage) of approximately \$340 per year. This amounts to an additional \$17,680 per year paid to the Town.

Associated benefits to existing Town business of additional goods and fees sold to additional customers are very difficult to quantify. We want to acknowledge that they exist but will not ascribe any value to that benefit here.

So, the ongoing tax payments to the Town of Millbury would be \$344,525.

There are also significant one time benefits to the Town in the form of various fees levied in the course of residential unit construction.

For instance, sewer connection and betterment fees will be \$3,800 per unit. The infiltration/inflow fee for each unit will be \$1,320. So, these one time fees paid to the Town will be \$5,120 per unit and \$266,240 for the project.

### Costs

13 of the proposed duplexes, 26 units total, will have a larger footprint to accommodate a first floor master bedroom. These units are expected to be sold to empty nest couples with very few, if any, children living with them.

Of the remaining 13 duplexes with the smaller footprint, we expect that 5 duplexes, or 10 units, will be utilized as 3 bedroom units and that 8 will be utilized as 2 bedroom units with a den or office.

A recent study by the National Association of Home Builders found that 3 bedroom housing units averaged just over 80 school age children per 100 units. We'll assume that 9 school age children will live in the 10 such units in Rice Pond Village. The study found that 2 bedroom units averaged 36.7 school age children per 100 units. We'll assume that 6 school age children will live in the 16 such units in this project.

So, we expect a total of 15 school age children to live in the smaller footprint units and, just to be conservative, we'll add another from the first floor master bedroom units for a total of 16 school age children living in Rice Pond Village. And we'll make the conservative assumption that none are enrolled at private schools. They will all be enrolled in the Millbury Public School system.

For the ongoing fiscal year, overall expenditures in the system were \$23,285,221 for 1756 students served for a per pupil average expenditure of \$13,260.38.

This expenditure per student is paying for equipment and facilities and administrative staff that very likely don't change with the addition of 16 students to the school system. Nor does instructional staff necessarily increase with the addition of these students to the system. Nevertheless, we'll, again, make an extremely conservative assumption and estimate that each new student will cost the school system that much additional expenditure so the expected 16 students will incur a cost to the Town of 16 x \$13,260.38 or \$212,166.08.

The remainder of the Town's overall budget of \$47,031,41, after subtracting what is spent on the school system is \$23,746,193. This amount pays for existing facilities and Town staff in the Police, Fire, Department of Public Works and other departments.

There's no reason to believe that the approximately 120 new residents of the Town will require additional facilities or staff in the Police or Fire Departments. In fact, new construction of residences above the median price in Town are statistically less likely to need either department's services. And with the proposed road, Hillcrest Circle, being private neither plowing nor other maintenance will be done by the Department of Public Works.

In short, there's no basis to expect significant additional costs to the Town to be incurred through use of other services.

### Net

So, even if extremely conservative assumptions are made in regard to school system costs, the proposed project would result in a net tax benefit to the Town of approximately \$132,359 per year. And there would be significant one time fees paid to the Town of more than a quarter million dollars.

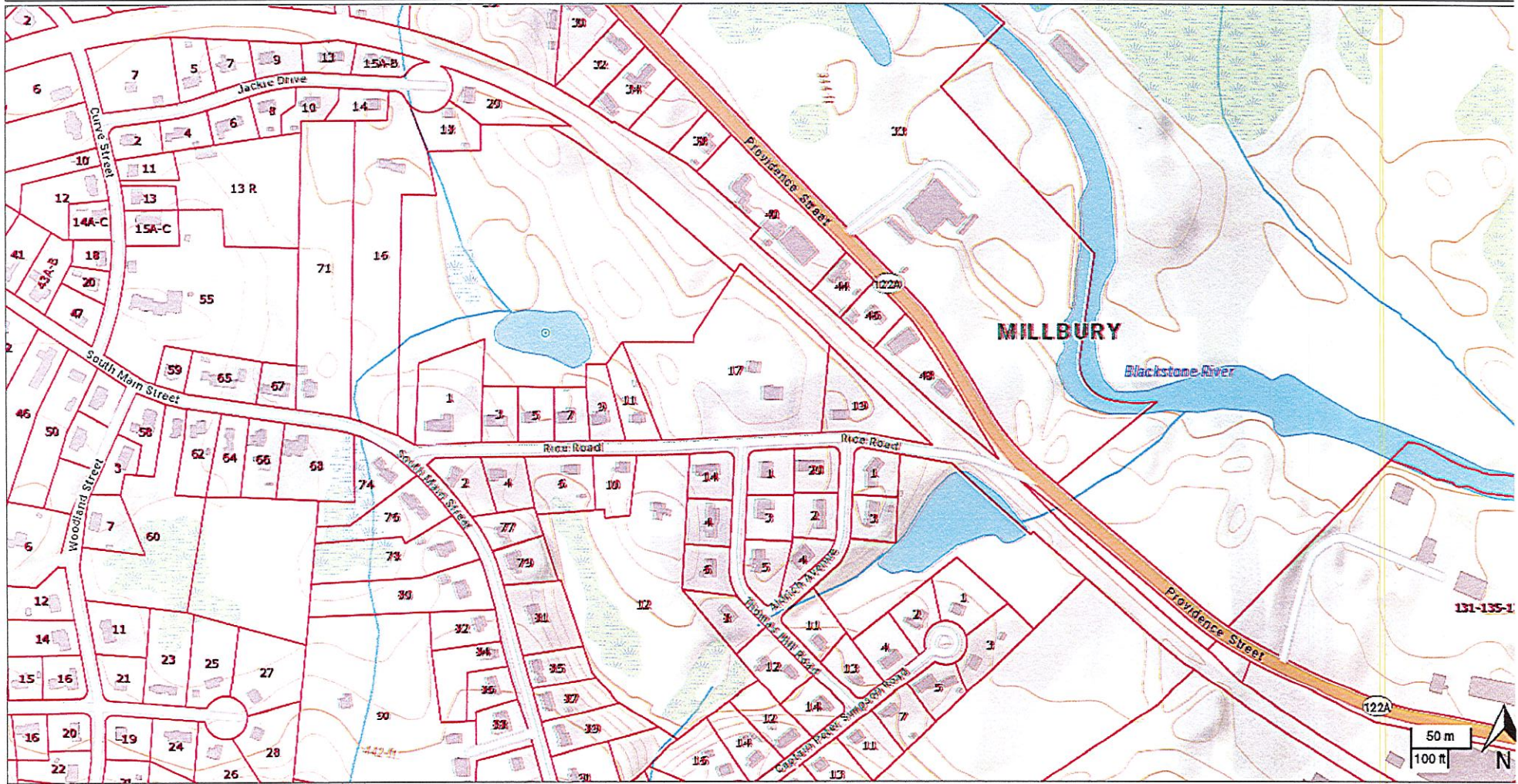


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## APPENDIX

- Map of the area from the Mass GIS OLIVER web site showing no priority habitats or endangered species or certified vernal pools in the area
- Search results from the Massachusetts Historical Commission's MACRIS database showing no historical properties in the area
- Calculation of the Leq equivalent steady state noise of an infrequent noise source
- Web Soil Survey of this area

NHESP resources at 17 Rice Road, Millbury



# Massachusetts Cultural Resource Information System

## MACRIS

[MHC Home](#) | [MACRIS Home](#)

## Results

[Get Results in Report Format](#)

PDF

Spreadsheet

Below are the results of your search, using the following search criteria:

**Town(s):** Millbury

**Street Name:** Rice Rd

**Resource Type(s):** Area, Building, Burial Ground, Object, Structure

For more information about this page and how to use it, [click here](#)

No Results Found.

[New Search](#)

[New Search - Same Town\(s\)](#)

[Previous](#)

[MHC Home](#) | [MACRIS Home](#)



# Leq-Calculator

## Conversion of Individual Sound Levels into $L_{eq}$

Sound pressure / Distance Calculator

Number

2

$L_{ASmax}$

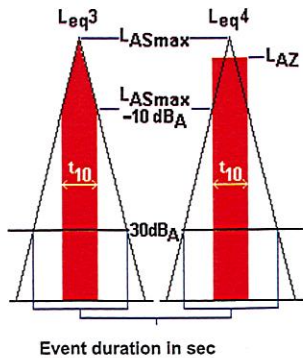
90

dB<sub>A</sub>

Duration

120

sec

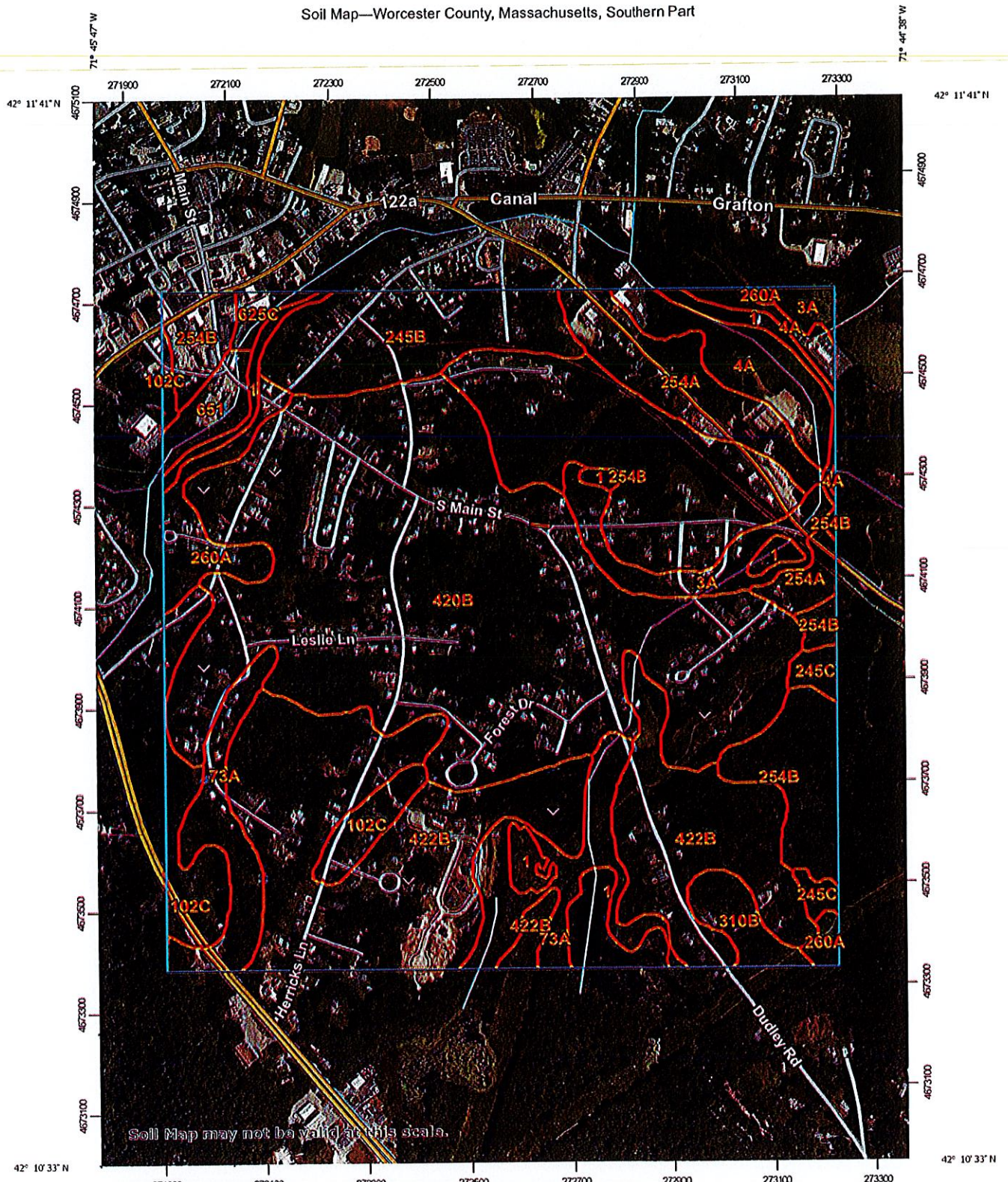


In our calculation, the noise curve of each event is approximated by a triangle. Only the red area is used for calculation. (Noise which is not less than  $L_{ASmax} - 10 \text{ dB}_A$ )

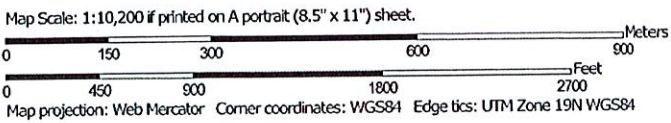
2 events with a maximum level of 90 dB<sub>A</sub> and an event duration of 120 sec (related to a base-level of 30 dB<sub>A</sub>) will result in the following average sound indicators if averaged for certain given periods of time:

Period of time	$L_{eq3}$ [dB <sub>A</sub> ]	$L_{eq4}$ [dB <sub>A</sub> ]
1 hour	66.5	64.0
8 hours = 1 night	57.4	52.0
1 day	52.6	45.7
1 month	37.9	26.0
6 months = averaging time defined by Law Against Aircraft Noise	30.1	15.7

Soil Map—Worcester County, Massachusetts, Southern Part







































Soil Map may not be valid at this scale.





### MAP LEGEND

- |   |                        |   |                       |
|---|------------------------|---|-----------------------|
|    | Area of Interest (AOI) |  | Spoil Area            |
|    | Soil Map Unit Polygons |  | Stony Spot            |
|    | Soil Map Unit Lines    |  | Very Stony Spot       |
|    | Soil Map Unit Points   |  | Wet Spot              |
|    | Blowout                |  | Other                 |
|    | Borrow Pit             |  | Special Line Features |
|    | Clay Spot              |  | Streams and Canals    |
|    | Closed Depression      |  | Rails                 |
|    | Gravel Pit             |  | Interstate Highways   |
|    | Gravelly Spot          |  | US Routes             |
|    | Landfill               |  | Major Roads           |
|    | Lava Flow              |  | Local Roads           |
|    | Marsh or swamp         |  | Aerial Photography    |
|   | Mine or Quarry         |   |                       |
|  | Miscellaneous Water    |   |                       |
|  | Perennial Water        |   |                       |
|  | Rock Outcrop           |   |                       |
|  | Saline Spot            |   |                       |
|  | Sandy Spot             |   |                       |
|  | Severely Eroded Spot   |   |                       |
|  | Sinkhole               |   |                       |
|  | Slide or Slip          |   |                       |
|  | Sodic Spot             |   |                       |

### MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:25,000.

**Warning: Soil Map may not be valid at this scale.**

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Worcester County, Massachusetts, Southern Part

Survey Area Data: Version 13, Jun 11, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 26, 2019—Oct 5, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

## Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
1	Water	14.3	3.3%
3A	Scarboro and Walpole soils, 0 to 3 percent slopes	12.2	2.8%
4A	Rippowam fine sandy loam, 0 to 3 percent slopes	14.9	3.4%
73A	Whitman fine sandy loam, 0 to 3 percent slopes, extremely stony	26.7	6.1%
102C	Chatfield-Hollis-Rock outcrop complex, 0 to 15 percent slopes	15.8	3.6%
245B	Hinckley loamy sand, 3 to 8 percent slopes	22.9	5.2%
245C	Hinckley loamy sand, 8 to 15 percent slopes	3.3	0.7%
254A	Merrimac fine sandy loam, 0 to 3 percent slopes	19.0	4.3%
254B	Merrimac fine sandy loam, 3 to 8 percent slopes	58.6	13.4%
260A	Sudbury fine sandy loam, 0 to 3 percent slopes	10.2	2.3%
310B	Woodbridge fine sandy loam, 3 to 8 percent slopes	5.6	1.3%
420B	Canton fine sandy loam, 3 to 8 percent slopes	141.6	32.3%
422B	Canton fine sandy loam, 0 to 8 percent slopes, extremely stony	86.3	19.7%
625C	Hinckley-Urban land complex, 0 to 15 percent slopes	2.2	0.5%
651	Udorthents, smoothed	5.0	1.1%
<b>Totals for Area of Interest</b>		<b>438.4</b>	<b>100.0%</b>