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1. Mapping the Effects of W.R. Grace

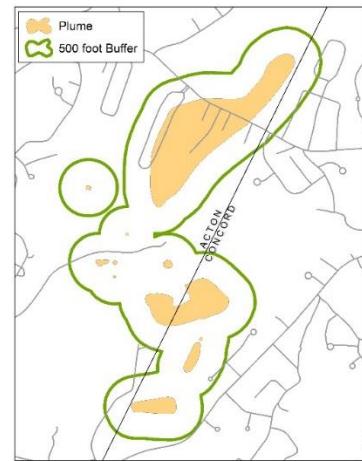
In addition to hosting the Nuclear Metals superfund site at 2229 Main St, Concord has also been affected by the W.R. Grace site, about a mile north and just over the town boundary in Acton. In recent months, our Health Department has been tracking down data related to the associated contamination plume, which Gabi White then asked us to map. "Ideally, we would like to be able to look at the Area of Concern and see what if any currently permitted wells are within that area. In addition, we will use the map to identify, when a new well is requested, will it be allowed within a zone of protection."

Concord GIS created several map layers to display this information, starting with the plume itself.

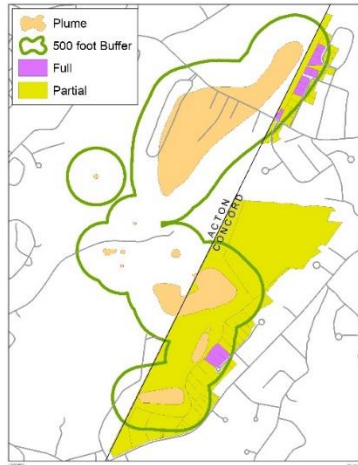
The plume's location has been delineated based on information from several hundred monitoring wells installed in the area.



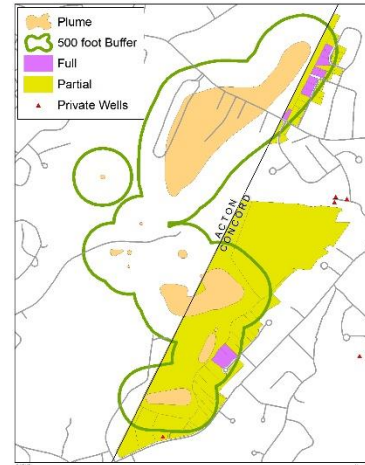
A 500-foot buffer around the plume represents the Area of Concern.



Next, we identified parcels either fully or partially within the Area of Concern.



Finally, we mapped private wells, as recorded by the DEP, to determine whether any were in the Area of Concern.



I'm delighted that our Health Department is making good use of geographic data to protect Concord citizens' health and well-being!

■ *Jill Moonheron*

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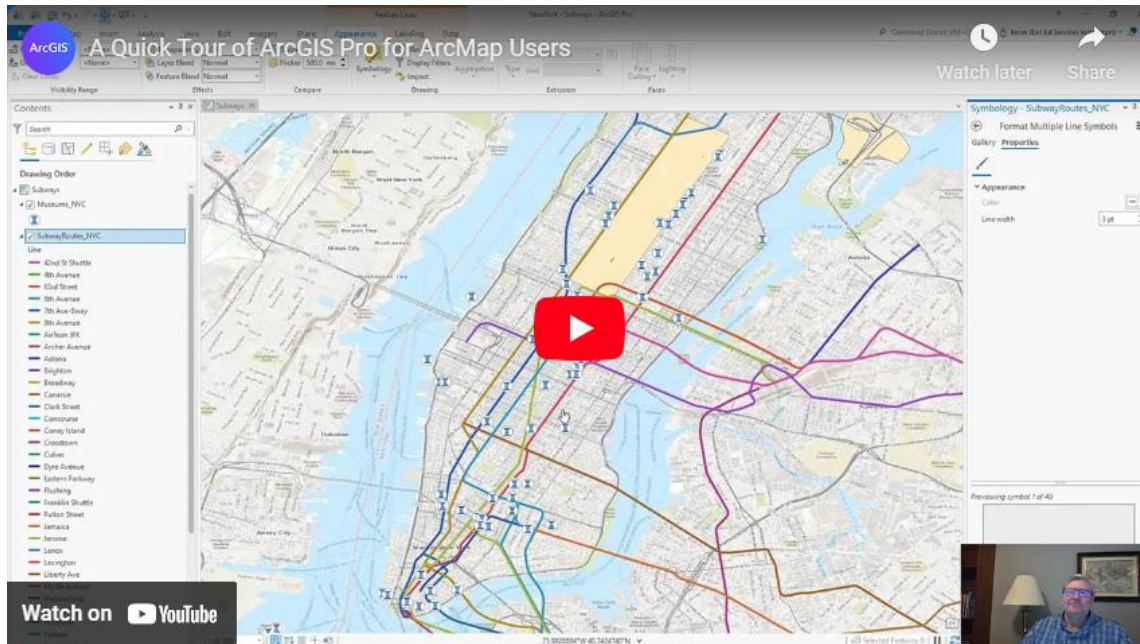
2. Migrating from ArcMap to ArcGIS Pro

Most GIS users will be familiar with ArcMap, the desktop GIS software produced by Esri that has led the industry for years and years. I have some bad news for all you ArcMap users, unfortunately – in the not-too-distant future, ArcMap will be phased out and replaced with the newer desktop software application, ArcGIS Pro.

Esri have announced that ArcMap will enter the mature support phase in March 2024, meaning there will be no further software updates from then on. ArcMap won't formally be retired until 2026, so don't worry, you can still use the software for a couple more years! However, some processes may start to break over that time in ArcMap. As such, all ArcMap users should start thinking about learning how to use ArcGIS Pro.

ArcGIS Pro can do everything you currently do in ArcMap (and more!), just with a different layout. It might seem daunting at first getting started, but once you're used to the differences in ArcGIS Pro, you won't want to go back!

We'll have more communication in the future about migrating users over to ArcGIS Pro. Our first step will be to send out a brief survey so we can understand how people are using ArcMap and how frequently they're using it. From that information, our GIS Team will be able to plan ArcGIS Pro trainings for staff in the future before we start asking users to migrate software. But for anyone looking to learn a bit about ArcGIS Pro in the meantime, here's a quick 5-minute video from Esri that's a helpful introduction to ArcGIS Pro:



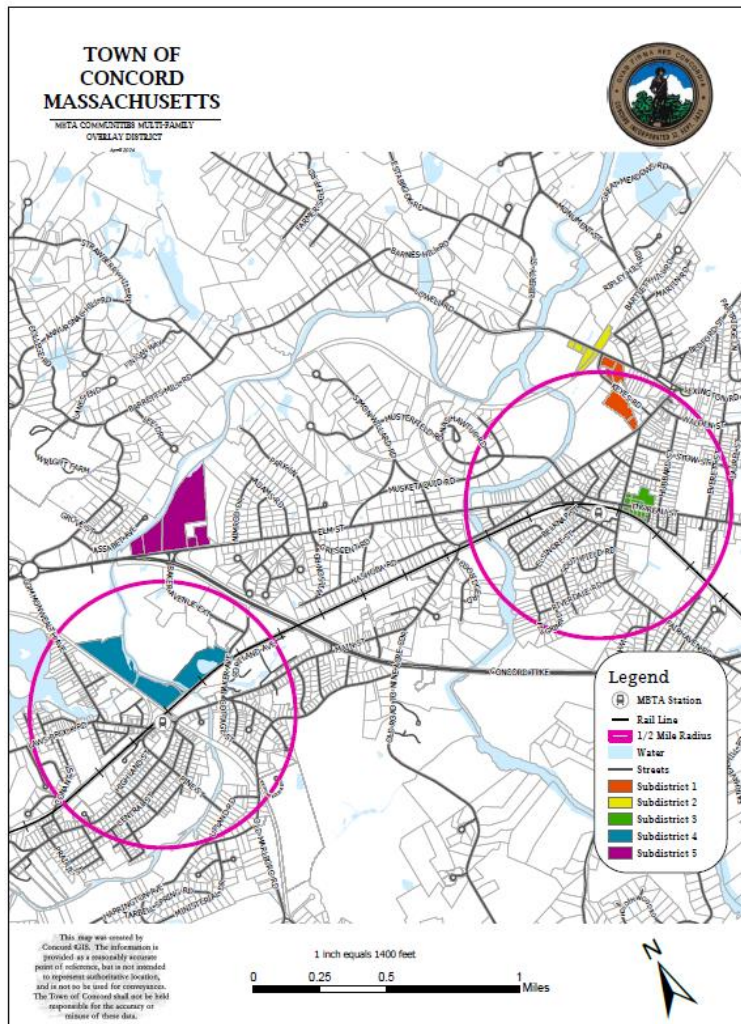
If you have any questions, please let me know!

■ Neill Fotheringham

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3. MBTA Communities Plan and Maps

In 2021 the State passed the MBTA Communities Law, requiring communities with an MBTA station to plan for multi-family homes. Concord's Planning team and the Planning Board have crafted a plan to comply with both State regulations and Concord residents' vision for the community. Initial plans were drafted by consulting group Horsley Witten, who were kind enough to pass along their materials and instructions to the GIS team to carry the project across the finish line. You can see a more detailed map of the proposed multi-family districts in the map gallery.



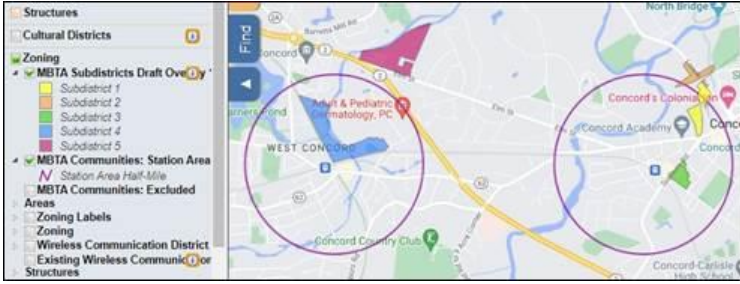
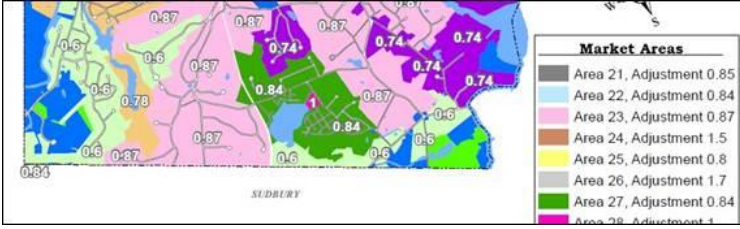



Under this proposal, there are five multi-family overlay districts. Not all of the districts need to be within a half mile of either of Concord's commuter rail stations, but the State does place requirements on how many units and how much land area needs to be within a half mile radius of each station. These districts do not guarantee that multi-family housing will be built in any particular location, but that multi-family developments could be built within those districts as part of the plan. This map is a product of many hours of collaboration and work and is a noteworthy accomplishment!

■ *Tristan Boyd*

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4. Map/App Gallery

CTRL-Click on a thumbnail to view a full-size map

<p style="text-align: center;">MBTA Communities</p>		<p>Created and posted a new layer on the Public Webmap to show the draft MBTA Subdistricts, at the request of Elizabeth H.</p>
<p style="text-align: center;">Assessor Market Areas Map</p>		<p>Updated the Assessor's Market Areas map with the current fiscal year's neighborhood adjustment values.</p>
<p style="text-align: center;">Holiday Parade Map</p>		<p>Provided an updated Holiday Parade and Tree Lighting map for Mardi H in Recreation.</p>
<p style="text-align: center;">Holiday House Tour Map</p>		<p>Provided an updated map for the annual Concord Museum Holiday House Tour.</p>
<p style="text-align: center;">Sachem Trail</p>		<p>Updated a variety of data layers relating to the Sachem Trail road name change.</p>

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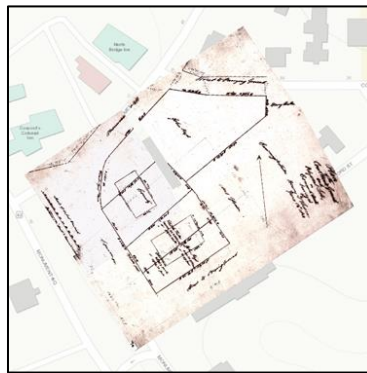
5. Mapping Henry David Thoreau's Land & Property Surveys

Henry David Thoreau, a life-long resident of Concord, has been described as an author, philosopher, naturalist, abolitionist, and social critic. In addition, he supported himself as a land surveyor for much of his life, beginning in the 1840s. Thoreau's clients included the Town of Concord, Ralph Waldo Emerson, Amos Bronson Alcott, Nathaniel Hawthorne, Francis R. Gourgas, Samuel Hoar, Edmund Hosmer, John Brooks Moore, Daniel Shattuck, Cyrus Stow, and numerous other private property owners. Between 1846 and 1860, Thoreau drafted 195 land and property surveys and maps, some as finished products in ink. The [collection of surveys](#) is housed and made available online by the William Munroe Special Collections at the Concord Free Public Library. The GIS Team was recently asked to help map these surveys in a public-facing web application, which is intended to serve as a virtual map tour of many of Concord (and nearby towns') historic properties.

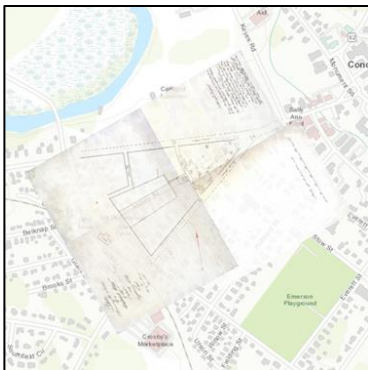
A few examples of mapped surveys are below, including Walden Pond, the Town House, the Concord Free Public Library, and the Orchard House.



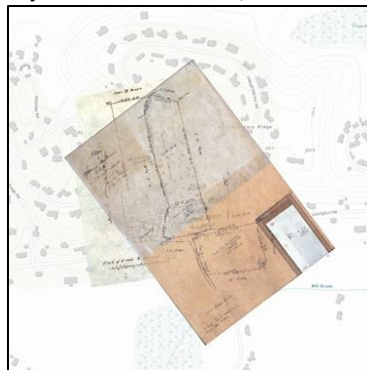
133a Walden Pond [1846]



7a Plan of the Court House Grounds and Adjacent Lots ... June 13, 1850



24b Plan Showing the Relation of a Proposed Street to the Depot and Neighboring Streets ... Sept. 1850



2a Plan of A. Bronson Alcott's Estate; Concord, Mass. ... Sept. 22, 1857
51a Plan of Nathaniel Hawthorne's Estate in Concord Mass. ... Aug. 20, 1860

This will be an ongoing project over the next several months, so keep an eye out for updates on the application's progress in future newsletters!

■ *Heather Bhowmick*

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