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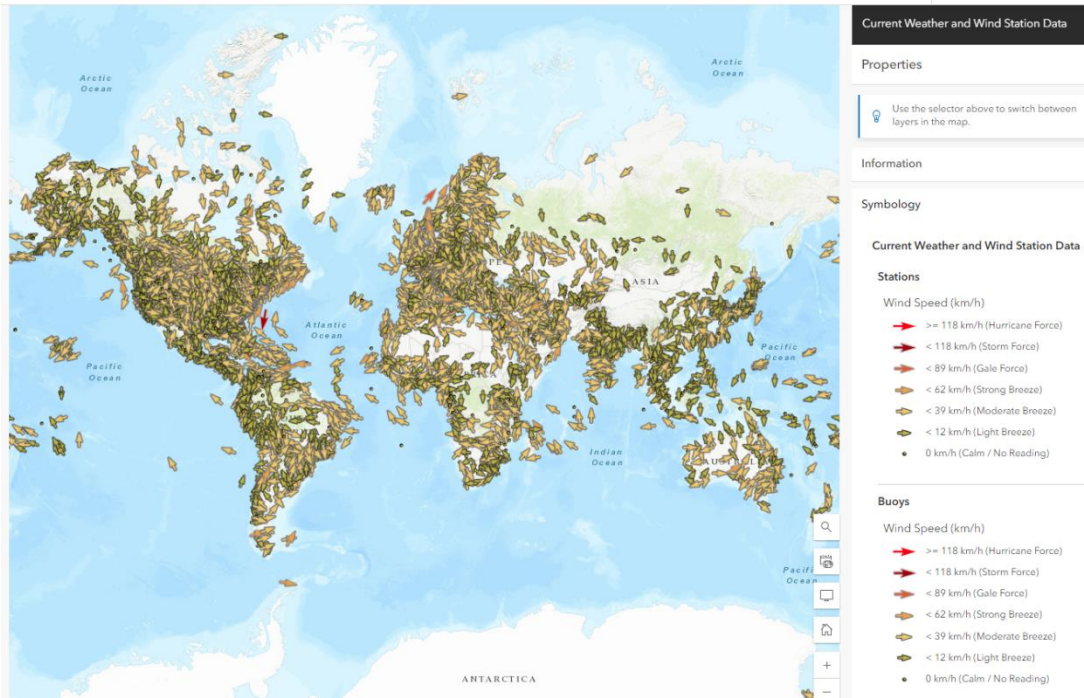
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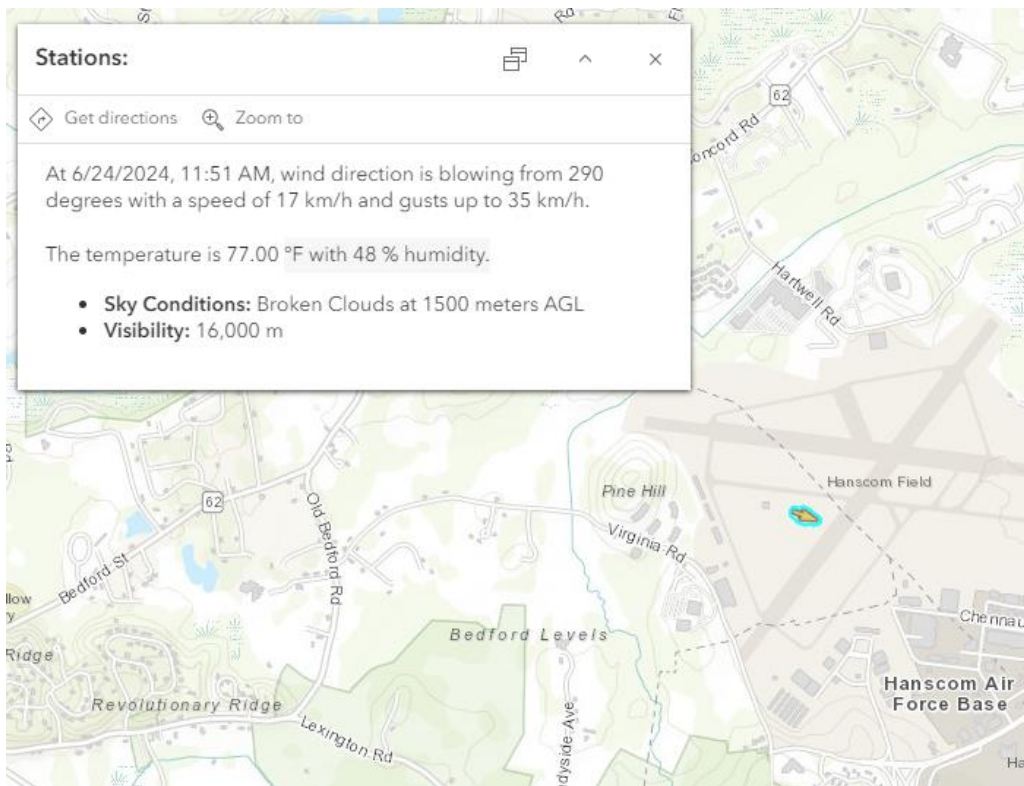
### 1. Utilizing the Living Atlas in ArcGIS Online

You can access spatial data from many different sources (not just the layers our GIS Team maintains for Concord), and I'll be telling you about one interesting data source here! In either ArcGIS Online or ArcGIS Pro, you can access Esri's Living Atlas. The Living Atlas has thousands of layers that are verified and curated by Esri's content team. Some (most) of these layers won't be particularly relevant to what we do here in Concord, but there are at least a few layers that I know of which could certainly have their uses for some of the projects we work on. If you'd like to take a look, you can either go to **ArcGIS Online/Content/Living Atlas**, or in **ArcGIS Pro/Add Data/Portal/Living Atlas**.

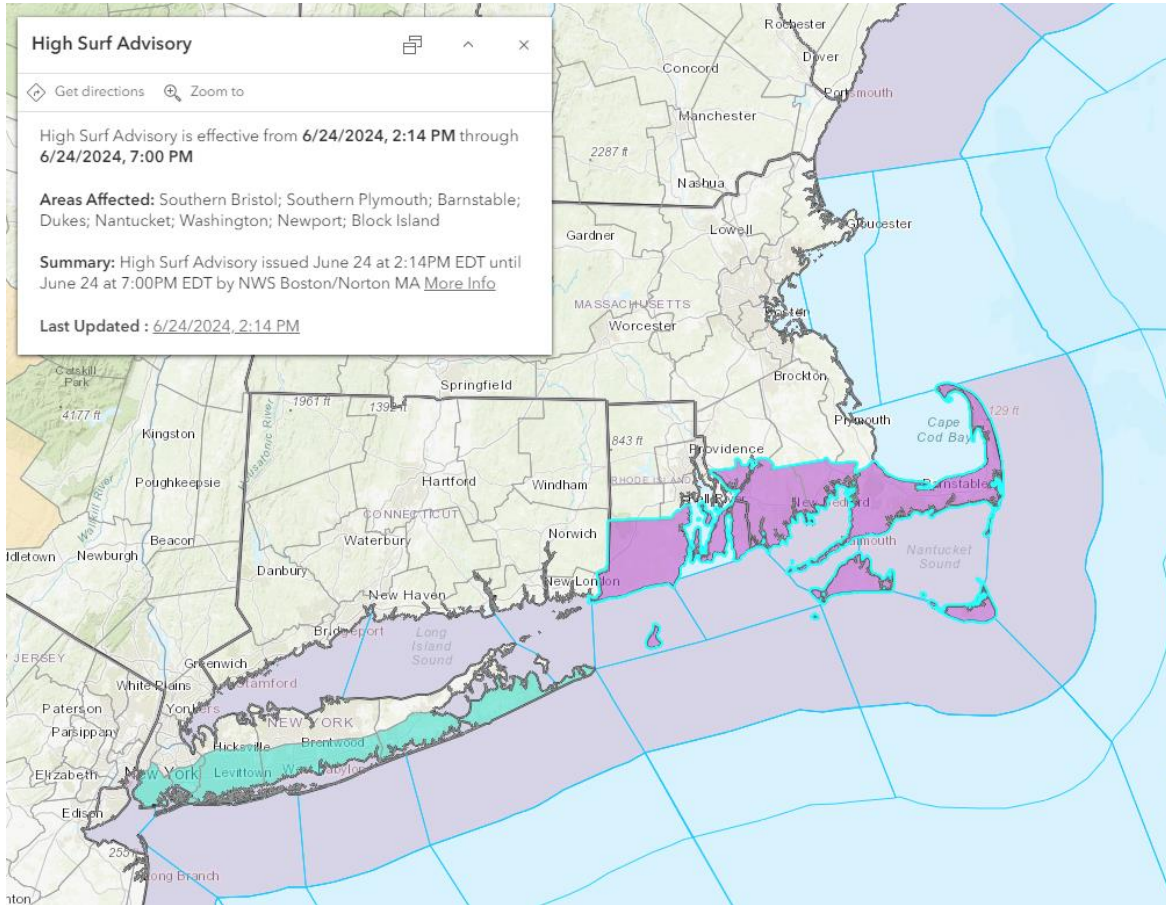
Some of these layers are enormous, covering whole countries or even the planet! One layer that caught my eye is called "Current Weather and Wind Station Data". When you add it to a web map, it'll look something like this:



Every weather station and buoy that the National Oceanic and Atmospheric Administration monitors, in near real time! The arrows point in the wind direction, and the color and size show wind speed. Zooming in to Concord, you'll notice they monitor a station at Hanscom Air Force Base:



The data for these stations is updated roughly hourly. It also includes information on temperature, humidity, and weather conditions. This type of data could be useful for us to include in emergency response applications for situational awareness. Another layer in Living Atlas that could have similar uses is the US Weather Watches and Warnings layer:



No weather warnings in Concord at the time of writing! But were we experiencing (or expecting to experience) inclement or extreme weather, these layers would provide good information on the extend of the National Weather Service warnings.

I've been looking at the weather-related layers in the Living Atlas here, but there are thousands of other layers offered, many of which include real time or near real time updates. It's very interesting to see what datasets are available out there and to think about how we could utilize these resources here in Concord.

- *Neill Fotheringham*

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## 2. Enriching Our Existing Data – Creating Unique Trail IDs

Sometimes in the process of updating our layers, we notice areas where greater context or specificity could make our data more user-friendly and applicable to other departments. In the Spring of last year, the Concord GIS team began an effort to do just that with our trails layer. As it stands, our trails layer distinguishes Town-owned and maintained trails from other trails, and denotes which trails are “main” trails versus trails of a lesser order. However, many parts of Town have a high density of trails. In these areas, like Hapgood Wright Town Forest, how do Town staff determine where something is, or what trail they might be on?



We are addressing these concerns by creating unique IDs for each trail and trail segment in Concord. These unique IDs reflect the important attributes of each trail (owner and type) as well as the trail’s relative location in Town based off a mile-by-mile grid that we use on many existing maps. In practice, these IDs will only be used within our digital records, and would not necessarily need to appear on any physical trail markers (see below).

A4TM-06	Black Line	No	Concord NRC	Yes	M
A4TM-07	Black Line	No	Concord NRC	Yes	M
A4TM-08	Black Line	No	Concord NRC	Yes	M

These IDs can be used for wayfinding on paper maps for Town employees, for locating assets for maintenance (trail signage, benches, kiosks, etc.) and for potential Public Safety applications as well. Once complete, we will prepare a “best practices” document for the maintenance and creation of new trail IDs going forward, so that the system instituted here can continue to be a

valuable resource for the Town. Creating this supporting documentation goes to further our efforts of creating accessible and easily maintainable spatial data for the Town.

If you have any spatial data that you think could use some “enhancing,” please reach out!

- *Tristan Boyd*

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### **3. Cartographic Capabilities within ArcGIS Pro and ArcGIS Online**

Making maps has never been easier. Data is well maintained and authoritative, the programs used to produce them are continuously improving, and mistakes and edits can be corrected in a matter of minutes. So why in this age of abundant and efficient cartography would we settle for the mundane in our maps?

As the Town of Concord transitions away from ArcMap and into the newer desktop software application and the cloud-based services, ArcGIS Pro and ArcGIS Online, our range of map image production and display broadens tremendously. While there will always be a place in our lives for the “quick, easy, and slapped together”, enhanced map making options within ArcGIS Pro and ArcGIS Online allow us as technicians to leverage our abstraction and creativity amidst an otherwise exacting field. Maps can now be interactive allowing for rapid on the fly adjustments and changes, 3D to allow for more complex visualization, or simply stylized to display the same information within new methods and formats.



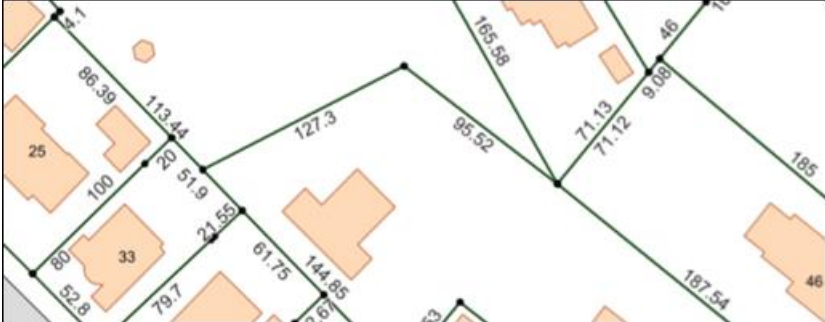
Overall, as the field of GIS and its programs evolve the ability of technicians to produce unique and interesting map images will enhance as well. Allowing for map images that convey not only meaning but artistic options as well – the blueprint design and 3D diorama maps in the gallery below are such examples.



- *Peter O'Donnell*

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#### 4. Map/App Gallery

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

<p><b>2229 Main St Superfund Plume</b></p>		<p>Developed a Webmap layer for the newly-approved Half-Mile Exclusion Zone, based on data provided by Melanie Dineen in Health.</p>
<p><b>Town-Owned Property</b></p>		<p>Developed a map at the request of Ann Clifford, depicting properties owned by the Town of Concord.</p>
<p><b>Parcel Line Dimensions</b></p>		<p>Completed a multi-year effort to provide parcel line dimension data on Assessor Tax Maps, as well as on Webmaps.</p>

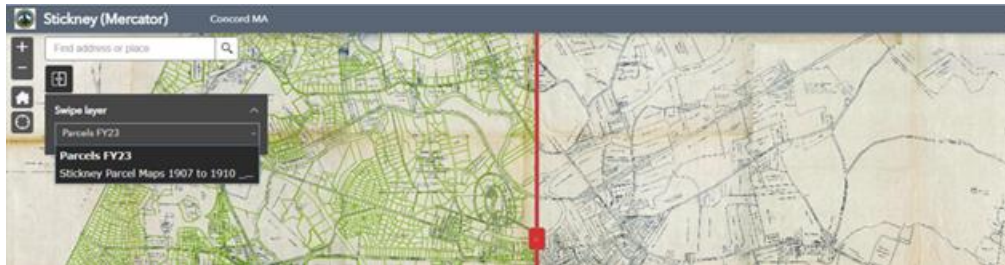
<p><b>3D Diorama Map of Concord</b></p>		<p>A 3D diorama map of Concord created in ArcGIS Pro showing aerial imagery of the terrain and with waterbodies labelled.</p>
<p><b>Blueprint Themed Map of Concord</b></p>		<p>A different take on a map of Concord, using a blueprint design.</p>

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## 5. Stickney Maps – improved!

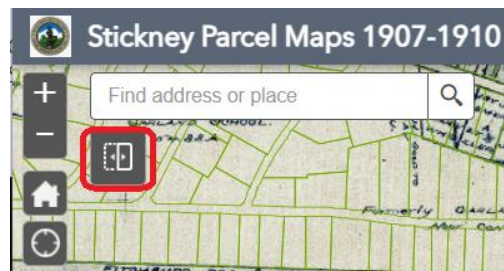
As reported in the April 1 GIS Newsletter, we were able to set up a web app showing the parcel maps Frank W. Stickney created between 1907 and 1910. Since then we have added another cool feature, at the suggestion of Archivist Nate Smith: A slider that allows you to sweep the current Parcels layer on and off the underlying Stickney maps.

Ctrl-Click on this image for a demo:



Nate says, “It’s fun to see the new neighborhoods pop up.”

To try it for yourself, open the [web app](#), then click on the button indicated in red below:



Enjoy! And let us know if this type of capability might be useful to you in your work.

PS – we also added the app to the [GIS Historic Maps](#) webpage.

- *Jill Moonheron*

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