

User Manual:

The Nantucket Food Asset Map

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This manual is designed to be a step-by-step set of instructions in updating the Food Asset Map created by Worcester Polytechnic Institute's 2017 team of IQP students.

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1. Overview

Sustainable agriculture works to meet the food needs of today without compromising the food security of tomorrow. Communities are now promoting more locally sourced food through farmers markets, supplying fresh produce to food pantries and local schools, as well as a growing resurgence of practices such as gleaning that reduce food waste.

Sustainable Nantucket, the Nantucket Food Pantry and Food Rescue Nantucket are three organizations promoting sustainable food activities on the island. Sustainable Nantucket promotes sustainable agriculture to protect the environment while increasing the island's self-reliance. The Nantucket Food Pantry provides vital support to many families and individuals struggling to make ends meet, and Food Rescue Nantucket works to stop food from ending up in landfills. As a developed island community, Nantucket's opportunity to grow agricultural resources is limited. Even so, this local food system is not being used to its full potential.

To construct a more sustainable community, food asset mapping is a useful visualization technique. This method marks out local areas that contribute to the community food cycle and helps gain an understanding of what resources a community has. The existing food network on Nantucket can be analyzed and enhanced. The creation of a food asset map is part of the larger endeavor of a comprehensive food assessment. This can help to highlight spaces not being used to their full potential or areas that show possibilities for future agricultural expansion; being beneficial for local sustainably focused organizations.

Taking ownership of this map will allow the map to be maintained and updated. This is imperative in order to continue the collaboration between the sustainable organizations on Nantucket and to enhance the local food system.

1.1 Platform Overview

ArcGIS Online is an online GIS system that allows one to create, share, and analyze geographical data. ArcGIS Online supports features such as: the ability to create an online map, import data layers onto it, and make the map accessible to the community. The publishing features are versatile, including the option of creating a web application from the map.

1.2 Important Terminology

GIS	Geographic Information Systems
Food Asset	Location where a community grows, prepares, shares, buys, receives, or learns about food.
Point Data	Depicts discrete locations (longitude, latitude).
Parcel Data	Depicts a collection of pieces of land.
Data Layer	Set of related locations.

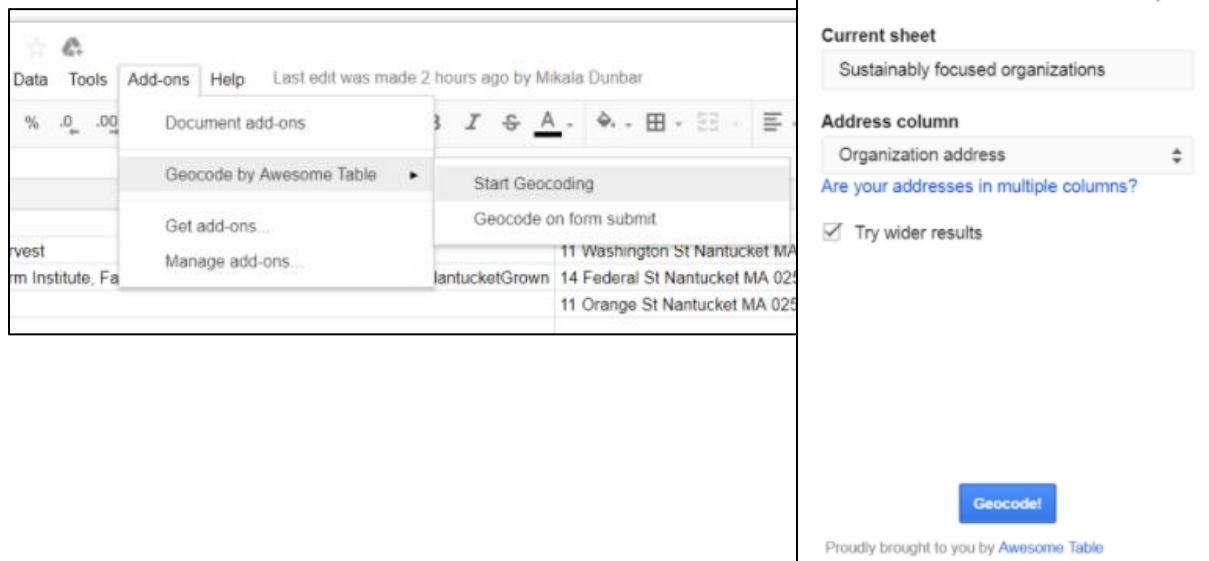
1.3 Items to Update on the Food Asset Map

- Google Sheets
- Parcel Data
- ArcGIS Online Certification

2. Updating Google Sheets Data

1. Access the Google Sheets spreadsheet titled “Food Asset Map Database” on Google Drive.
2. The Food Asset Map Database is organized in different sheets, based on data layer of the map. Each data layer contains different assets. Within each sheet, you can update by adding new assets and deleting those that are no longer active.
3. Click “Add-ons” on the top help bar.
4. Under “Add-ons” click “Geocode by Awesome Table” => “Start Geocoding”.

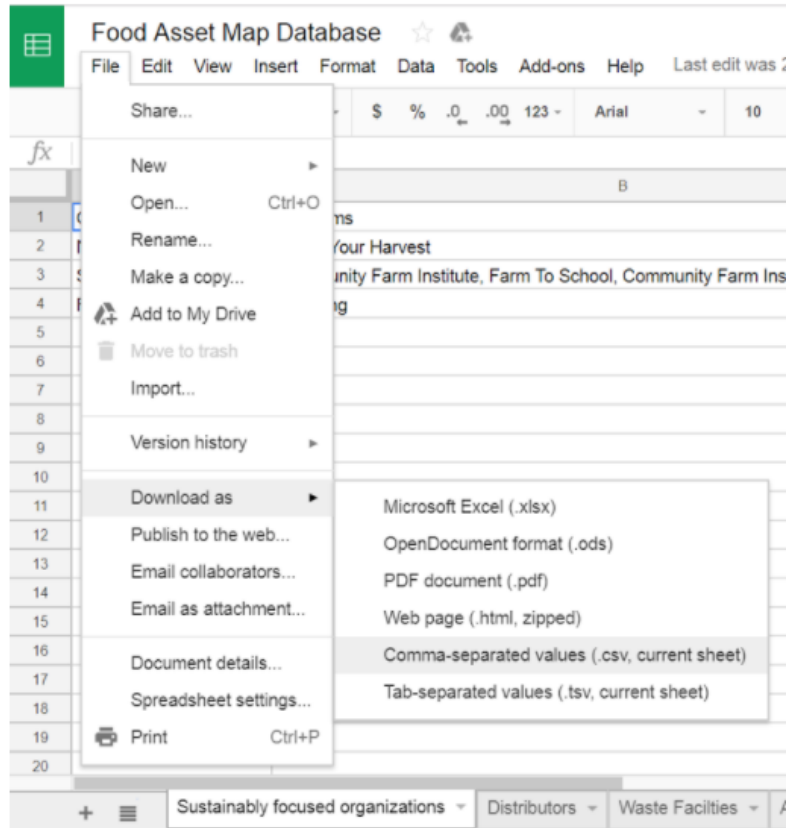
When the pop up appears on the right, ensure that Address column is the column with the addresses, then hit Geocode. This runs the add-on to convert new addresses to latitude and longitude. See images below for further detail.



2.1 Preparing Google Sheets to upload to ArcGIS Online

1. Download each sheet directly from Google Sheets as a CSV file by clicking “File” then “Download as” and “Comma-separated value (.csv, current sheet).”

The step is illustrated in the image below.



2. Follow directions below at Section 4 Updating ArcGIS Online

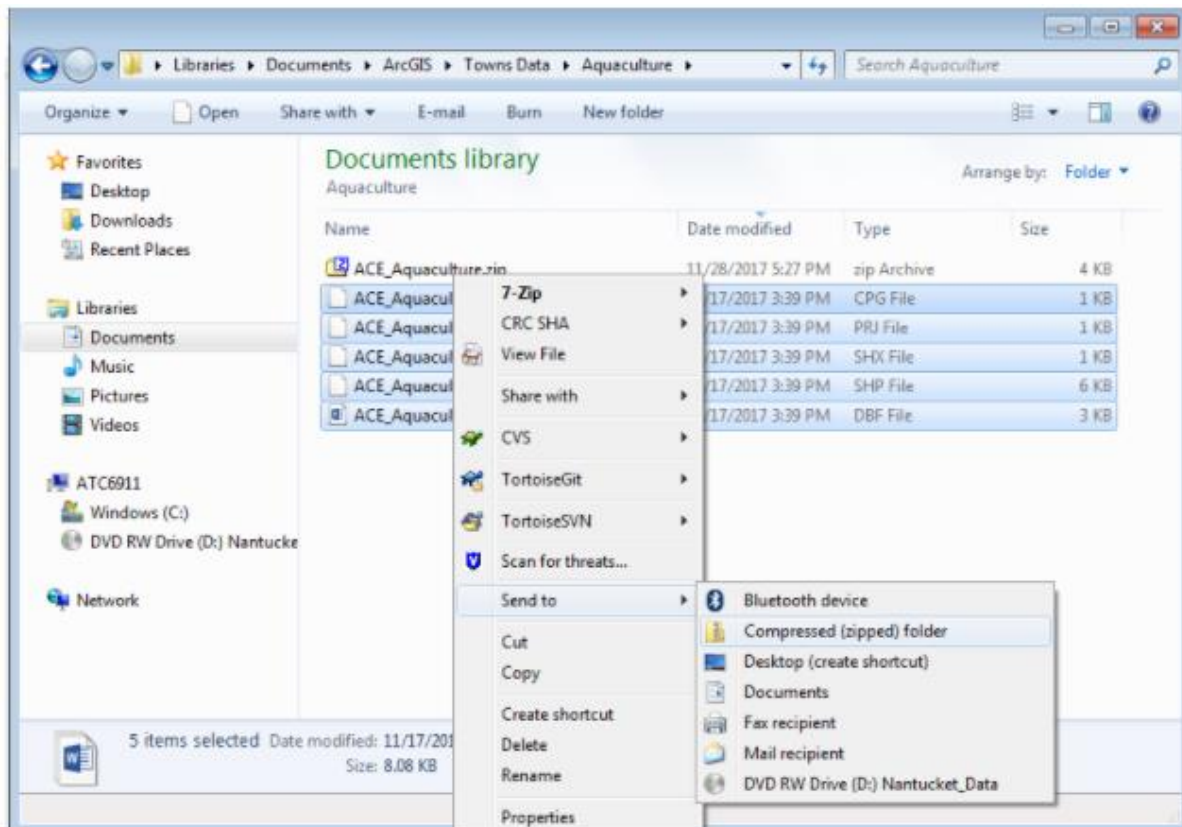
3. Preparing the Parcel Data to Upload to ArcGIS Online

Some files of parcel data can be accessed through the Nantucket Town GIS and then uploaded to the online food asset map.

3.1 How to upload parcel data to ArcGIS Online

1. Contact the current Nantucket Town GIS coordinator to get the most updated versions of files such as Aquaculture or land usage.
2. After acquiring the data, highlight the files needed, right click and click “Send to” then “Compressed (zipped) folder.”

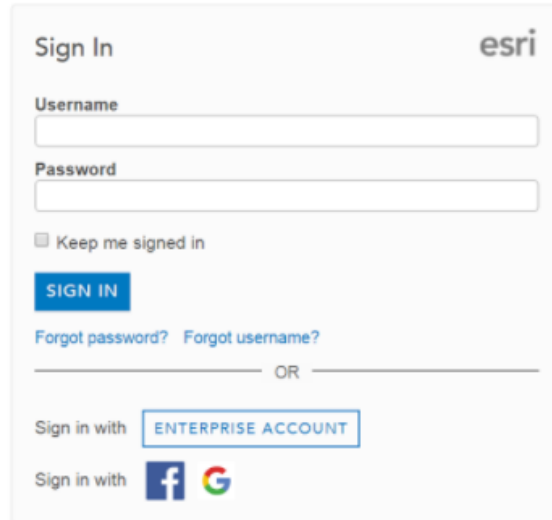
It is important to note: there are limitations to how much data can upload at once. Shape files or CSV files can only upload 1000 features or 250 addresses at a time.



3. Once the data is converted to a zip file, it can be uploaded to ArcGIS Online following the instructions below in Section 4 Updating ArcGIS Online.

4. Updating ArcGIS Online

1. Navigate to the ArcGIS Online sign in through your web browser and enter the proper credentials.

The image shows the ArcGIS Online sign-in interface. At the top left is the text "Sign In" and at the top right is the "esri" logo. Below the logo are two input fields: "Username" and "Password". Under the password field is a checkbox labeled "Keep me signed in". A blue "SIGN IN" button is positioned below the checkbox. Below the button are two links: "Forgot password?" and "Forgot username?". A horizontal line with the word "OR" in the center separates these from the bottom section. The bottom section has "Sign in with" followed by a button labeled "ENTERPRISE ACCOUNT". Below that, another "Sign in with" is followed by the Facebook and Google logos.

2. To access the already existing map, go to Content and “Nantucket Food Asset Map”
3. Click “Open the map with map viewer”

4.1 Add a layer

1. Click “+Add”
2. Click “Add Layer from File”
3. Choose the CSV file that was downloaded from Google Sheets, or the zip file created from the parcel data.

4.2 Delete a layer

1. Find the data layer you wish to delete in the Details tab, under Contents. This is a list of the data layers.
2. Click on the data layer, then on the three dots for more options.
3. In More Options, select “Remove”

4.3 Save your work

1. Click “Save” at the top of the window.

This saves your changes on the account and updates the link to the map.

5. Special Cases

5.1 Oyster Farms

- Most oyster farms are depicted in relative areas of the harbor. They do not have exact locations to enter in the database. **Using Google Maps, approximate latitudes and longitudes were found and inputted into the Oyster Farms Google Sheets tab.**
- On Google Sheets, there is both a tab for Oyster Farms and Producers. The Oyster Farms are included in the Producers tab. The Oyster Farms tab is used as a working space, not to be uploaded, while the Producers tab does get uploaded to the map.
- To upload the Oyster Farms in their correct locations on the Producers data layer, follow these steps starting in the Producers data tab:
 - a) Geocode the data (described starting in Section 2, step 3). This adds latitudes and longitudes for all data points here, putting in random latitudes and longitudes for the oyster farms.
 - b) Go to the Oyster Farms tab, and manually copy these latitudes and longitudes to the Producers tab in the corresponding rows.
 - c) This data layer can now be downloaded as a CSV file (Section 2.1) and uploaded to the map (Section 4).

5.2 Private Producers

- Information in this data layer is not publicly available. Therefore, it must be kept private. This also means that we do not have specific addresses for these locations, if anything we were given areas of Nantucket or just a road name.
- To upload more points on this layer, you must manually input each point by following these steps:
 - a) Click “+Add”
 - b) Click “Add Map Notes”
 - c) Click “Create” and then select the shape of the point you wish
 - d) Click on the point when it appears on map, and input all necessary data
 - e) Click on the point on the map and drag it to move its location
 - f) Click “Close” when satisfied with the point’s location
 - g) Click “Save” at the top of the window

6. ArcGIS Online Certification

To learn about and obtain this free subscription, follow these steps:

1. Visit esri.com
2. Click the “Industries” tab at the top of the page.
3. Click “Education”
4. Go to the “Schools” tab
5. Click “Schools Software Bundle”
6. Fill out the form on the page to request a Free ArcGIS for Schools Bundle.