Short Practice: Exporting Data to Shapefiles and Uploading it to ArcGIS Online

UC DAVIS EXTENSION

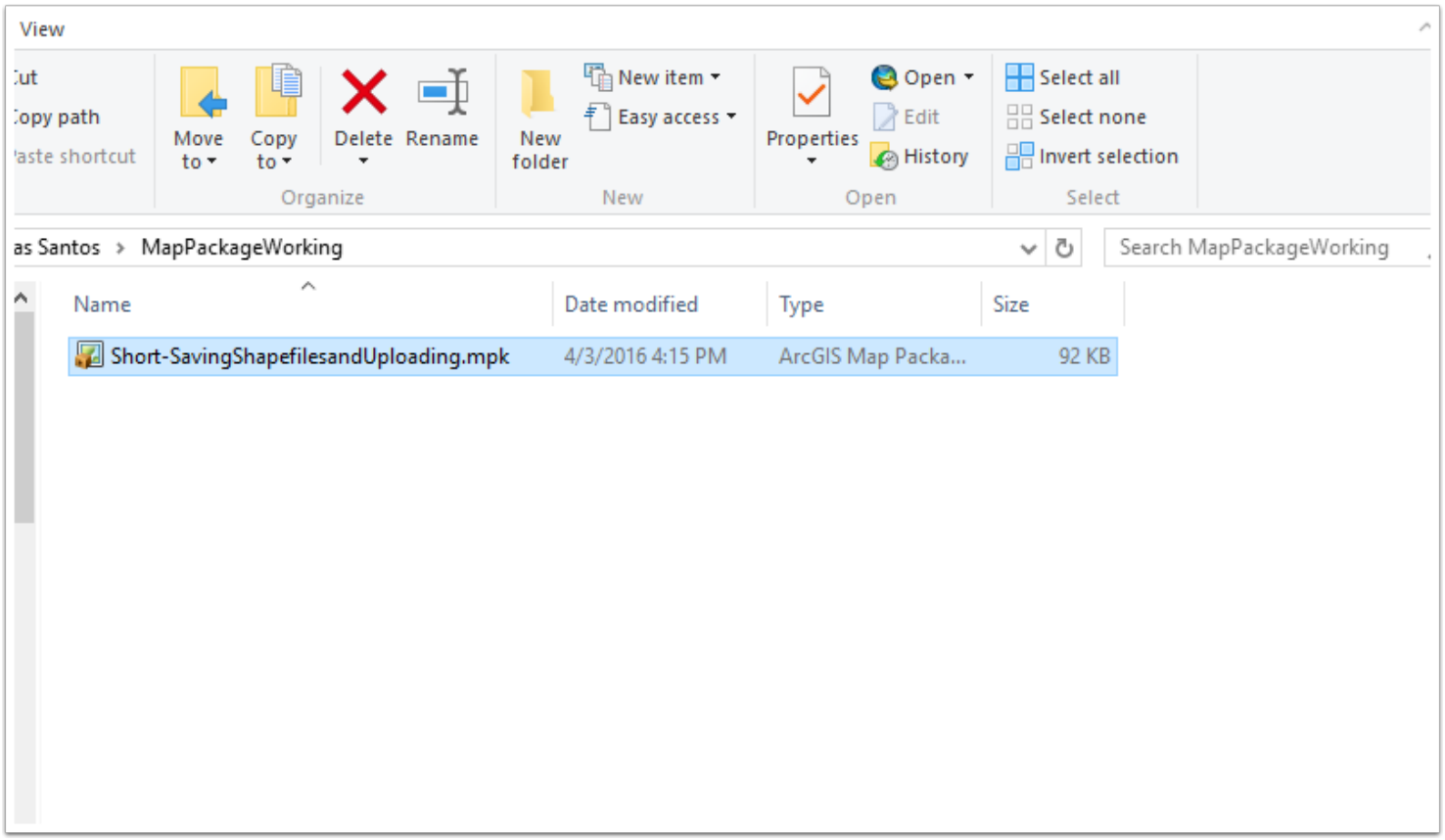
In this short tutorial, you will load a map package, export the corresponding data to a shapefile, compress the shapefile into a single zipfile, and upload the resulting zipfile to ArcGIS Online to be a layer in a web map. You will use the California air monitoring stations for this exercise, but the exact data aren't important in this case. Instead focus on the exact export steps and loading the data into ArcGIS Online.

Note: This tutorial was made with ArcGIS 10.3.1. Minor differences may occur when using versions

1. Loading the map package

First, this tutorial starts out by using a map package, a data container that includes a map document (.mxd) in the same file as all of the data, so that you can send all of the information required to load a map in one file. You could have loaded this data manually from a geodatabase too - this is just for practice using map packages (.mpk).

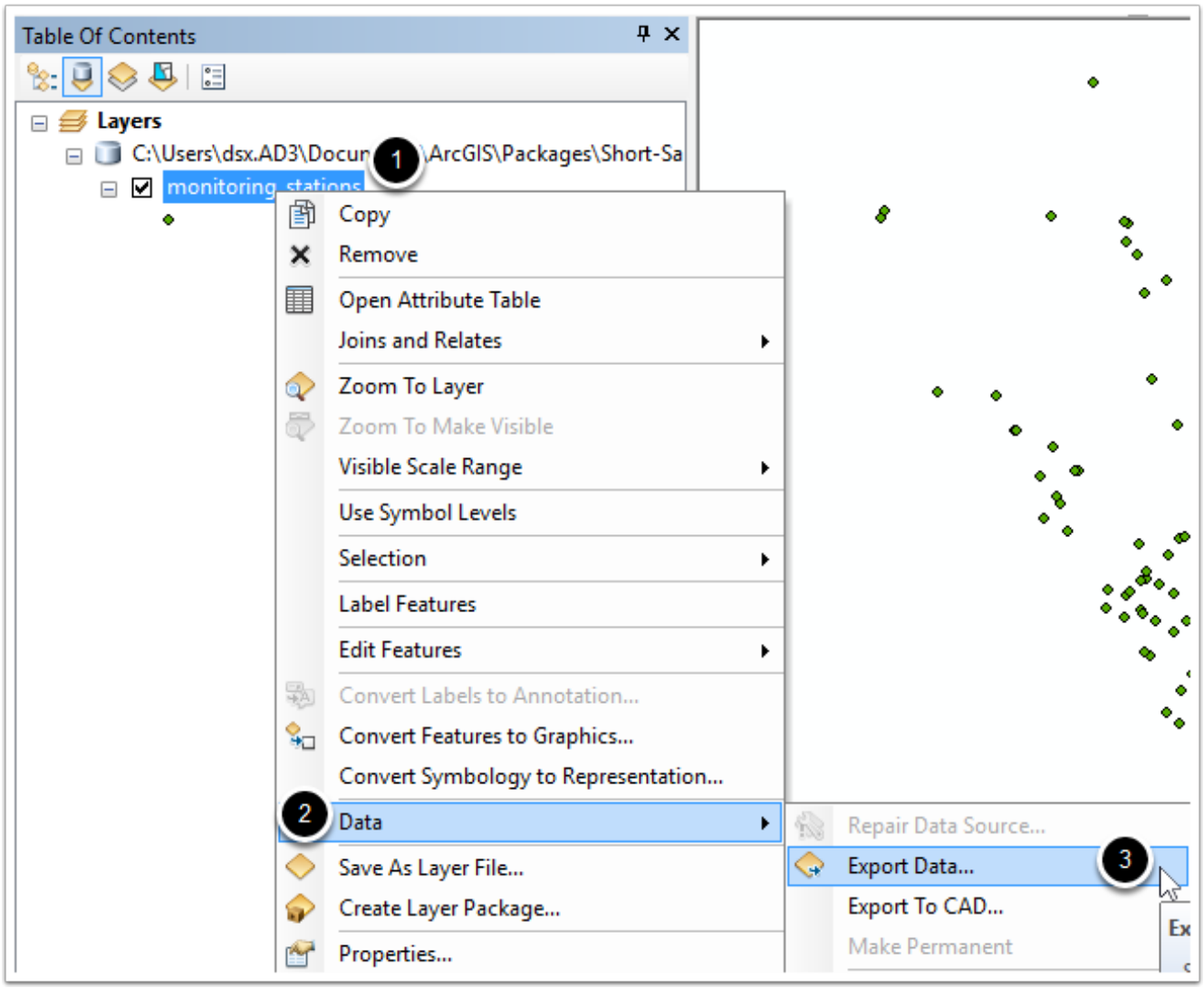
To start off, double click the map package for this tutorial, *Short-SavingShapefilesandUploading.mpk* in Windows to have ArcMap open the map package.



1.1 Exporting the data file

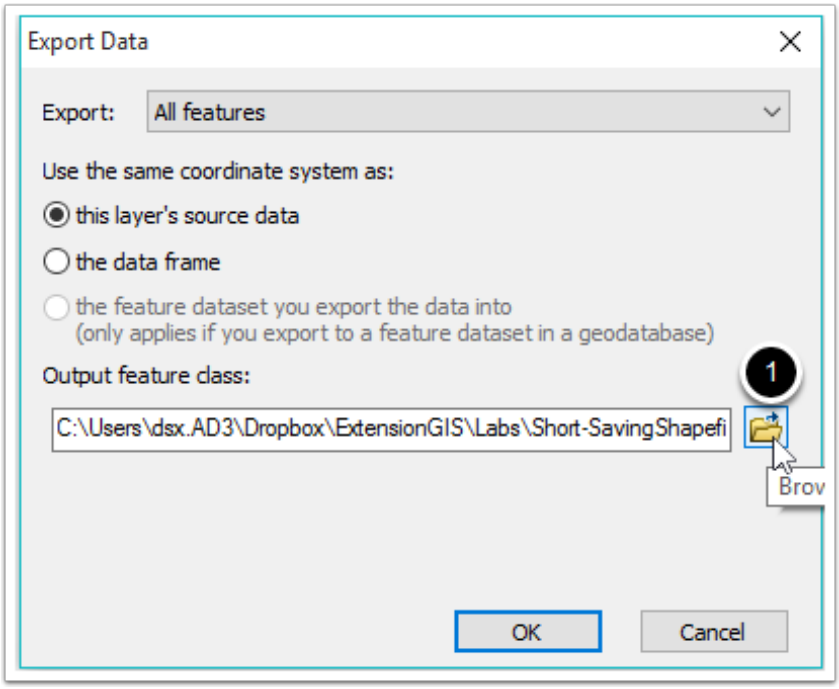
Once the map opens, we'll want to export the data. In a real situation, you'd likely have this data in a map document already, or you'd initiate a similar procedure from the Catalog window. You should know how to do the by now, but just in case:

1. Right click on the layer *monitoring_stations*
2. Go to the *Data* submenu
3. Click *Export Data*



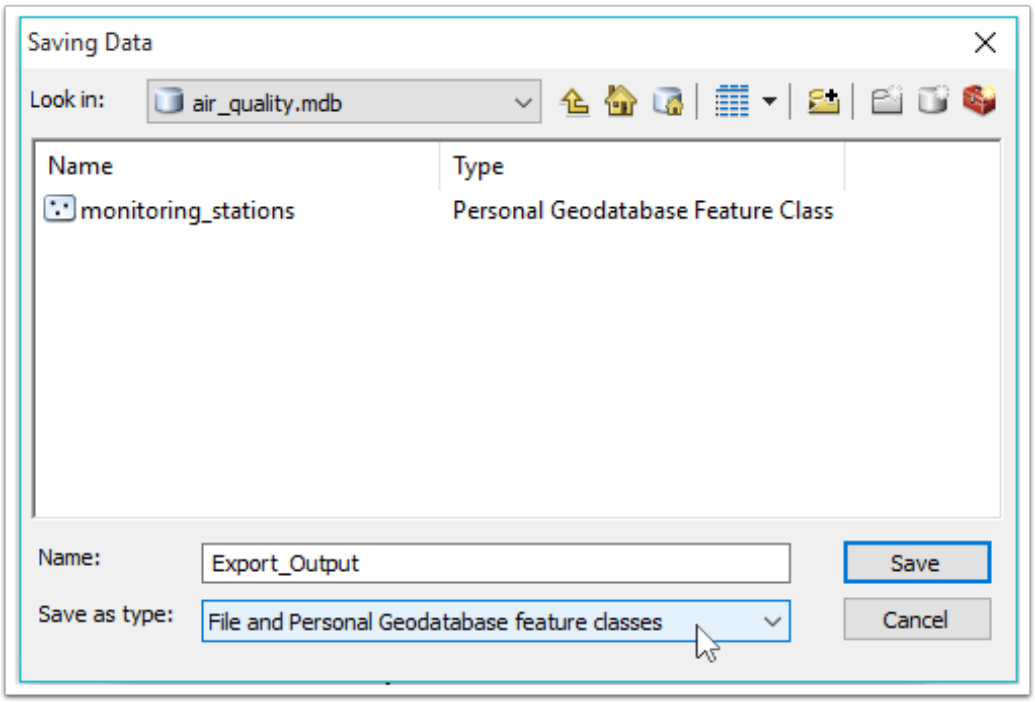
1.2 Finding the location

Click the *Browse* button next to the *Output feature class* to find a location to export to.



1.3 "Save as type"

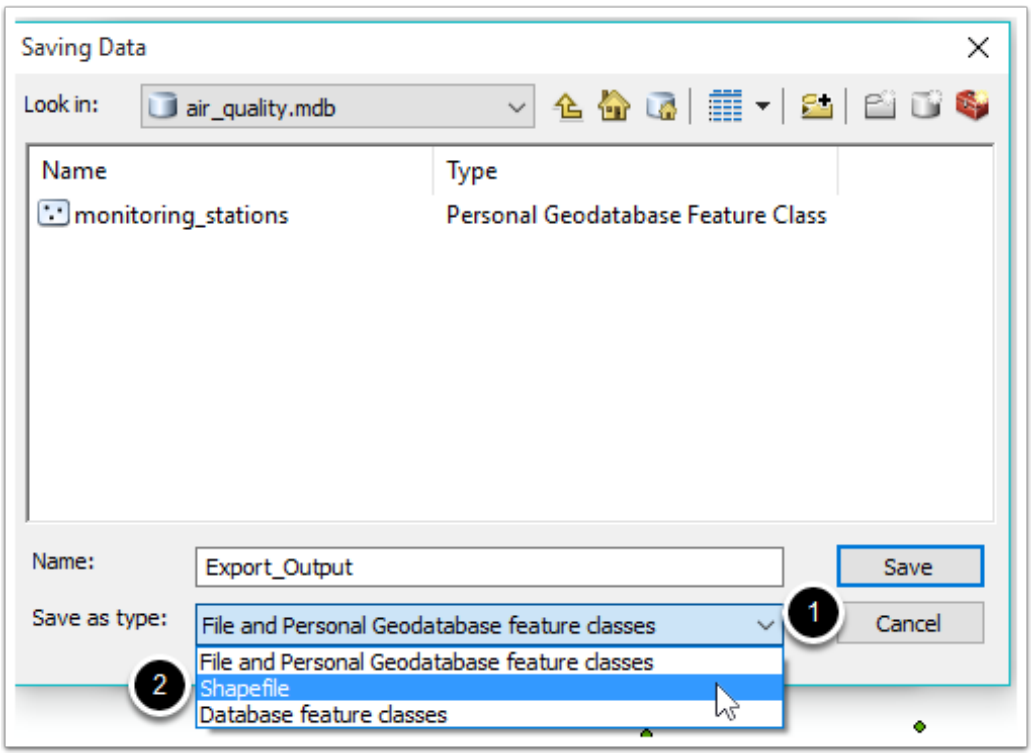
Here is the critical part, and a big reason for this tutorial. In the bottom of the *Saving Data* dialog you are looking as, you'll see a *Save as Type* option. In the case of this tutorial, it was set to the last data type that was used by ArcMap, which is *File and Personal Geodatabase feature classes.* This view doesn't allow us to see and use shapefiles, so we'll want to change it.



1.4 Changing the "Save as Type" setting

1. Click the dropdown next to *Save as Type*
2. Click the *Shapefile* option to select it

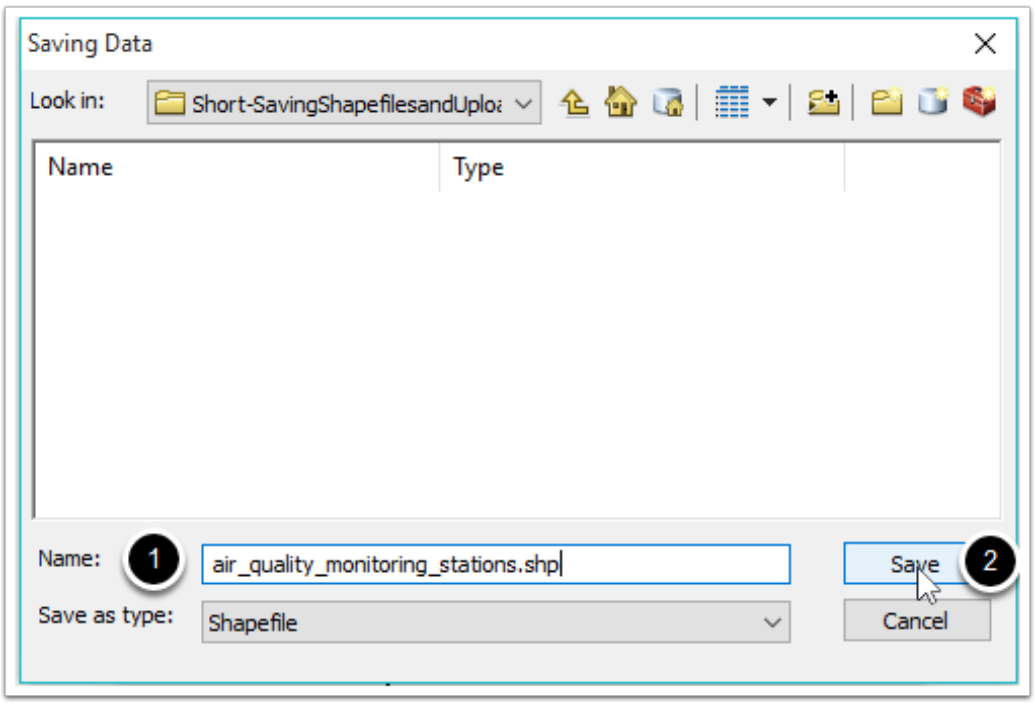
This works in reverse too. Sometimes when trying to save in geodatabases, you won't see the geodatabases at all if you don't change the *Save as type* setting to *File and Personal Geodatabase feature classes.*



1.5 Name your shapefile

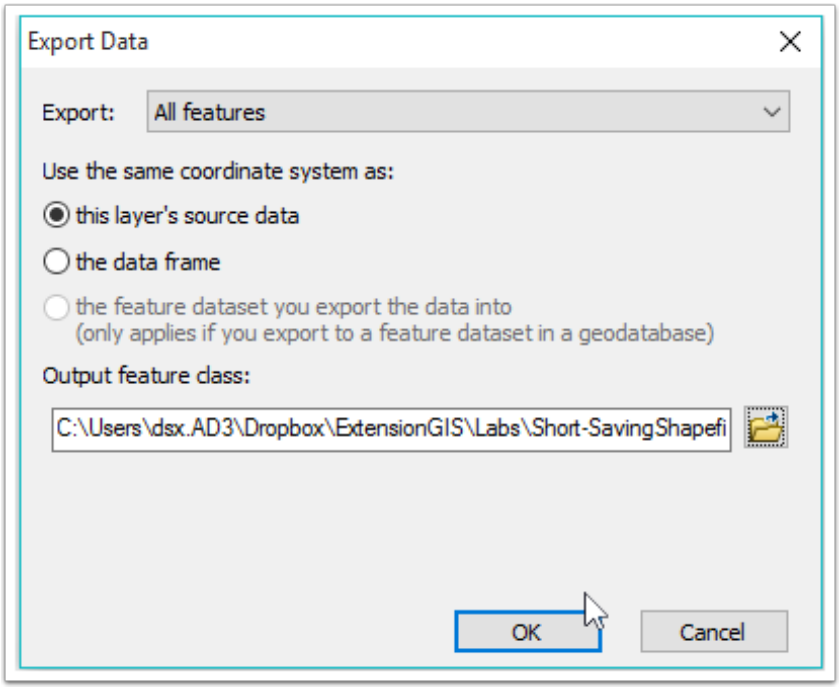
Once you change the type, you can navigate to the location you want to save your shapefile to - find a folder that you'll be able to locate in a moment to save it to, because you'll need to access it within Windows once it's done exporting.

1. Give it the name *air_quality_monitoring_stations.shp*
2. Then click *Save*



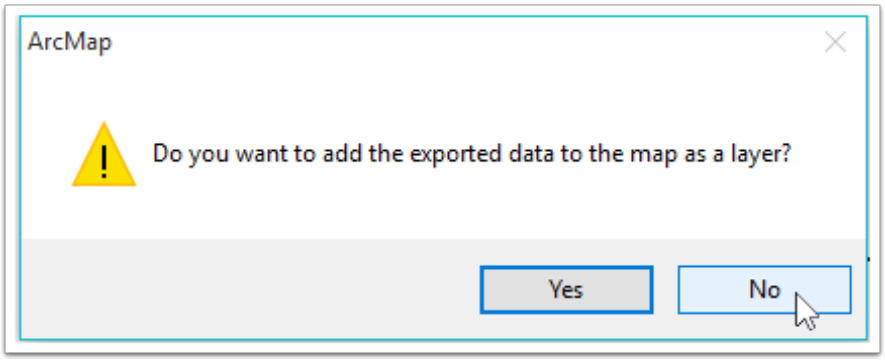
1.6 Finish the export

Click OK to initiate the export



1.7 Adding to map

When prompted, you don't need to add the exported layer to the map. We're done working in ArcMap for now!



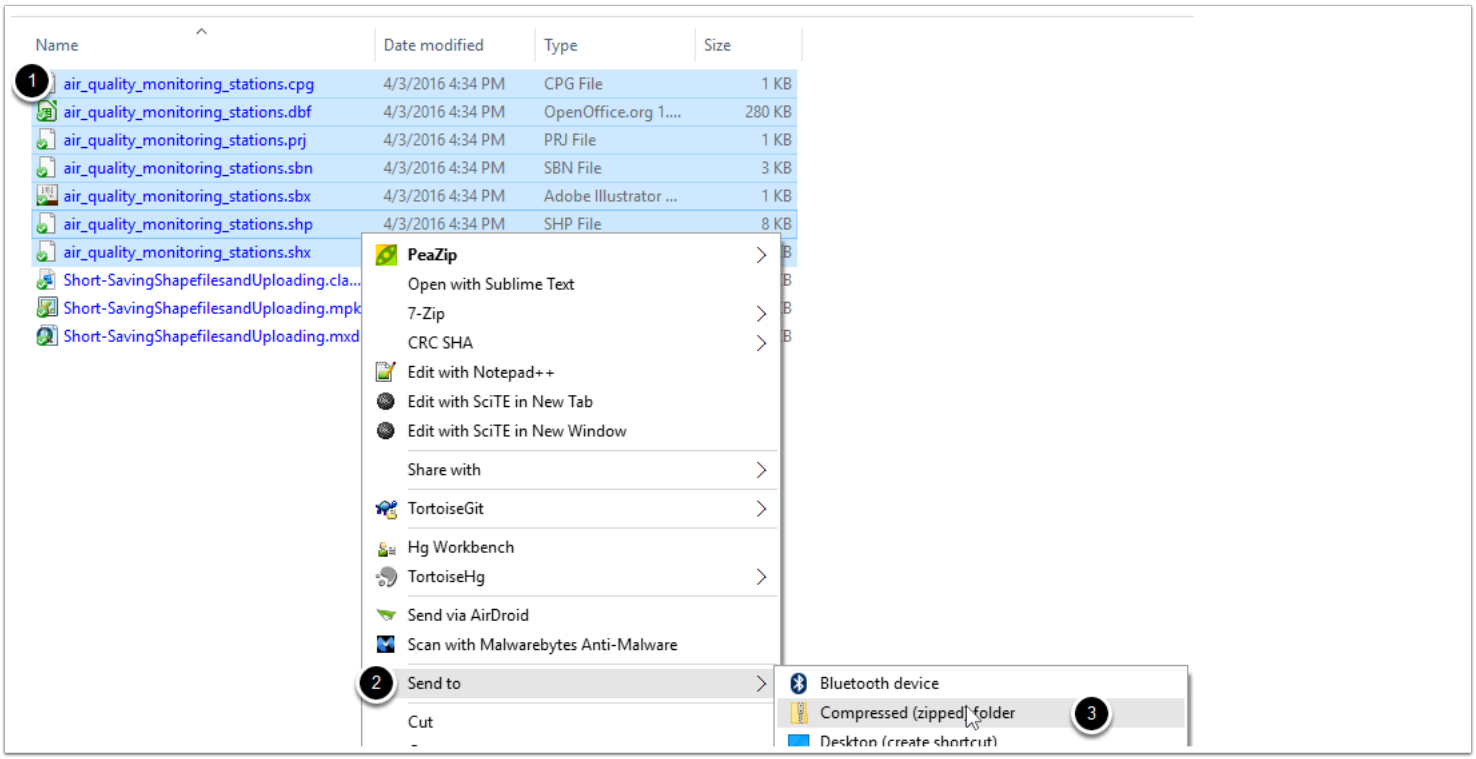
2. Compressing the shapefile for upload

Switch to Windows and find the shapefile you just exported. Recall that shapefiles are composed of many different component files that each hold different parts of the data. We need a way to upload all of those to ArcGIS Online as a single file, and the zip compression format allows us to do that.

Zip compression takes files and directories, and through analysis of the contents, shrinks the size and combines them into one file for interchange, without permanent modification of the underlying data. While you must decompress files within zip files (often called zip/compressed folders instead) before using them, the format provides a nice way to send data to a collaborator or service such as ArcGIS Online. Think of it as a cardboard box when you ship a package in physical mail - it keeps everything contained in transit, but you have to open it up before you can use the contents.

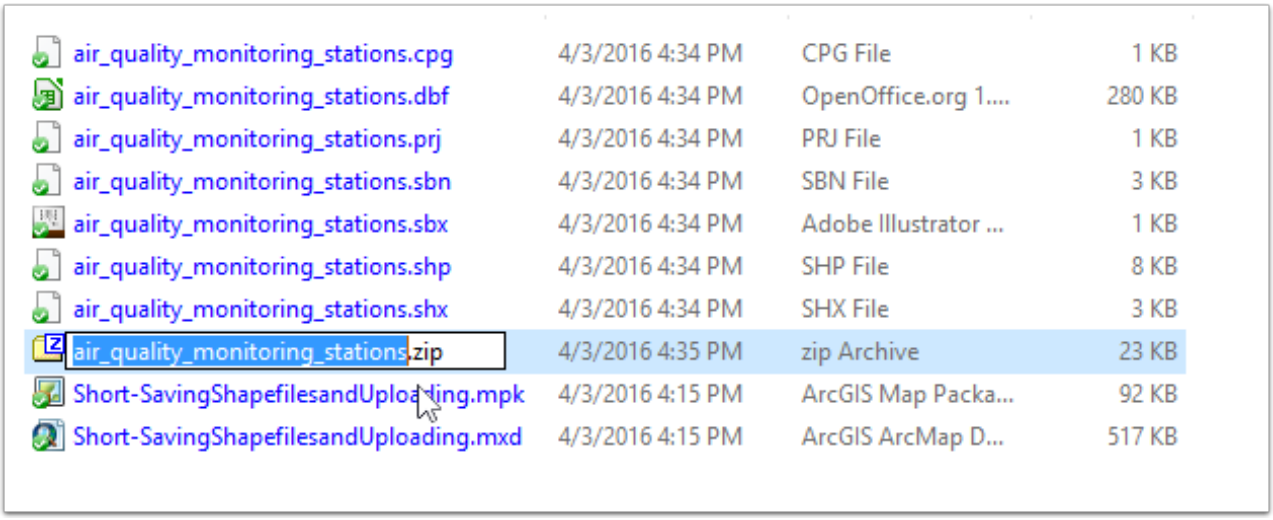
We're going to zip all of the component files now - if you know how to do it already, no need to follow the directions in this step exactly, you just need a zip file to result. If you need some practice, follow along!

1. Select all of the files with the name *air_quality_monitoring_stations* (and any extension). You can do this with the mouse, or by selecting the first one, holding down the shift key on your keyboard and clicking the last one - if you accidentally select any extra files, stop holding the *shift* key, then hold the *ctrl* key instead and click any files to remove from your selection. *Note*: Your screen may look different from the screenshot below, but as long as you are in the folder, selecting the files, that's ok. Once you've select all the files, right click on them
2. Go down to the *Send to* submenu and hover to expand it
3. Click *Compressed (zipped) folder* to have Windows start combining those files into a zip file



2.1 Naming the zip file

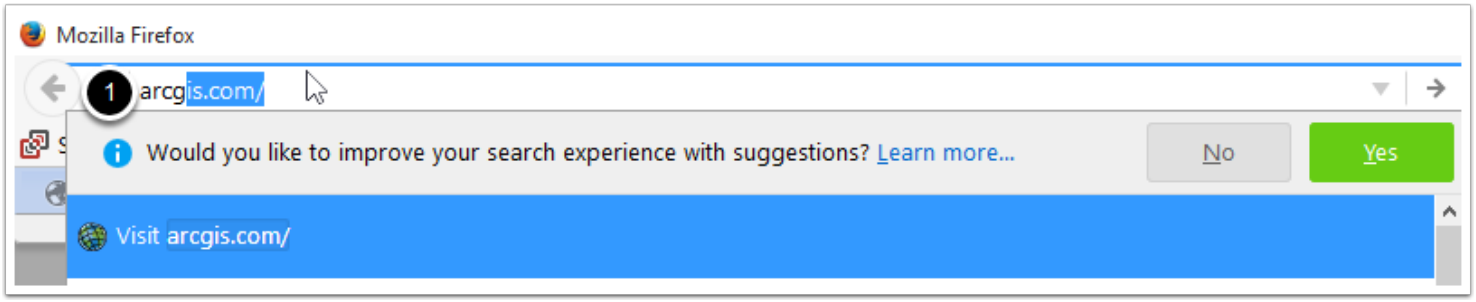
Windows will create a new file and suggest a name for it. In this case, I'll leave the name as it suggested, but feel free to rename it as you choose.



3. Load ArcGIS.com

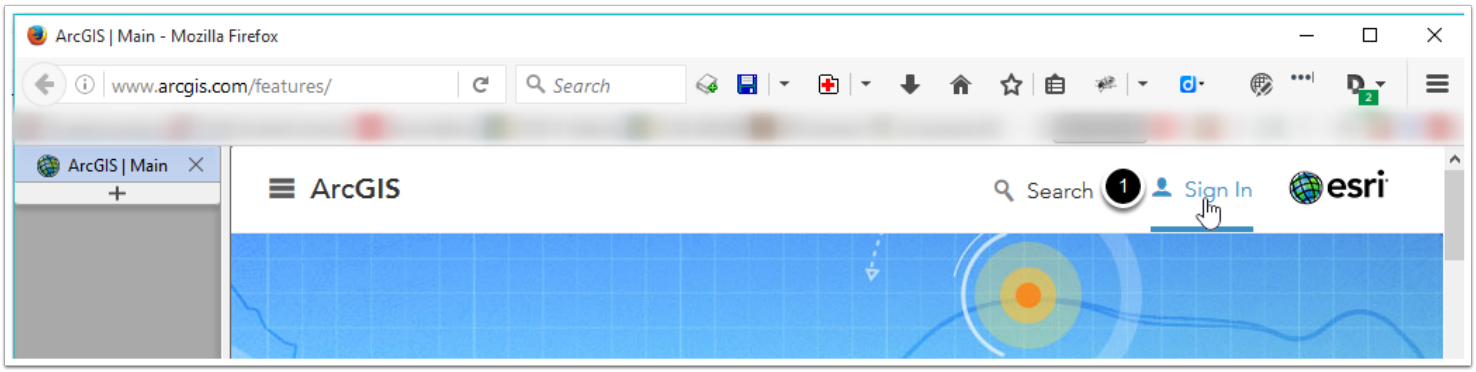
Next, load up your web browser. For this document, we'll use Mozilla Firefox - any browser supported by ArcGIS Online is fine.

1. In your browser's address bar, type *arcgis.com*



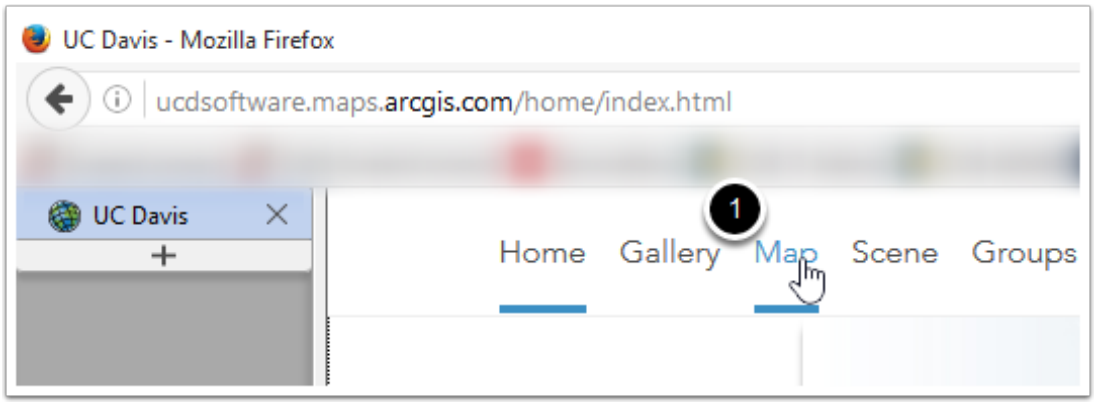
3.1 Log in to ArcGIS.com (if not already logged in)

1. If you aren't already signed in, click the *Sign In* button in the upper right, then complete the sign in process. If you are signed in, skip to the next step.



3.2 Load a new map

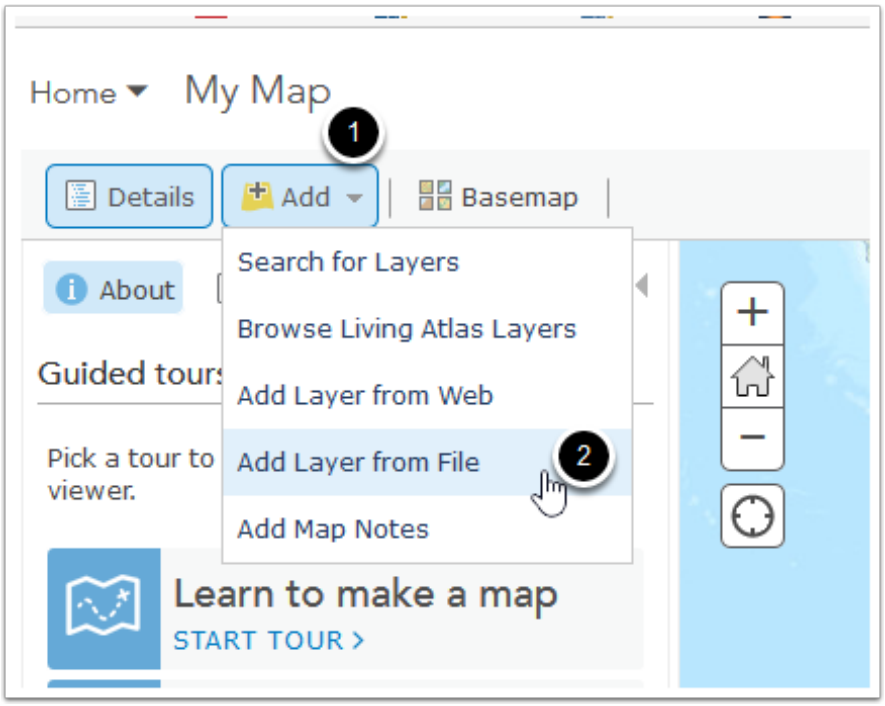
1. Once signed in, click the *Map* link on the toolbar to make a new map.



4. Begin adding a layer to your map

Now, you'll see a full web map displayed. Now, you can upload the zip file that contains your shapefile into the map!

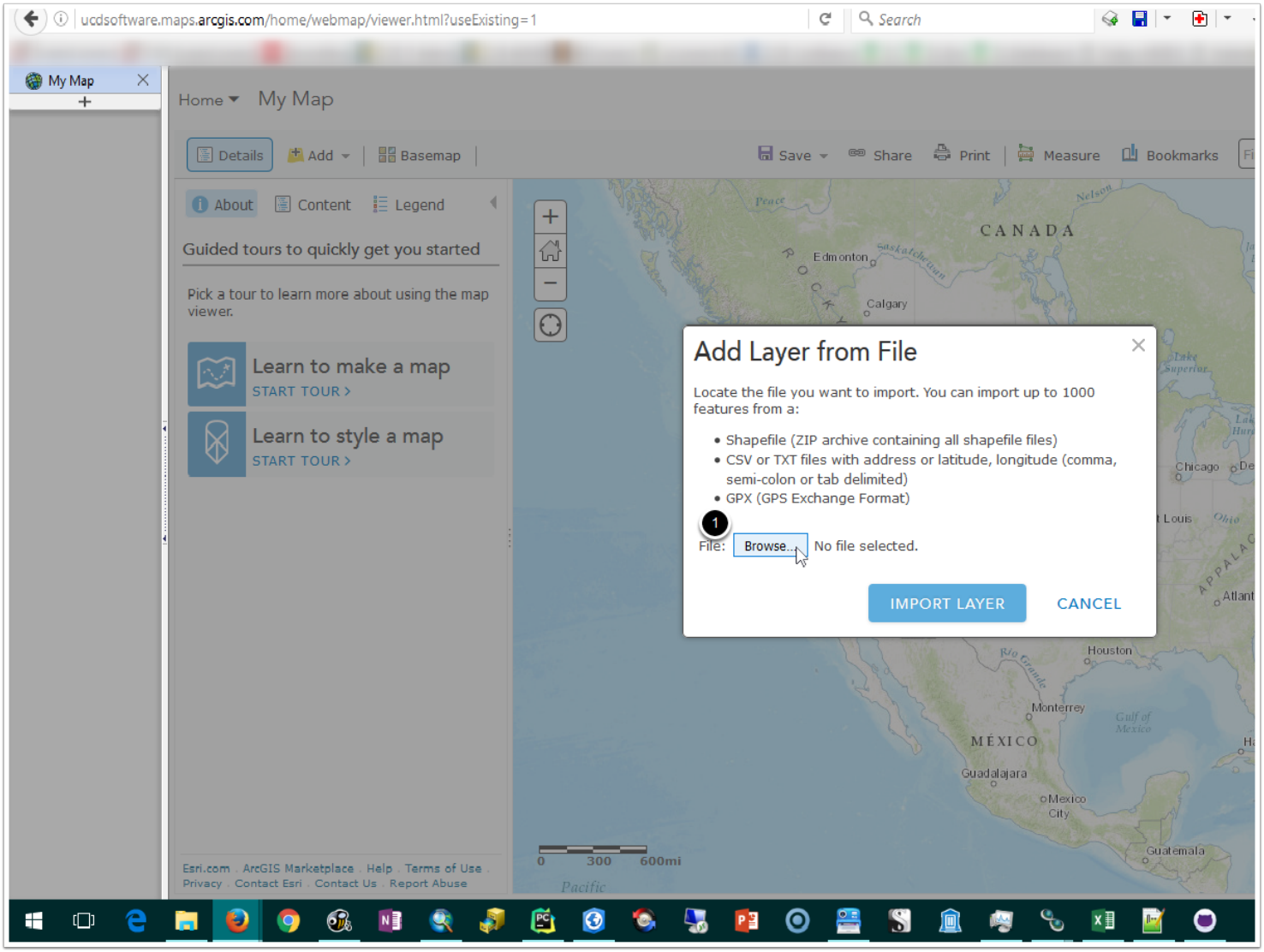
1. Click the *Add* menu to add data
2. The click *Add Layer from File* to initiate the file upload



4.1 Browse for the file

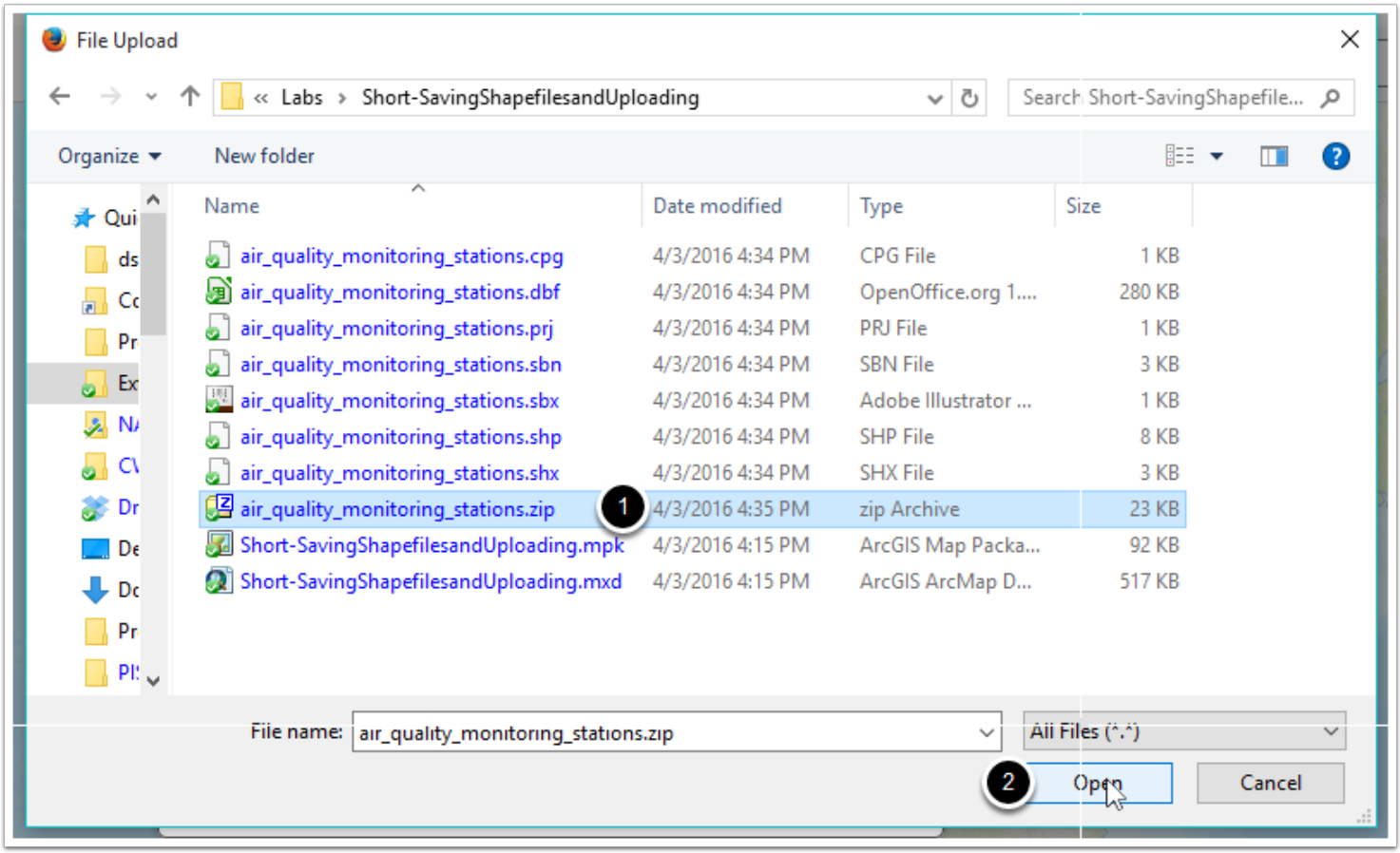
The *Add Layer from File* dialog will come up. Now you can browse to the shapefile you wish to upload.

1. Click the *Browse* button to find the zip file.



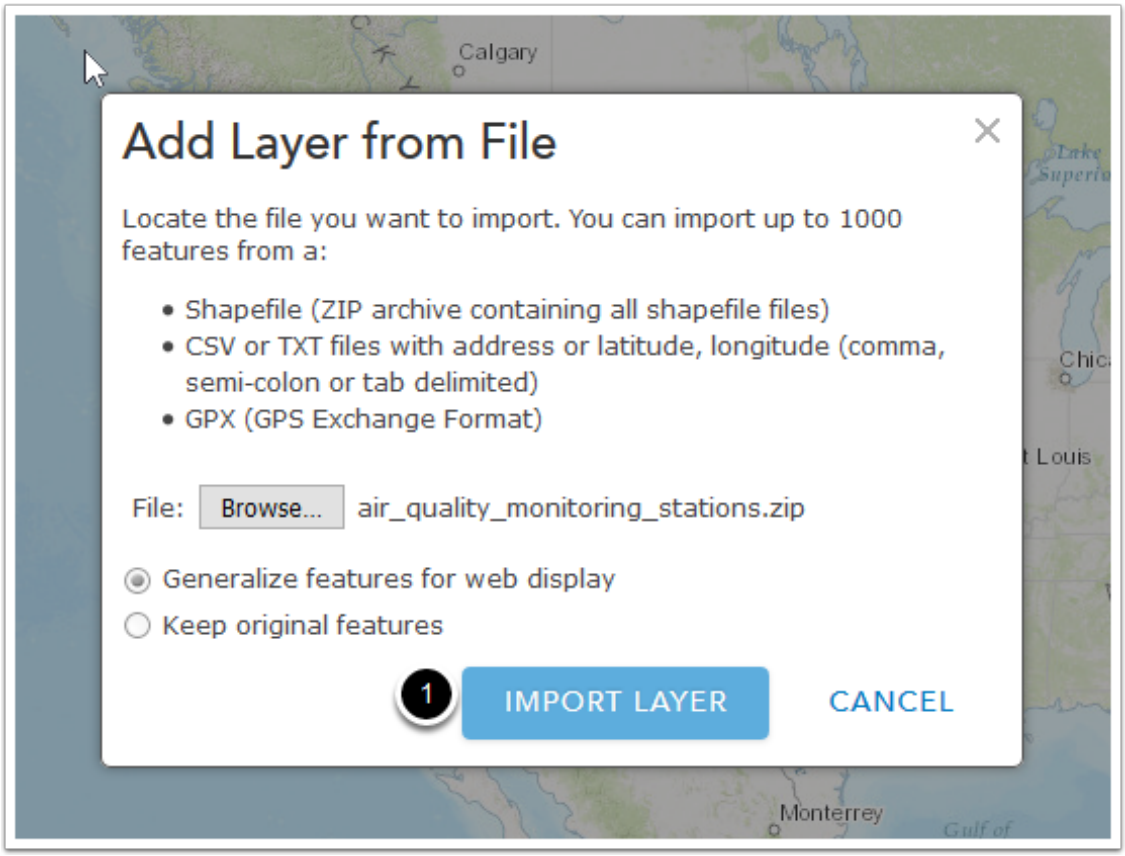
4.2 Find your zip file

1. In the *File Upload* dialog that comes up, find the zip file containing your shapefile, then click on it.
2. The click *Open* to tell ArcGIS Online to use that file



4.3 Complete the import

1. Now, the page knows that we're ready to upload the file, so you just need to click *Import Layer* to start the upload and processing of the shapefile. Click that now.



5. Data in your map!

ArcGIS Online will display your data on the map - it will attempt to symbolize it based on the attribute table (yours may look different!). For now, you can continue to play with the layer and the symbology in your map, but this tutorial is complete. You learned how to export a feature class from a geodatabase to a shapefile, compress it into a single zip file, and use that zip file to upload the data to ArcGIS Online.