

ArcGIS Online Web Mapping Tips & Tricks

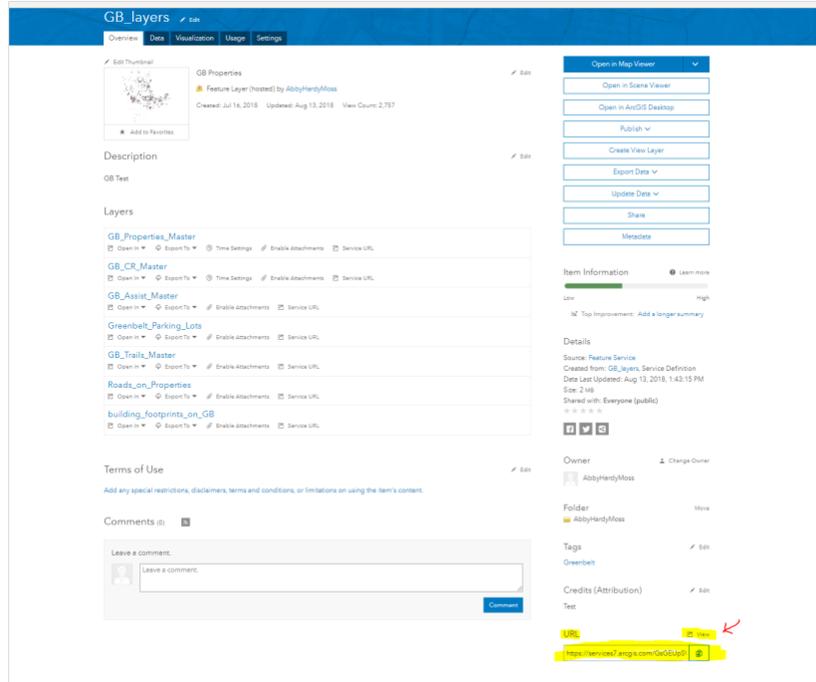
During Greenbelt's web mapping process, we learned a number of helpful techniques along the way that we'd like to share. Below are a list of tools and shortcuts we have found beneficial.

Publishing Feature Services from Desktop to ArcGIS Online

There are multiple ways to upload data to ArcGIS online. You can do so directly into your webmap, or on the "Content Page". You can also publish feature services directly from ArcMap. We found this is the best way as doing so uses less credits* then adding data via the Content page in ArcGIS Online, and you can use the data in multiple web maps, which is not possible if you add data directly to a web map. To publish new features services or replace existing ones, sign into ArcGIS Online through Arc Desktop.

Create a map that has all of the layers you want to publish. You can use this method to add new data to a web map or to update existing data in a web map. To update existing data each layer must be present in the Table of Contents and in the correct order to match with existing data in the web map (see screenshot below). Symbology on the desktop side is not critical - whatever is set within a web map will be retained.

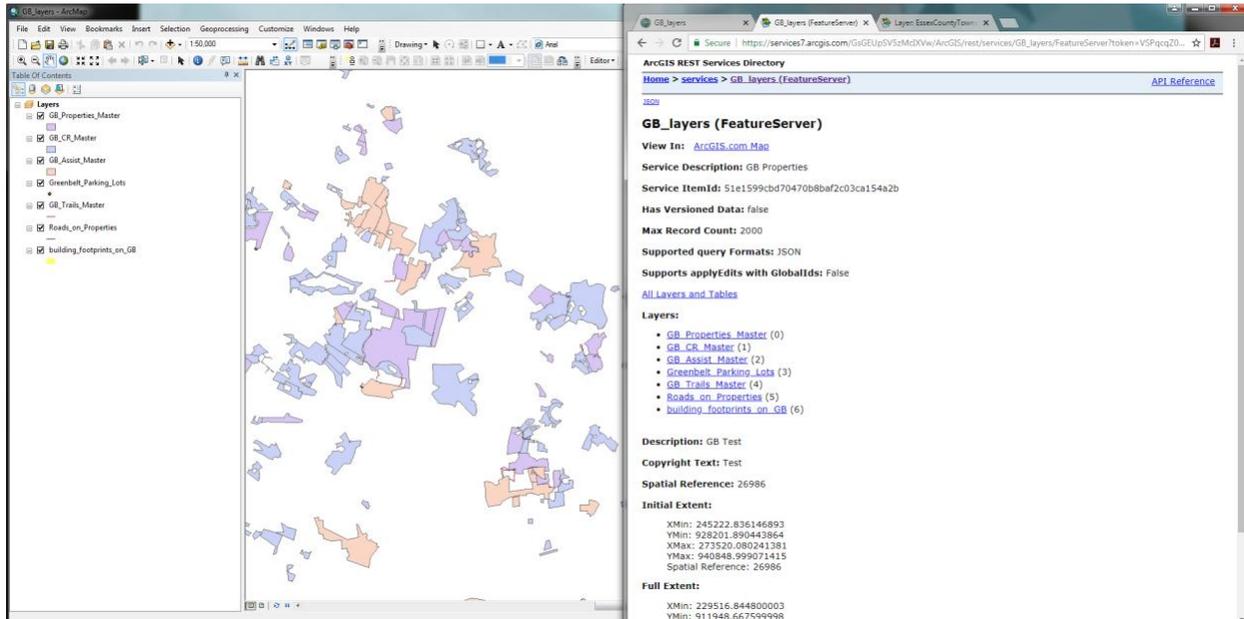
To view the REST Services Directory, go to the item Overview page, on the bottom of the right hand side of the page it will say URL, click View right above the URL.



* For more information on credits see <http://doc.arcgis.com/en/arcgis-online/reference/credits.htm>

A handout from LTA's Rally 2018, Session B05 - *An Engagement Toolkit: Modernizing your Website & Interactive Maps*

Publishing Feature Services cont.



If the feature count is different or out of order, the feature will either symbolize the wrong data, or won't display at all. If this happens, simply re-publish the feature service correctly and web map settings will be restored. Online Assistant (see details on Online Assistant below) can be used to update URLs if things really go south.

Once data is ready to go, File>Share As>Service...

Select either 'Publish a service' (for a new service) or 'Overwrite an existing service'.

Select the existing service to replace.

Parameters: max number of records to return should be more than the number of features in a layer, but less than 5,000 or the web map will bog down trying to render that many at a time.

Capabilities: Enable 'Feature Access' and enable operations

Then click **Publish**.

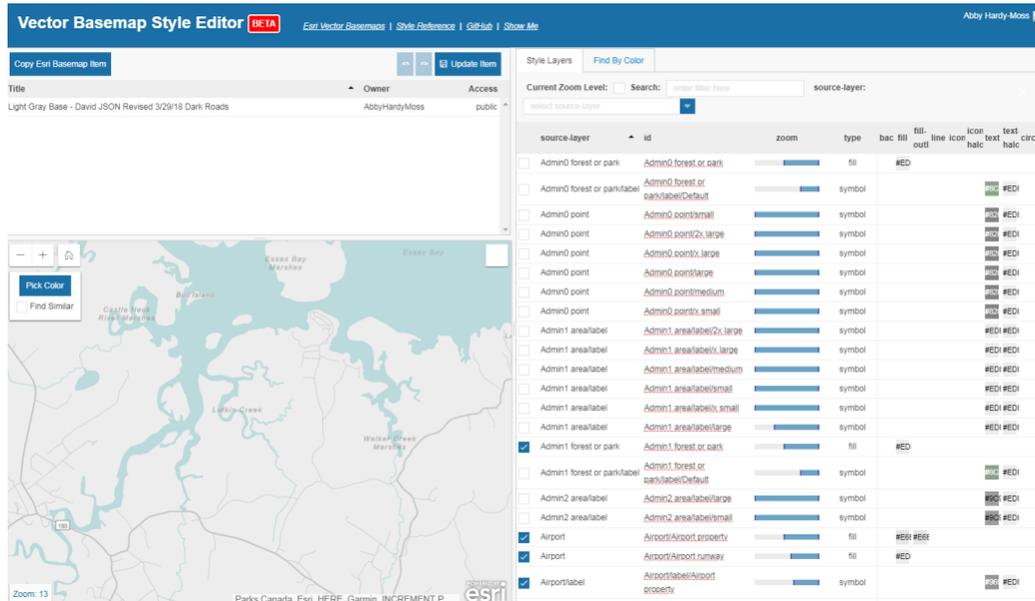
Esri has advised that the best practice is to use geodatabase files rather than shapefiles when publishing feature services because geodatabases includes spatial indexing and attribute indexing to increase rendering speed in an online environment.

Basemap Customization

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In order to remove a significant amount of data from our web map (keeping your webmap lean helps it to render more quickly) we customized the light gray basemap. To do so we used the Vector Basemap Style Editor Pictured Below:

The Vector Basemap was customized using the [Esri Vector Basemap Style Editor](#)



Visibility, zoom scale, and coloration can be edited by modifying each 'source-layer'. It can be challenging to track down individual feature layers, but they can be narrowed down by using the 'pick color' tool in the map display and clicking on the feature. The style layers list will then narrow down to all layers matching that color.

Make adjustments then click: [Update Item](#)

If needed, this file can be uploaded on the [ArcGIS page](#) to update the code. On the same page, 'download style' can be used to save other backups in the future.

We used this tool to turn on and customize the color of building footprints, to customize the color of and set the zoom scale of roads, and to customize the color of water.

Back End Data Management Using ArcGIS Online Assistant

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If web maps are experiencing issues with layers failing to draw, or if a layer's data source has been deleted without first removing it from a web map, [Online Assistant](#) can be used to redirect layers to active data layers.

Once logged in, click on the 'I want to...' drop down and select 'Update the URLs of Services in a Web Map'.

Click on the web map of interest in the menu on the left which will then display each operational layer and its service URL.

The screenshot shows the ArcGIS Online Assistant interface. The top navigation bar includes 'ArcGIS Online Assistant', a search bar, and a user profile for 'Abby Hardy-Moss'. The main content area is divided into two panels. The left panel, titled 'Essex County Greenbelt Association - https://ec-greenbelt.maps.arcgis.com/', shows a navigation menu with categories like 'Root', 'Feature Layers and Shapetiles', 'Osprey', 'Story Map Examples', 'Web Maps', and 'Website Apps'. The 'Web Maps' category is expanded, showing a list of web maps, including 'Greenbelt Basemap MASTER MAP' (selected), 'Greenbelt Basemap MASTER MAP - backup 7 27 18', 'Greenbelt Basemap Tour De Greenbelt', and 'Light Gray Base - David JSON Revised 3/29/18 Dark Roads'. The right panel, titled 'Greenbelt Basemap MASTER MAP Type: Web Map | Item ID: 72c43d Copying', displays a 'Quick Text Find/Replace' tool. Below this, there are sections for 'Operational Layers', 'Other Protected Land', 'Greenbelt Protected - Private Land', 'Greenbelt Protected', 'Greenbelt Properties', and 'Boundaries_Features'. Each section contains a list of service URLs that can be replaced.

URLs can be changed to direct the layers towards their proper service. These can be found in the [ArcGIS REST Services Directory](#)

When complete, hit 'Update' and changes will be reflected in the web map.

Tips from Esri for Faster Data Rendering

- Use feature services from geodatabases
- The volume of web map layers is less important than the total number of feature service layers being requested (i.e. multiple layers in a web map can reference the same data)
- Before publishing a feature service, remove any unneeded fields in attribute tables
- Ensure maximum records returned is more than in the individual layers but under 5,000

Work Arouds

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Below are a couple problems we've discovered a work around for. If you find yourself facing the same problem, contact us and we'll let you know how we fixed it!

- Pop-up customization – avoids default pop-up style for mobile devices, which is poorly designed
- How to use a custom basemap in a property tour Story Map - this will hopefully be fixed at some point, but when we created the Story Map for the Cox Reservation adding your own custom basemap was quite tricky