



# Mobile Map Package for S1 Mobile Mapper



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## Purpose

The purpose of this document is to demonstrate what is needed to download a Mobile Map Package (.mmpk) and how it functions within the S1 Mobile Mapper App for use offline out in the field.

## Mobile Map Packages (.mmpk)

MMPKs are authored in **ArcGIS Pro** specifically for downloading and viewing assets and it can package maps and basemaps along with all referenced data sources into a single .mmpk file. MMPKs downloaded and used in a mobile app, for example in S1 Mobile Mapper or Esri Field Maps apps, allows for attribute pop-ups and query functionality from the data, however, **MMPKs are read only, and can only be used as reference information!**

More about MMPKs:

- Can be shared with others by uploading them to your organization in ArcGIS Online or by sharing an .mmpk file through common file sharing methods.
- Mobile map packages can be used by ArcGIS Pro, ArcGIS Explorer, ArcGIS Navigator, and by developers building applications with ArcGIS Runtime SDK.
- Mobile map packages support simple features, raster datasets, tables, relationship classes, locators, network datasets, and maps that contain map tiles (.tpk) or vector tile packages (.vtpk).
- Mobile map packages created in ArcGIS Pro for use in apps created with ArcGIS Runtime SDKs currently only support the following layer types: feature layers, raster layers, raster tiled layers from previously created .tpk files, and vector tiled layers from previously created .vtpk files.
- When creating a mobile map package, all maps, basemaps, and data layers will be projected to a common coordinate system. The coordinate system that will be used is the coordinate system of the first input map specified.

### Esri Information on Creating MMPK:

- **Create Mobile Map Packages** (Data Management) <https://pro.arcgis.com/en/pro-app/2.9/tool-reference/data-management/create-mobile-map-package.htm>

## Mobile Map Package (.mmpk)

- **Learn how to use ArcGIS Pro to create a map from a mobile map package (MMPK) for offline use.** <https://developers.arcgis.com/documentation/mapping-apis-and-services/offline/tutorials/tools/create-a-mobile-map-package/>

**Esri Field Maps Note:** To allow users to open a **mobile map package** without signing into an ArcGIS organization, **enable anonymous use** can be used if you have licensed ArcGIS Pro with the ArcGIS Publisher extension. Mobile map packages that have been enabled for anonymous use can be viewed by anyone using ArcGIS Field Maps.

- **Share a mobile map package** <https://pro.arcgis.com/en/pro-app/latest/help/sharing/overview/mobile-map-package.htm>

## Mobile Map Package Settings and Share Setup in ArcGIS Online

Mobile map packages (.mmpk), like other packages, are not viewable in a map viewer on ArcGIS Online (AGOL). They are stored on the **Content** list as a package in AGOL, select the package to open the Item Detail page, and that is where you will get the option to download or share your package to a group.

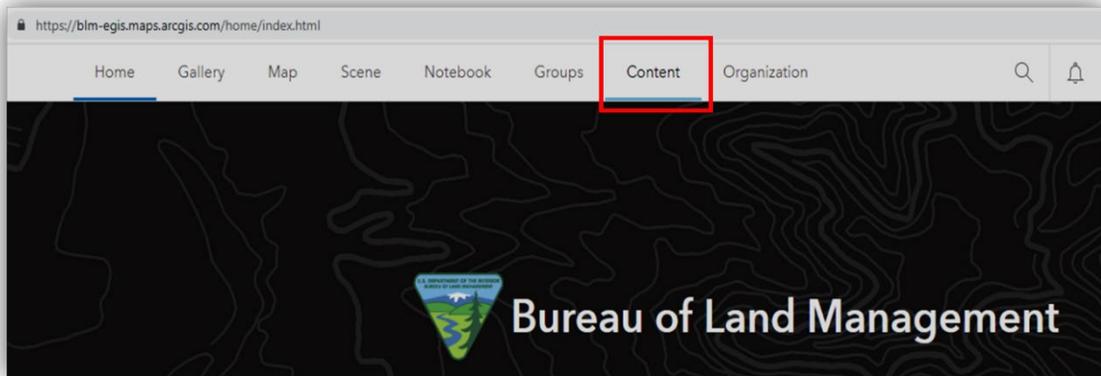
To download an .mmpk in the S1 Mobile Mapper app (or Esri Field Maps), the .mmpk needs to be shared to a group in your organization in ArcGIS Online and confirm the Application setting is checked on for **'Use in ArcGIS Field Maps Mobile'** (the default setting).

### Mobile Map Package Group Sharing in ArcGIS Online

**Note:** You need a AGOL **User Role of Creator** or above to Share content items with a group in ArcGIS Online. But any User Type can at least view to confirm if the Mobile Map Package is shared with a group so it will be available for download in a mobile application.

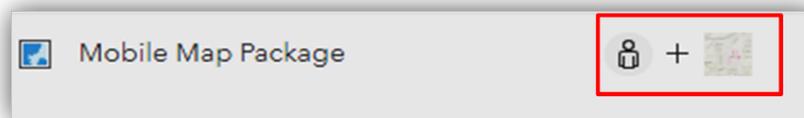
- **Login** into your ArcGIS Online Organization account (ex. Bureau of Land Management Organization).
- Click on the **Content tab** to open the My Content page.

## Mobile Map Package (.mmpk)



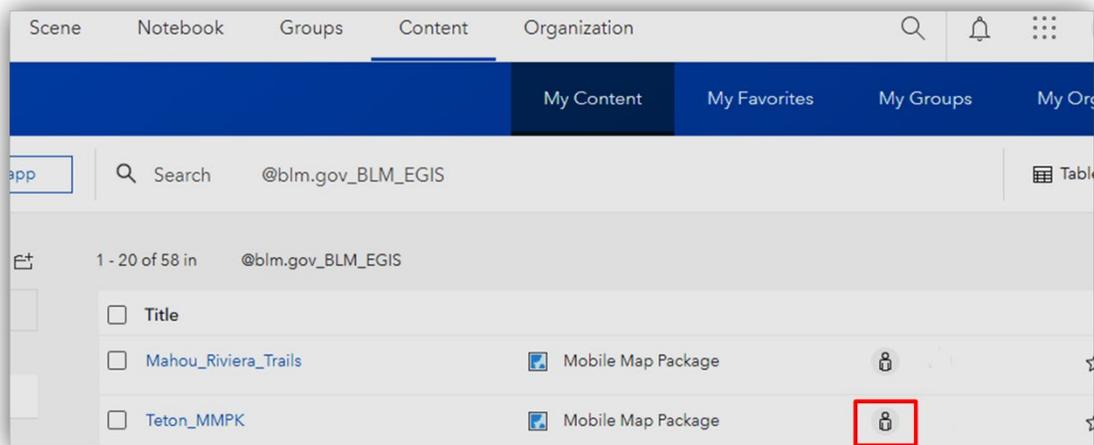
*Content Tab in ArcGIS Online*

- Find the Mobile Map Package (MMPK) that you want to work with and confirm if the MMPK has been shared with a group. You will know if the MMPK is shared with a group if the Person Icon has a + "Group Picture" next to it.



*Mobile Map Package **Shared** to a Group*

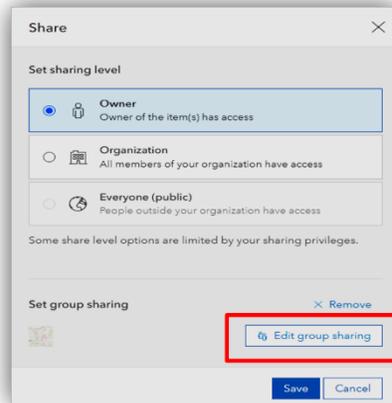
- If not shared with a group, then on the **Content** page, **click** on the person icon to the right of the **MMPK name** and **select an organization group to share with.**



*Mobile Map Package **Not Shared** with a Group*

- When the **Share** window pops up, **Tap** the **Edit group sharing button** on the bottom Right.

## Mobile Map Package (.mmpk)



*Edit Group Sharing Button*

- **Select** an organization group to share the mobile map package with and **click OK and Save**.

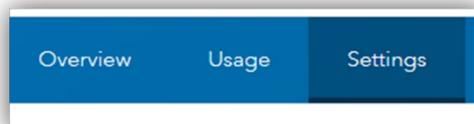


*Shared Group Icon for the Mobile Map Package*

- When you open the **S1 Mobile Mapper app**, you will see the mobile map package (.mmpk) within the Shared group.

## Mobile Map Package Settings in ArcGIS Online

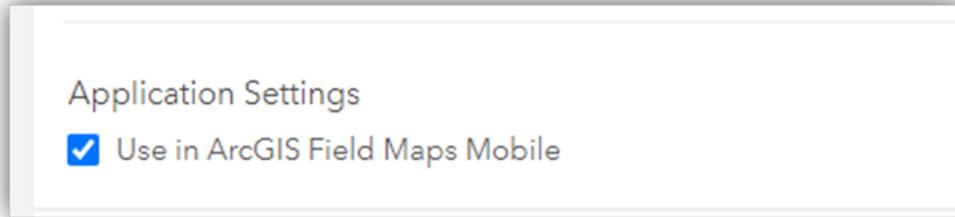
- In ArcGIS Online, click on the mobile map package title on the content page to open its **Item Detail** page.
- Select the **Settings** tab to open the mobile map package settings.



*Item Page Settings Tab*

- Confirm the **Application Settings** is checked **ON** for '**Use in ArcGIS Field Maps Mobile**' (should be on by default).

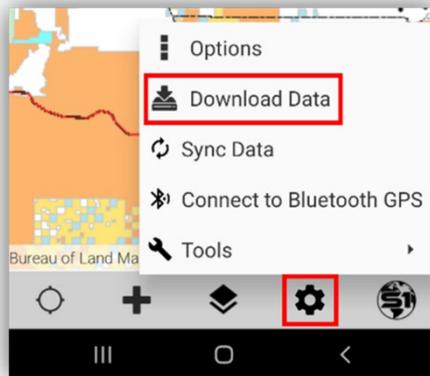
## Mobile Map Package (.mmpk)



*Item Page Settings for Mobile Use*

## Download Mobile Map Package to the S1 Mobile Mapper Directly

- Open the S1 Mobile Mapper App.
- Tap on the Options/Tools Icon on the Application toolbar and Select Download Data.



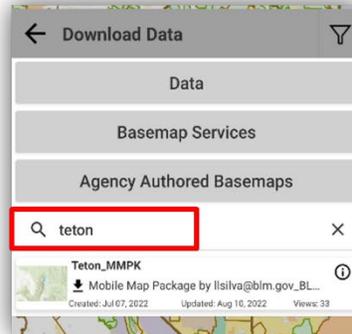
*Download Data Option from the Options/Tools Button*

- **Search Data Options:**
  1. Select the **Data** option on the **Download Data** pop-up list and select the MMPK from an ArcGIS Online (AGOL) group,  
**OR**
  2. Use the **search** AGOL content window to find the MMPK file,  
**OR**
  3. Could narrow the search down even further by also using the **Filter tool** set to the **Mmpk Filter**.

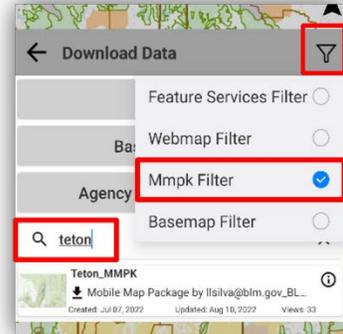
## Mobile Map Package (.mmpk)



*The Data Download Option*



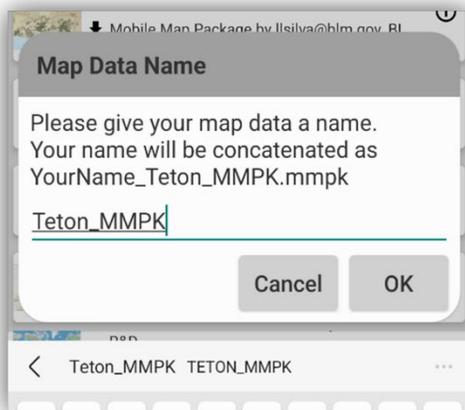
*AGOL Search Window Option*



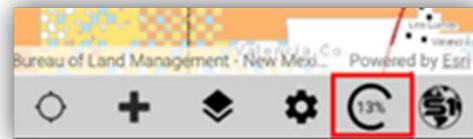
*Filter Tool and Search Window*

- Give your Map Data a Name (can have multiple downloads of the same map data), click **OK**. The **MMPK file** will start downloading.

**Note:** To Cancel the download, click on the percent download icon.



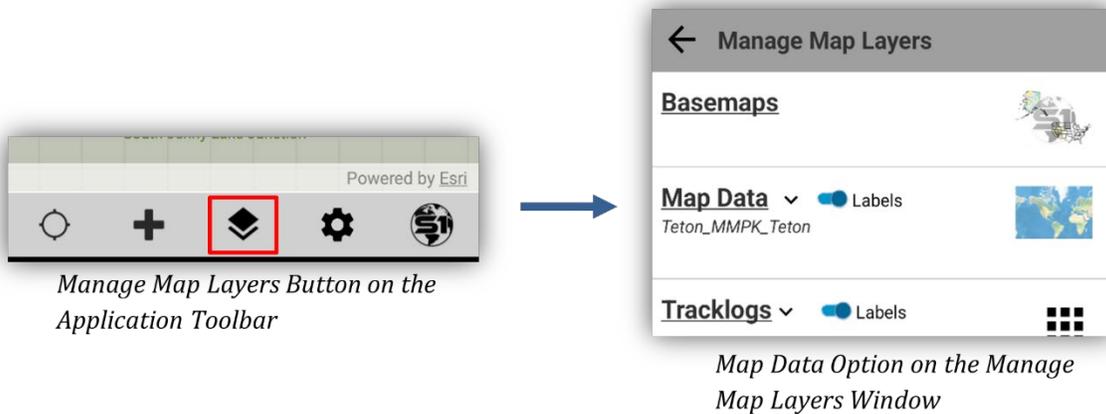
*Adding a Map Data Name*



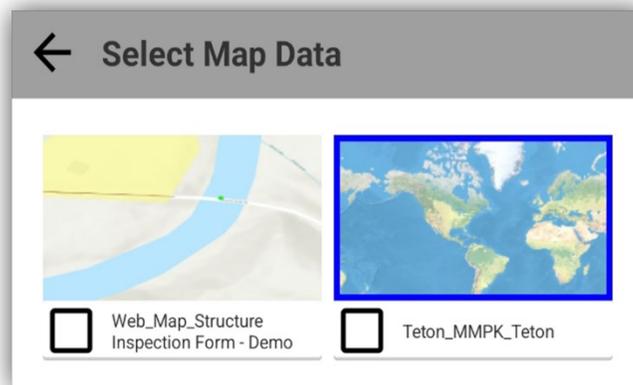
*Percent Download Icon*

- The S1 Mobile Mapper will recognize the **MMPK** download as a **Map Data download** and store the map in the **Map Data** list.
- **Tap** on the **Manage Map Layers** button on the Application toolbar and click on the **Map Data** option (picture or words).

## Mobile Map Package (.mmpk)

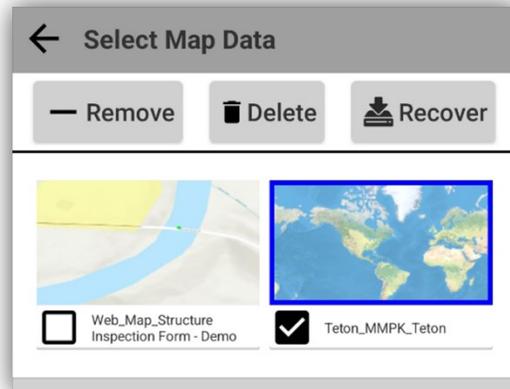


- The newly downloaded MMPK file will be saved as a Map Data option. There may be more than one Map Data option listed, but only one Map Data gdb can be active at a time in the main map view in S1.
- The active gdb "map data" will have a **blue border** around it.



- Checking the Map Data box will open other map data options, Remove, Delete or Recover, for your Map Data download. Deleting will completely delete the map data from the mobile device. Remove just removes it from the active map view to be used later if needed, and recover is only necessary for Android 11 devices if there is an SD card on the device that cannot be accessed due to Google's scoped storage lockdown. Recover copies the active edit gdb to the internal storage location that is accessible to the user to facilitate recovering the data if needed.

## Mobile Map Package (.mmpk)



*Selected Map Data Options*

### More about Mobile Map Packages in Mobile Applications:

- Mobile Map Packages (.mmpk) download as **read-only map data** with **no editable layers**. However, MMPKs will have attribute pop-ups and attribute Query capabilities in the S1 Mobile Mapper (Option→Tools→Query tool) and in Esri Field Maps.
- Mobile Map Packages (.mmpk) consume the whole map view in S1 Mobile Mapper and in Esri Field Maps. There is not an option to add a basemap under an MMPK in either mobile application.

**NOTE:** See the **Agency User Guide** on the [S1 Mobile Mapper Website](#) for more information.

## Side-loading Mobile Map Package into the S1 Mobile Mapper Application

Large Mobile Map Packages (.mmpk) can be side-loaded into the S1 Mobile Mapper **SideloadMmpk** folder on your device. There is no limitation of a Mobile Map Package file size except for the available storage space on the device. See document on [Side-Load Basemaps](#) on the [S1 Mobile Mapper website](#).

**NOTE:** Mobile Map Packages **will not** download as a basemap option, even if you try to side-load it into the basemap folder.



[S1 Mobile Mapper website](#)