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### Collector for ArcGIS

Collector is a mobile application for use on smartphones or tablets to aid in the collection and updating of information while in the field. The application can be used while connected or disconnected to a cellular or Wi-Fi network. The links provided on this page are worth checking out and keeping on hand.

This document highlights a basic workflow for using Collector during incident response.

The sections included are as follows:

- Create or select feature service
- Set up Groups, Users, and Web Maps
- On the device: Install , Device Setup, Using Collector , and Testing Web Map



Resources for Using Collector:

- Collector for ArcGIS Product Information: <http://www.esri.com/products/collector-for-arcgis>
- Collector for ArcGIS Support: <http://doc.arcgis.com/en/collector/>
- System Requirements: <http://doc.arcgis.com/en/collector/#systemRequirements>

Collector Related Training:

- Offline Data Collection:  
<http://training.esri.com/gateway/index.cfm?fa=catalog.webCourseDetail&CourseID=2786>
- Simplify Workflows:  
<http://training.esri.com/gateway/index.cfm?fa=catalog.webCourseDetail&courseid=2891>

Blog Posts:

- Related Tables: <http://blogs.esri.com/esri/arcgis/2015/02/18/related-tables-exploring-new-ways-to-use-collector-for-arcgis/>
- Side load basemaps: <http://blogs.esri.com/esri/arcgis/2014/03/23/using-your-own-basemap-layers-with-collector-for-arcgis/>

#### Important questions to ask before starting:

1. What kind of data is being collected? – Damage assessment, incident features, SAR, etc.
2. What specific information is needed? – Fields, attributes, domains
3. Will attachments be gathered? – How many per point, per day, what resolution
4. Will the devices need to be used offline? How often will they sync their data?
5. Is it important to track the location of the collectors themselves?
6. Field users: are they experienced, techy, able to troubleshoot, what level of introduction is needed?
7. What devices will be used? Personal, provided by agency or by incident
8. Can a basemap be created and side-loaded? (see blog above for how to do this)

The answers to the above questions are up to you and the incident managers. These will influence how you set up your Collector data layers, map, and how you process the incoming data and attachments.

Field staff will need to install the application from the [Apple App Store](#), [Google Play](#) or [Windows Store](#).

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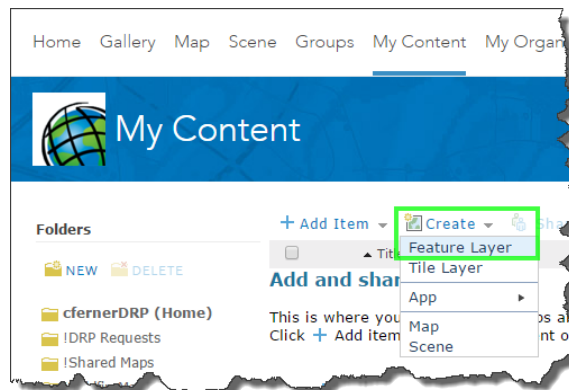
## Create or Select feature service

The very first task is to determine what data layer or feature service will be used during the current incident. Some important things to consider are what fields need to be visible and editable by the field users, can fields have domains to simplify the user experience and improve data quality, are there other fields that need to be included in the dataset that do not need to be visible during field data collection, and will the data be used offline. For this document we will work through this process using the Damage Assessment while trying to address more complex issues that may arise.

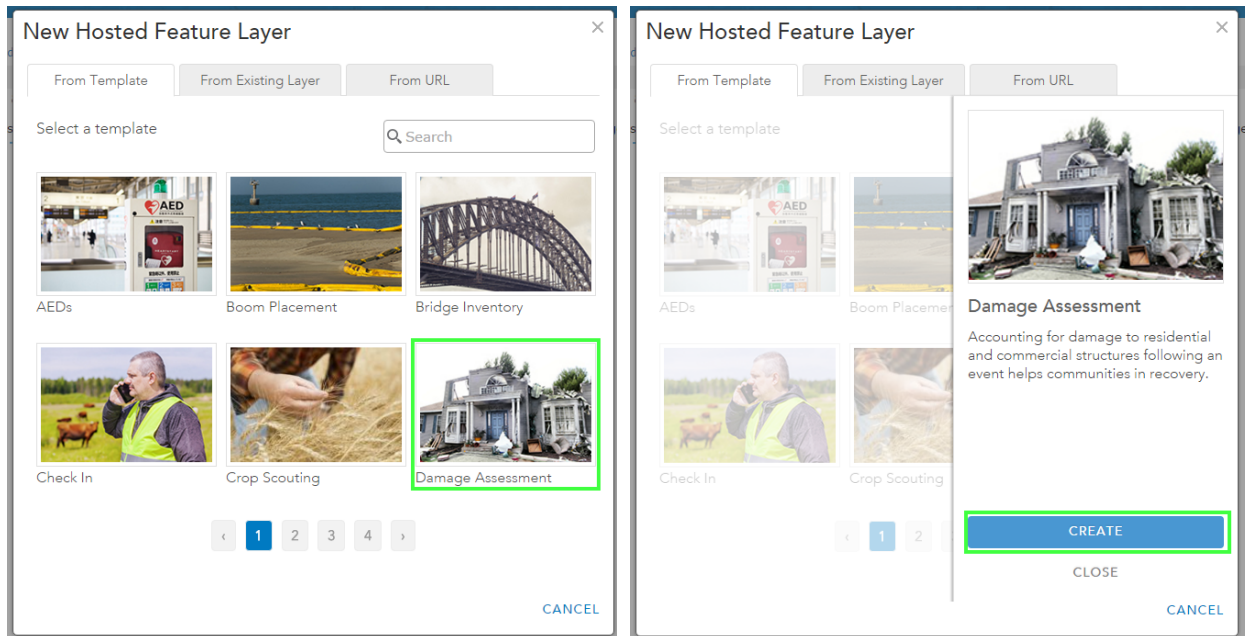
If setting up custom data before publishing into ArcGIS Online follow this tutorial:

<http://doc.arcgis.com/en/collector/android/create-maps/prepare-data-desktop.htm>

1. Sign into ArcGIS Online and navigate to the 'My Content' tab. Then click on Create and select the option for Feature Layer.

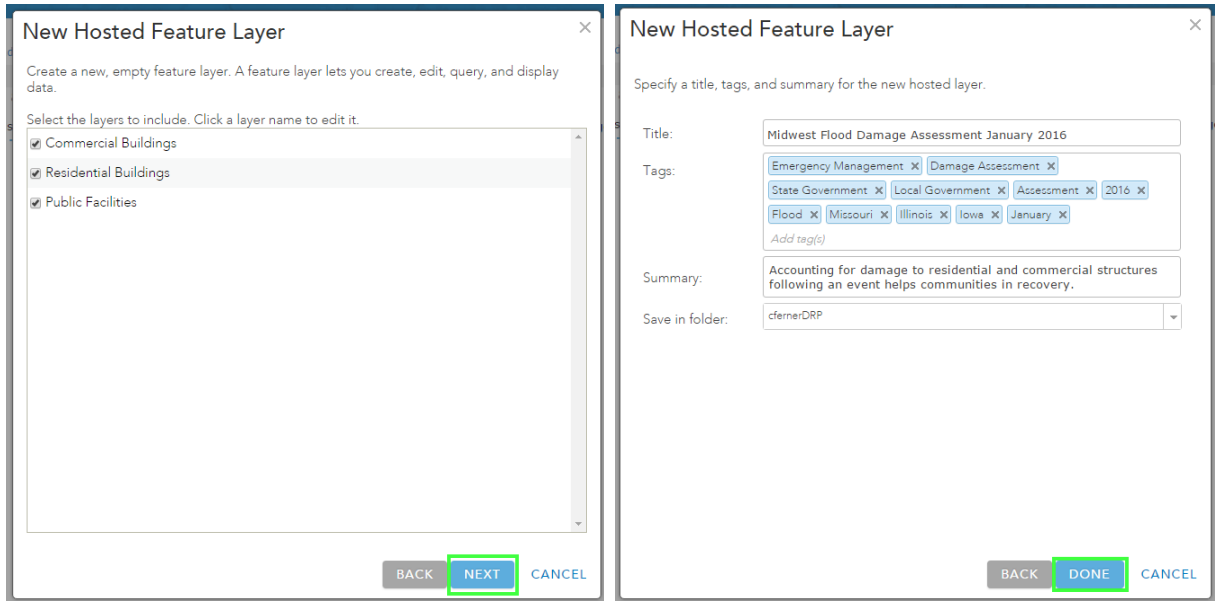


2. For this example we will use the Damage Assessment template. Click on the Damage Assessment icon and then select **Create**. *Note: Click through the pages to explore the other available templates. Empty layers can also be created from an existing layer inside of your organization or based on a URL.*



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3. Follow the steps through the creation wizard. If you don't need all three layers, uncheck those not needed. Then zoom to the area of interest to help the users of the layer locate the incident more easily. The next window is where you give your new layer a name, tags to make searching and filing of content easier, and a summary. These can all be updated as the incident develops but it's best to enter as much upon creation as possible. Click **Done** to finish the wizard and the new layer will be created in your 'My Content'.



4. The new feature layer will open in the Item details view. For more information about options on that page visit: <https://doc.arcgis.com/en/arcgis-online/share-maps/item-details.htm> Click Edit next to each item to update the title, summary, thumbnail, description to provide more background to others.
5. On the **Overview** tab of the Item Details you can enable or disable attachments. Do this with the awareness that the more attachments collected, the more potential issues the user will experience when trying to sync in low bandwidth environments. There is a new setting on the iOS version of Collector for ArcGIS to allow users to control the resolution of attachments which will help reduce issues.

### Layers

<p><b>Event Point</b></p> <p>  Open In ▼                      Export To ▼                      Time Settings                      Disable Attachments                      Service URL                 </p>
<p><b>Event Line</b></p> <p>  Open In ▼                      Export To ▼                      Time Settings                      Enable Attachments                      Service URL                 </p>
<p><b>Event Polygon</b></p> <p>  Open In ▼                      Export To ▼                      Time Settings                      Enable Attachments                      Service URL                 </p>

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- 6. **Item Details** is also how you can change the settings for some of the editing options. **Sync**, shown at the bottom, is enabled which will allow field users to take a map with this layer offline for work in remote areas.

Feature Layer (Hosted) Settings

Editing

- Enable editing
- Keep track of who created and last updated features.

- Who can edit features?  
Share the layer to specific groups of people, the organization or publicly via the Share button on the Overview tab.
- What kind of editing is allowed?
  - Add, update, and delete features
  - Only update feature attributes
  - Only add new features
- What features can editors see?
  - Editors can see all features
  - Editors can only see their own features (requires tracking)
- What features can editors edit?
  - Editors can edit all features
  - Editors can only edit their own features (requires tracking)
- What access do anonymous editors (not signed in) have?
  - The same as signed in editors
  - Only add new features, if allowed above (requires tracking)
- Who can manage edits to this layer besides you and an administrator?  
Share the layer to groups that allow all members to update group content. These groups are created by administrators. [More info.](#)

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Sync

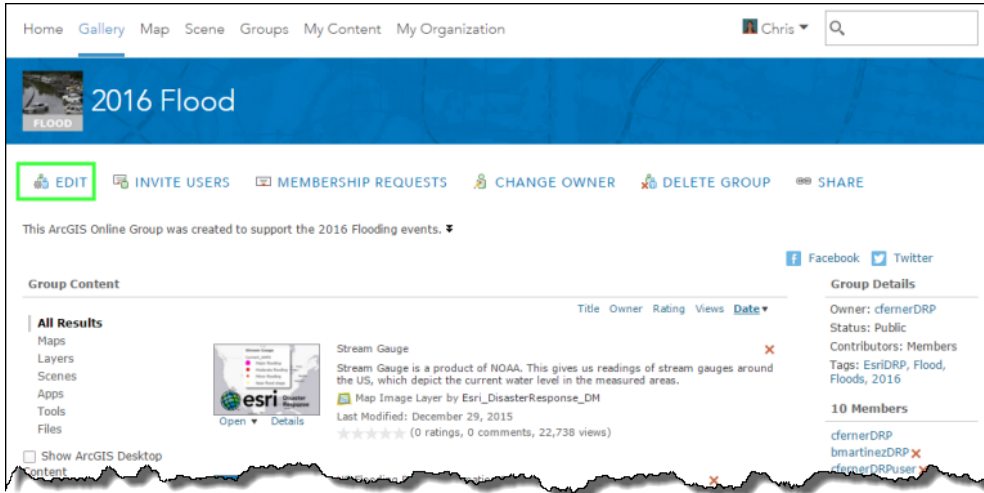
- Enable Sync (disconnected editing with synchronization).

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## Setup: Create a Group for the Incident

Create a group with an appropriate and informative thumbnail relating to the incident. Keep the group name short to help it be easier to view in Collector. For more information on creating groups visit:

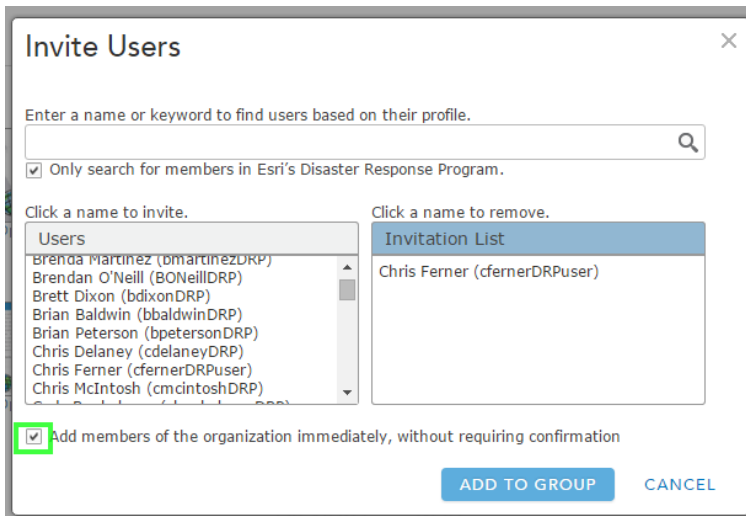
<https://doc.arcgis.com/en/arcgis-online/share-maps/create-groups.htm>



## Setup: Invite users to incident Group

Invite all of the field users into the new group. It is recommended to not add those users to too many groups to reduce the number of maps they see when they open Collector. Search for their name or scroll until you see it and click on it in the left list to display it on the right. To force the user into the group check the box at the bottom of the window. You can also search for users from outside the organization by unchecking the box under the search field but the user has to have made their profile public in order for you to find them.

For more information on owning groups and inviting users into groups visit: <https://doc.arcgis.com/en/arcgis-online/share-maps/own-groups.htm>

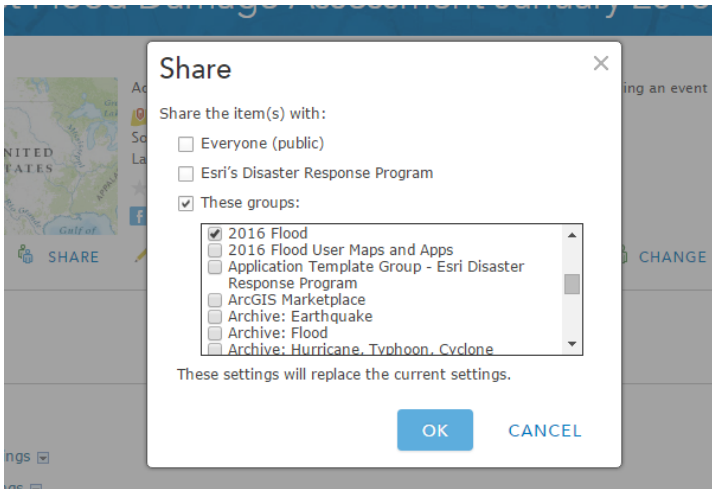


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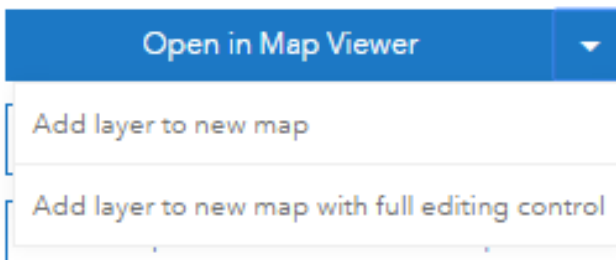
## Setup: Create a Collector Web Map

When building your web map – you'll need to consider what layers are appropriate for the data collection goal. The one mandatory layer will be for the thing you're collecting such as damage assessment, incident points, feature updates, etc. Optional layers can include tracking layer/service and reference layers. All layers in the web map will need to be editable in order for the map to be used in Collector. If not all layers should be edited, editing can be disabled for those layers.

1. From the item details of the layer created (if necessary go to your 'My Content' and open) or identified as the primary data collection layer, click **Share** and select the incident group in which the field data collectors are member.



2. Then click **Open in Map Viewer** and select **Add layer to new map**. This adds all of the layer to the map.



3. Save the map. Select a name that is short and clear to aid the users in selecting the correct map to open and edit. Also select tags and enter a summary. These can be changed later in the item details but it is much easier to just enter as much as possible the first time.
4. Rename the layers by clicking the ... symbol and then select Rename. Remove the layer name at the start. Longer layer names are more difficult to view on mobile devices.
5. Pop-Up: Configure the fields visibility and select which fields can be edited. Hiding a field removed the field data collectors access to enter data into that field when using this web map.
6. Refresh interval: on the layer dropdown set this based on the anticipated frequency of incoming data
7. Configure the symbology/style if not already done.
8. Bookmarks: create these to drive the users to specific locations
9. Click Share and share the map into the incident group where the layer was just shared and where the field data collectors are members.

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## On the device: Install Collector

The first step is to install the application based on the type of smart phone or tablet being used. Install the application from the [Apple App Store](#), [Google Play](#) or [Windows Store](#). **Note:** most devices require a login for installation of new apps. This can be an issue when working with resources assigned during an incident that you do not have the liberty of working with before the incident.

## On the device: Device Setup

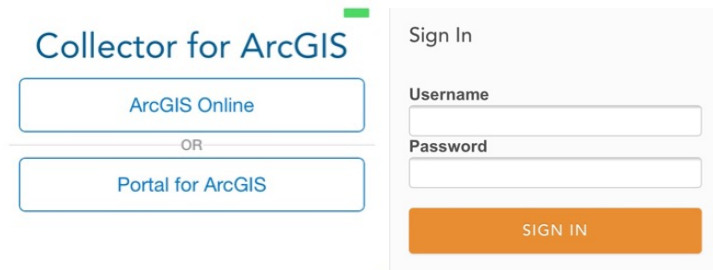
There are some settings on the device that will improve success when using Collector in the field. Most of these suggestions are ways to save battery life and reduce how much the device is connecting to a network.


- Enable location settings on your Camera and Collector apps.
- Disable location on all apps not being used during data collection.
- Disable notification for non-essential apps.
- Close all apps that are open.

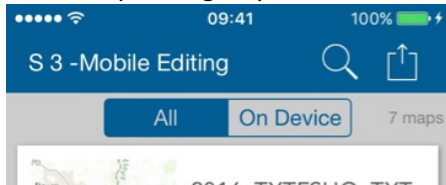
## On the device: Setting Up Collector

The interface differs slightly between iOS, Android, and Windows. The images below are of an iOS device. For more detailed images and instruction please visit the Collector help: <http://doc.arcgis.com/en/collector/>

1. Sign into the App – Use the ArcGIS Online option unless told to use Portal. If you forgot your username or password, you will need to go to [arcgis.com](http://arcgis.com) in a browser to reset it.



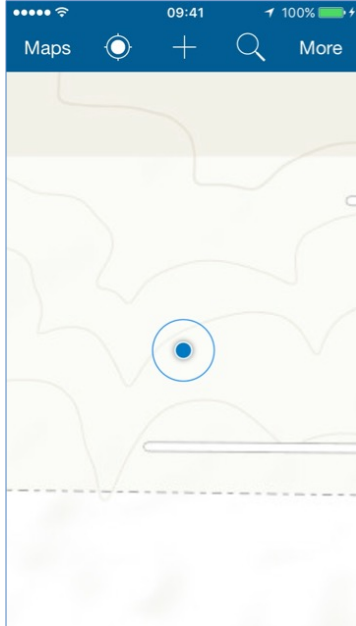
2. Open the menu  to access and adjust settings. The critical ones for incident response are attachment size (only on iOS); push/pull attachments; single or continuous collection; and WiFi vs Cellular. Decide what will work best on your incident and instruct field staff on what settings to alter.
3. Initially you will see all maps available for editing. If there are too many, click the word ALL and select one specific group to narrow down the options.




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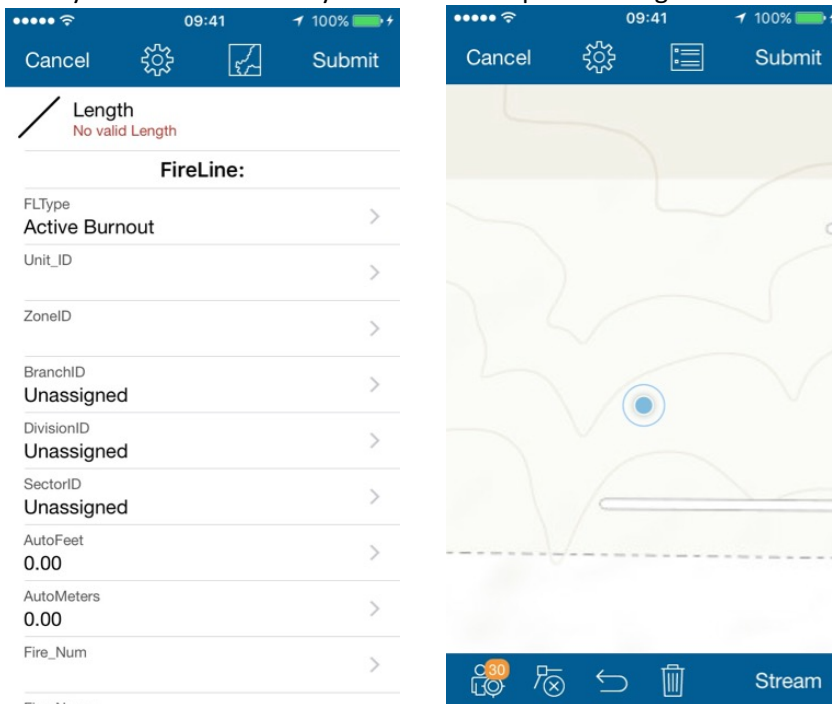
## On the device: Testing the Web Map

Click the map image or title to open. For more information about the map you can click the I icon.



### Creating Data

1. Click the  and select the feature type to add.
2. When adding lines, fill out the information, then switch to the map, click Stream to begin your line. Note you can also manually add or remove points along the line.



3. Click  to finish data collection on that single feature.