Enhancing Web Map Performance in ArcGIS Online

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Questions to ask before creating a web map

- Who will be using this web map?
- What functionality do the users need?
- What information is important?
- How will the map or application be accessed?
- What type of experience am I trying to convey?
Case Study: Mapperville, Michigan

- The citizens of Mapperville are in need of current land parcel information with reference data for neighborhoods and roads.
- The community needs to know: parcel ID, parcel owner & acreage.
- The map needs to be simple, clear and easy for anyone to use.
- Available through a browser, iOS or Android device.
What information is important?

- Maximum number of records returned by the server
- Number of feature layers in the service
- Number of attribute fields

As the amount of data goes up, the performance of the web map goes down.
Who will be using this web map?

- Set a visible scale range: layers set to automatically display only within an appropriate range of map scales
  - Minimum Scale: the smallest desired map scale (i.e. 1:50,000)
  - Maximum Scale: the largest desired map scale (i.e. 1:2,000)

- Use Bookmarks
- Fill in useful Metadata

**ArcMap**

**ArcGIS Online**
How will the map or application be accessed?

- **Feature Service**
  - If possible, disable editing on your services
  - Remove all filters on your data

- **File Layer**
  - Less than 1000 features
  - Not updated frequently or by multiple people
What functionality do the users need?

- Complexity of feature geometry: consider using the Simplify Line or Simplify Polygon tool
- Edit settings: should the layer be read-only?
What functionality do the users need?

- Tiles hosted on ArcGIS Online support fast visualization of large datasets using pre-drawn map images, or tiles.
- Tiled map services run quickly on the web, but it takes an investment of strategic planning and storage space to build a quality tile cache.
- Tile layers are most appropriate for vector or raster data that is read-only and intended for use as a basemap.

Methods:

1. Publish tiles from an ArcMap document.
2. Publish a tile package and upload to ArcGIS Online.
3. Publish a feature layer in ArcGIS Online.
What type of experience am I trying to convey?

- User-friendly
- Fast
- Informative
- Data centric
- Accessible
- Focused
- Functional
- Relevant
Performance Improvements

Data source:

- Reduced number of feature layers
- Refined the feature attribute information
- Minimized the number of records returned by the server
- Cached tiles
- Simplified the feature geometry

**Measurement tool = Service URL**

http://services.arcgis.com/Wi7Y1m92PbjtJs5n/arcgis/rest/services/Mapperville_FS1/FeatureServer/3

Web map configuration:

- Established visible scale ranges
- Created Bookmarks
- Configured pop-ups
- Add labels

**Measurement tool = User experience**
Thank you…

- Please fill out the session survey:

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