



# Enhancing Web Map Performance in ArcGIS Online

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Demo Theater

# 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?



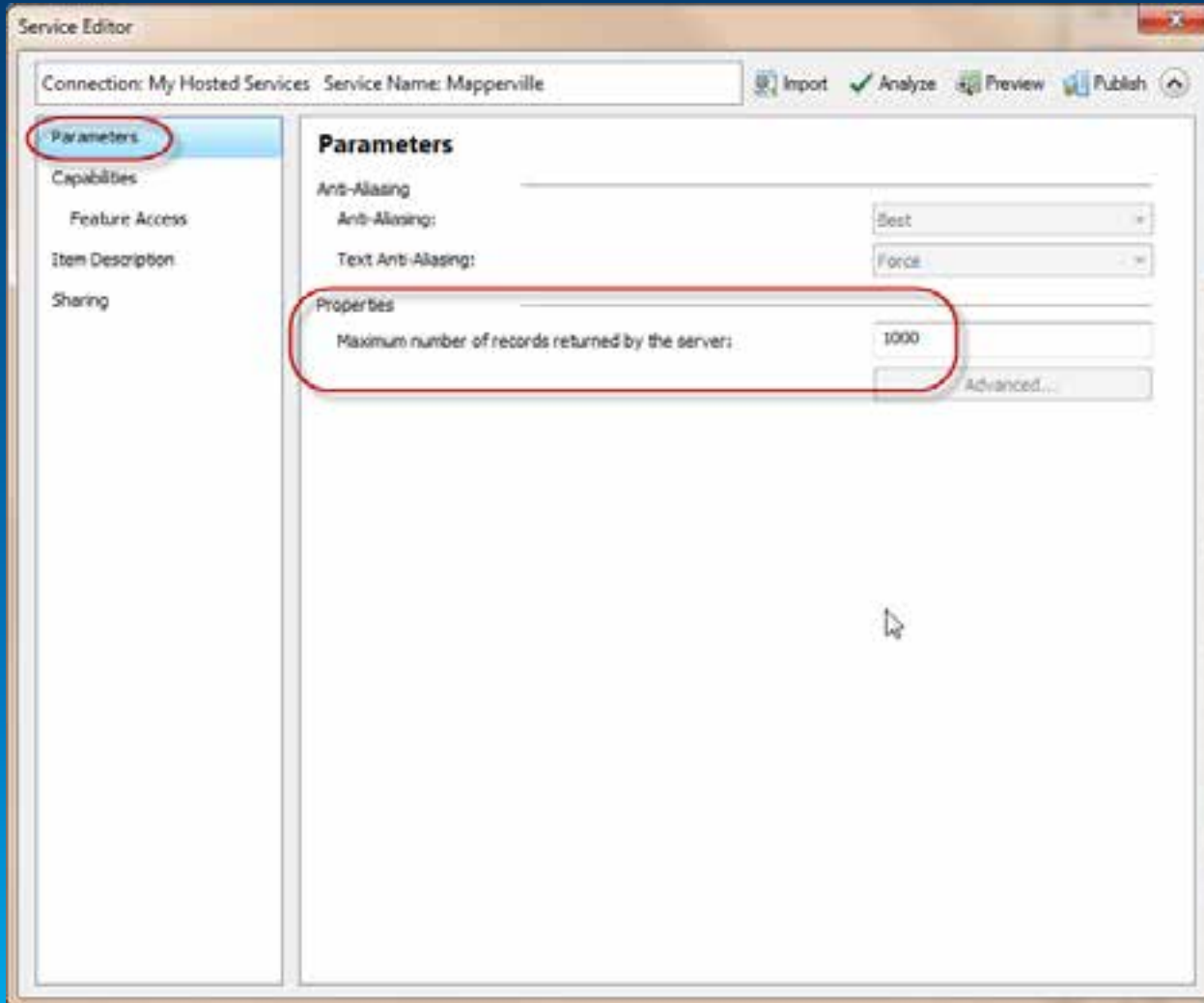
## Case Study: Mapperville, Michigan

- 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

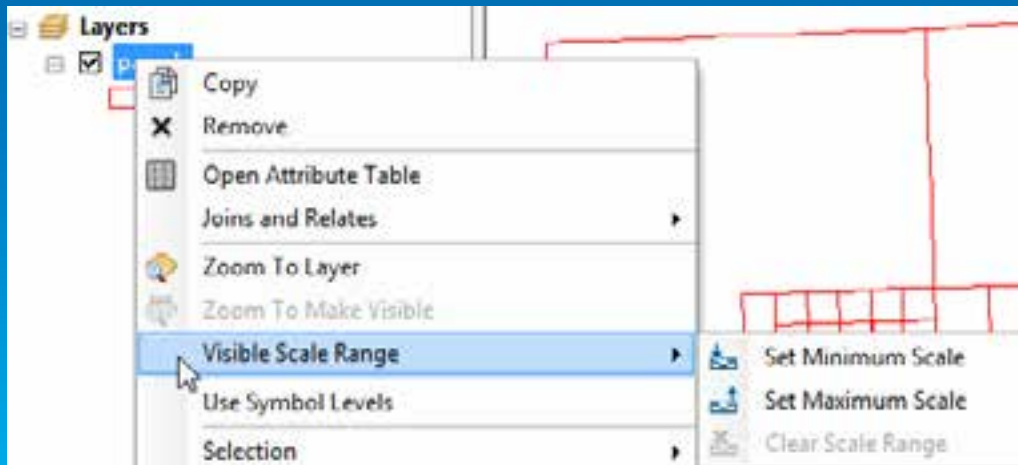
*As the amount of data goes up, the performance of the web map goes down.*



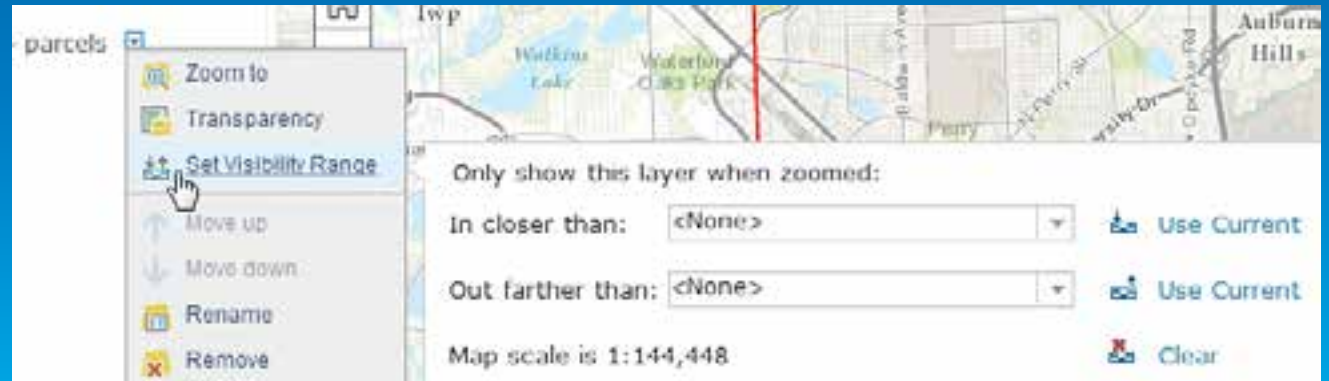
# Who will be using this web map?

- **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







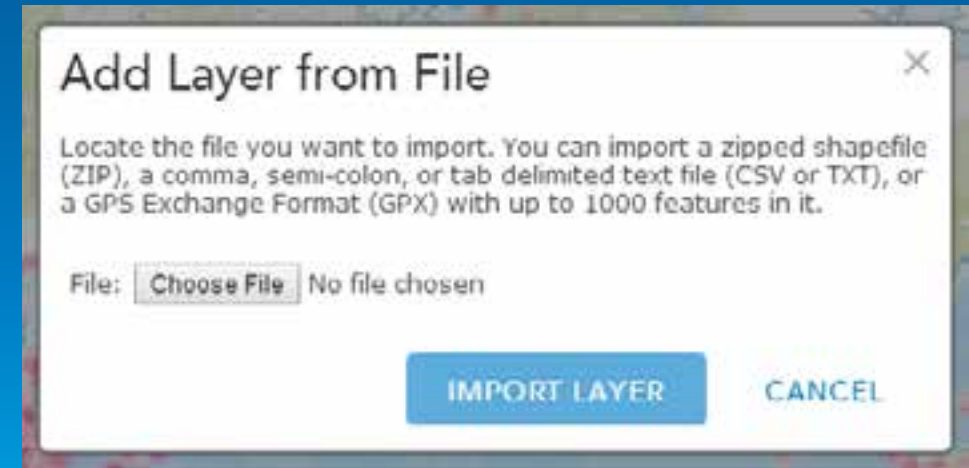
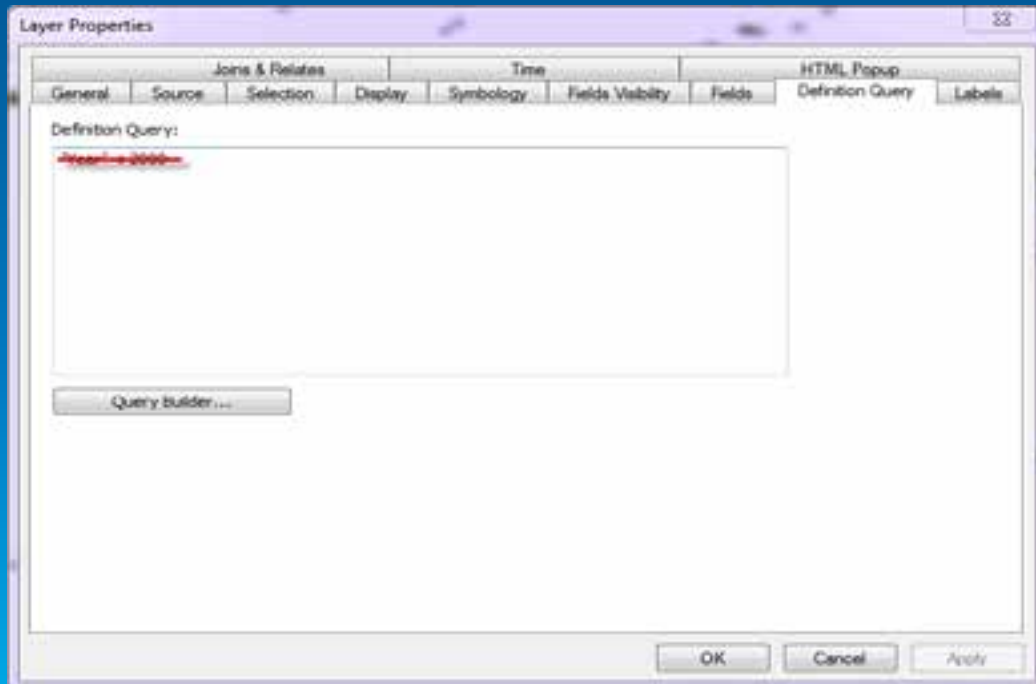
# How will the map or application be accessed?

- **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:

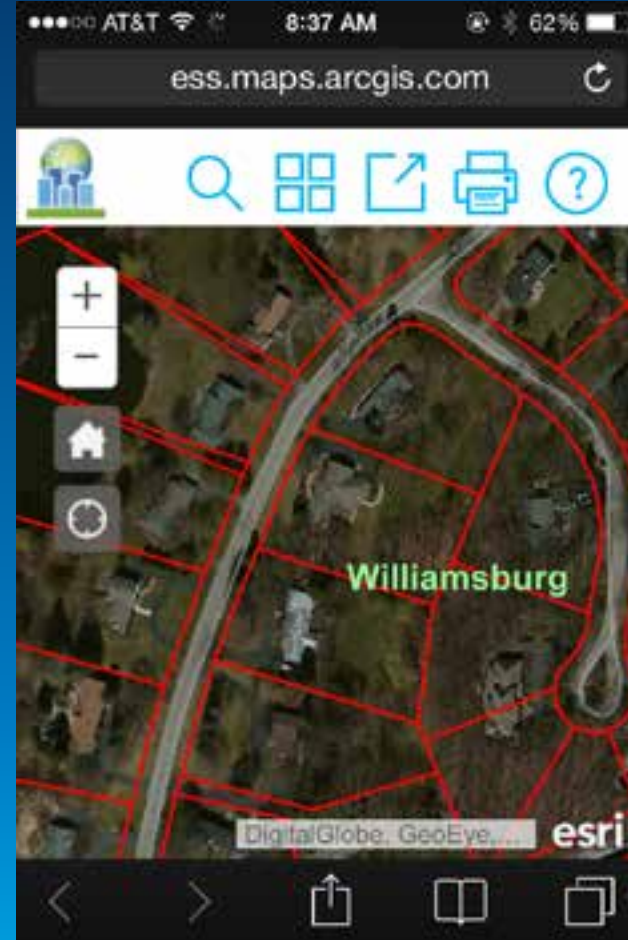
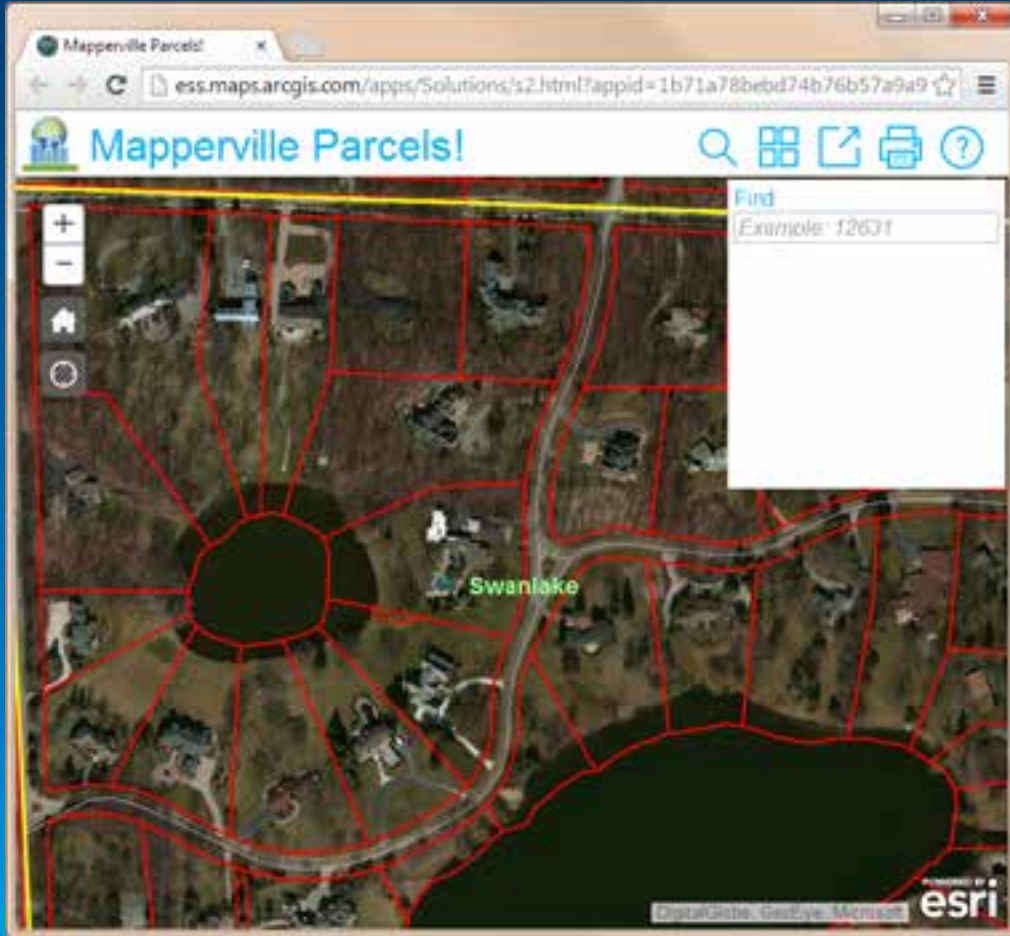
1. Publish tiles from an ArcMap document
2. Publish a tile package and upload to ArcGIS Online
3. Publish a feature layer in ArcGIS Online







# 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](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:**

**Offering ID: 1887**

**Session ID: 1271**

**Online – [www.esri.com/ucsessionsurveys](http://www.esri.com/ucsessionsurveys)**

**Paper – pick up and put in drop box**



Understanding our world.