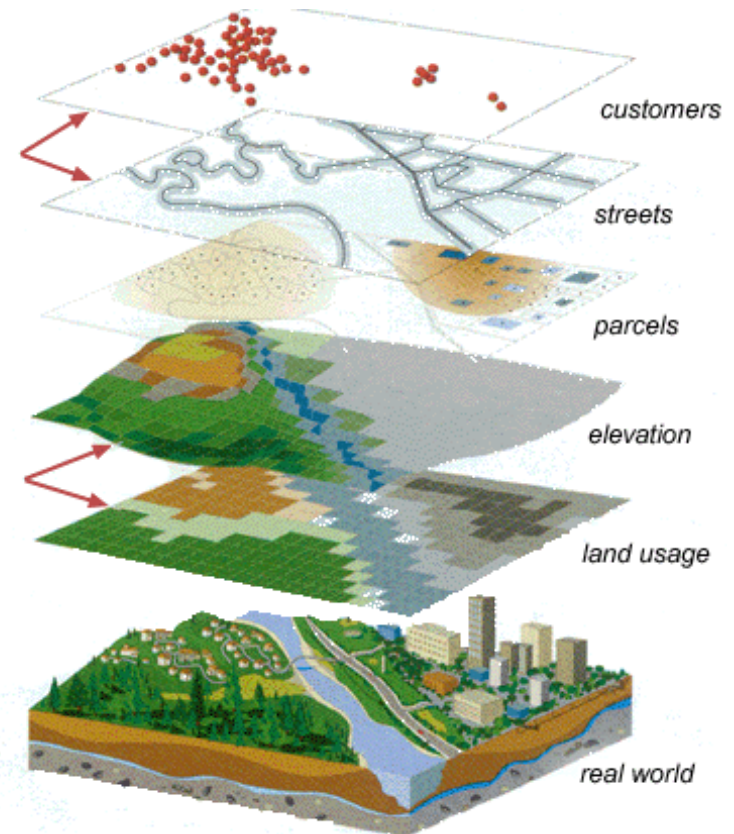


ArcGIS Online - Web Mapping

What is GIS?

- A geographic information system (**GIS**) integrates hardware, software, and data for capturing, managing, analyzing, and displaying all forms of geographically referenced information.
- A **GIS** helps you answer questions and solve problems
- ArcGIS Online is an easy to use GIS that we will use today.



ArcGIS Online: Appearance

1 - Details

2 - Map Layers



3 - Zoom in/out

4 - Reference Map Insert

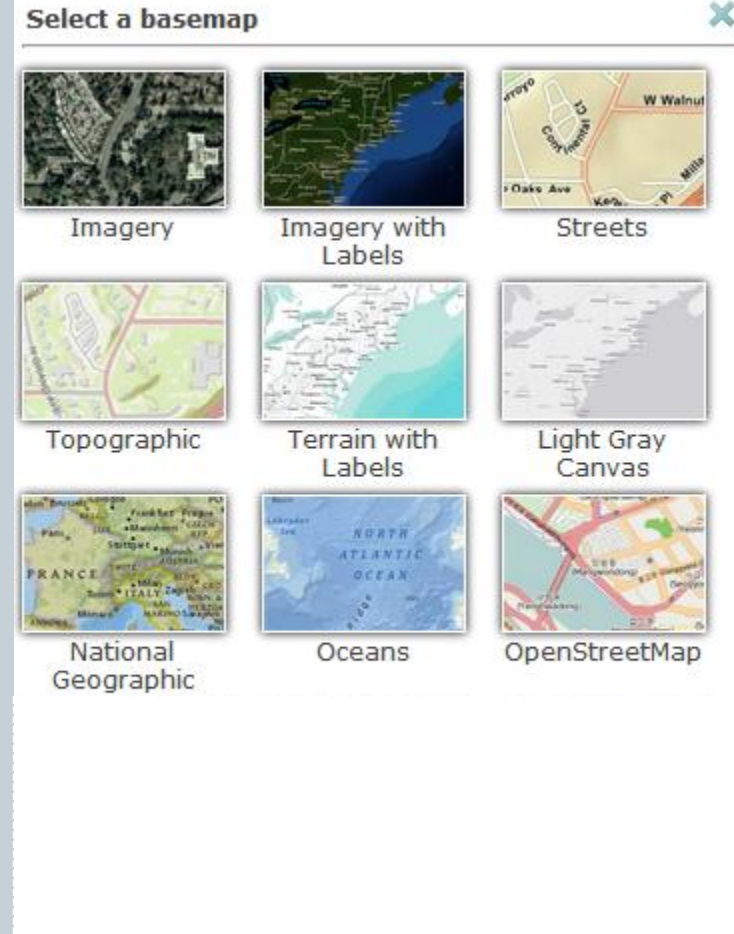
5 - Scale

The screenshot displays the ArcGIS Online interface with a map of the United States. The interface includes a top navigation bar with 'NEW MAP' and 'SIGN IN' buttons, and a search bar. On the left, there is a sidebar with a 'Make your own map' section containing four numbered steps: 1. Choose an area, 2. Decide what to show, 3. Add more to your map, and 4. Save and share your map. The map itself shows state boundaries and major cities. A red dashed line with arrows points from the '1 - Details' text to the 'Details' button in the top left. Another red dashed line with arrows points from the '2 - Map Layers' text to the 'Basemap' button. A red dashed line with arrows points from the '3 - Zoom in/out' text to the zoom controls on the left side of the map. A red dashed line with arrows points from the '4 - Reference Map Insert' text to a small inset map in the top right corner. A red dashed line with arrows points from the '5 - Scale' text to a scale bar at the bottom left. The Esri logo is visible in the bottom right corner.

ArcGIS Online Basemaps



- **Appropriate applications for different basemaps:**
 - **Reference**
 - ✦ *Business locations*
 - ✦ *Mountain peaks (for hikers)*
 - ✦ *Nearby landmarks for tourism*
 - **Thematic**
 - ✦ *Obesity rates by state*
 - ✦ *Ecological footprints by country*
 - ✦ *Housing values by neighborhood*



Overview

EXERCISE 1: See Your World

Follow instructions on your handout



- 1. Open ArcGIS Online:** Go to <http://www.arcgis.com>, and click "Map"
- 2. New Map:** Grab, hold, and move the map.
- 3. Zooming in/out:** See numbers in the Scale Bar change.
- 4. Finding Places:** Use the **Search** box to find your city.
- 5. Changing Basemaps:** Look at each of the different basemaps

Overview

EXERCISE 2: Measure and Mark Your World

Follow instructions on your handout



- 1. Measuring Distances:** The Measure tool has three options: Area, Length and Location. Zoom out to the world. Click "**Measure**" and choose "**Ruler**"
- 2. Measuring Features:** West coast of USA to England
- 3. Adding Labels:** "**Modify Map**" and "**Add Map Notes**"
- 4. Changing Symbols:** Zoom to your city and Select **Imagery with Labels** Basemap.
- 5. Measuring Areas:** Zoom back home and use the "**Add Features**" palette to add an "**Area**" for the school grounds.

Overview

EXERCISE 3: ArcGIS Online GALLERY

<http://www.arcgis.com/home/gallery.html#c=esri&t=maps&o=modified>

Follow instructions on your handout

The screenshot displays the ArcGIS Online Gallery interface. At the top, there is a navigation bar with links for ArcGIS, FEATURES, PLANS, GALLERY, MAP, and HELP. A 'Sign In' button and a search box are also present. Below the navigation bar is a blue header with the word 'Gallery'. The main content area is titled 'Esri Featured Content' and includes a 'Sort By:' dropdown menu set to 'Most Recent' and a view toggle button. On the left side, there is a sidebar with a 'Maps' section containing a list of categories: Show, All, Imagery, Basemaps, People, Earth, and Life. Below this is an 'Area' section with 'All', 'United States', and 'World'. At the bottom of the sidebar is an 'Apps' section. The main content area displays a grid of featured content items. The first row includes 'US Wildfire Activity Web Map' (with an 'esri' logo and 'Disaster Response' tag), 'Hurricane and Cyclone Web Map' (with an 'esri' logo and 'Disaster Response' tag), and 'Hennepin County Transportation Map' (with a 'Webmap' tag). The second row includes a map with a yellow and purple overlay, a 'BUY FRESH BUY LOCAL Cape Cod' promotional graphic, and a map titled 'Who in America Watches the World Cup?'.

Details | Basemap | Share | Print | Measure | Layers | Find address or place

Legend

Initial Attack locations (www.wildlandfire.com)

- WLF

US Wildfire Activity (USGS, daily ~1000h PST)

- Active fire report
- Active perimeter

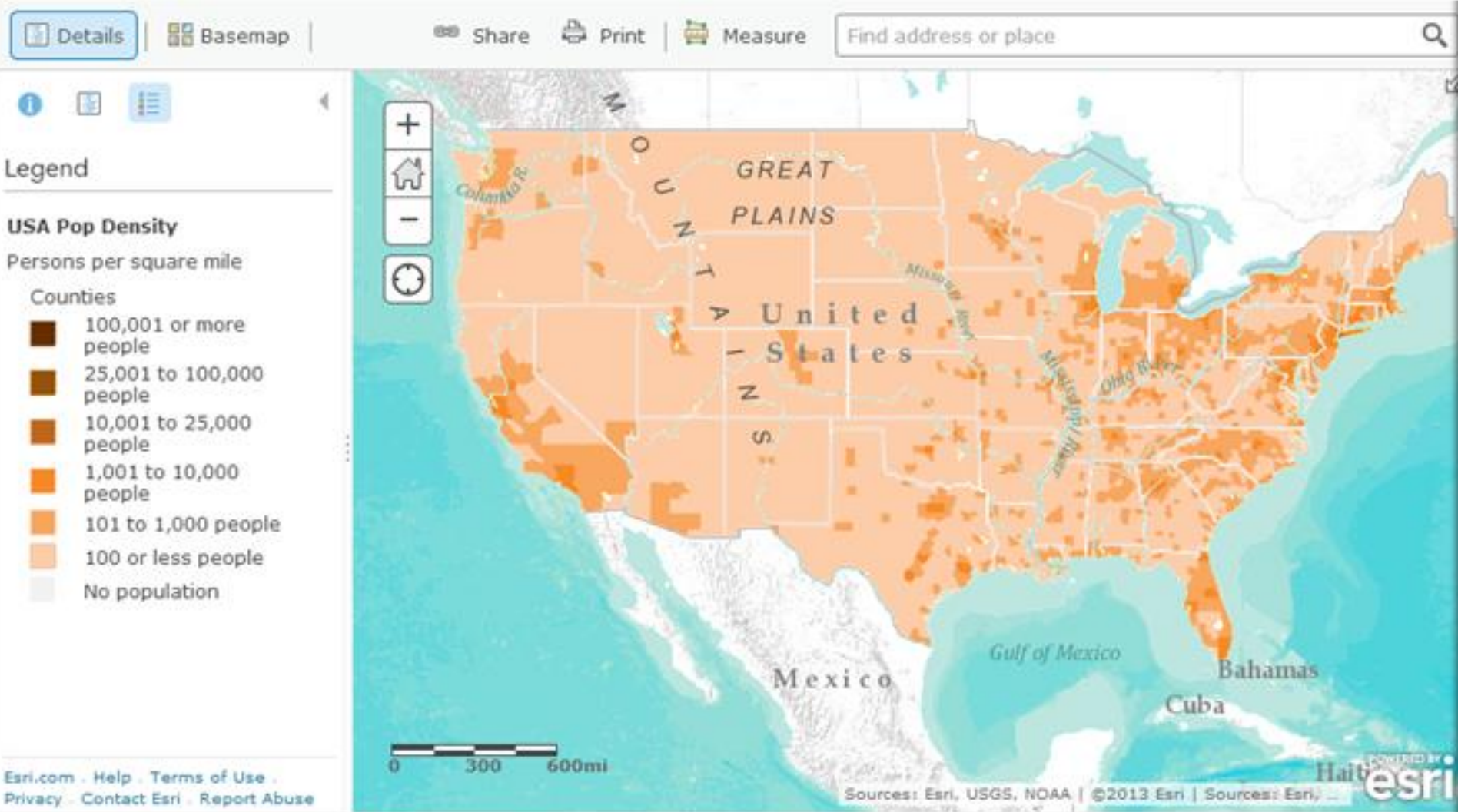
Fire-related Weather Warninas (NOAA)

Esri.com . Help . Terms of Use . Privacy . Contact Esri . Report Abuse

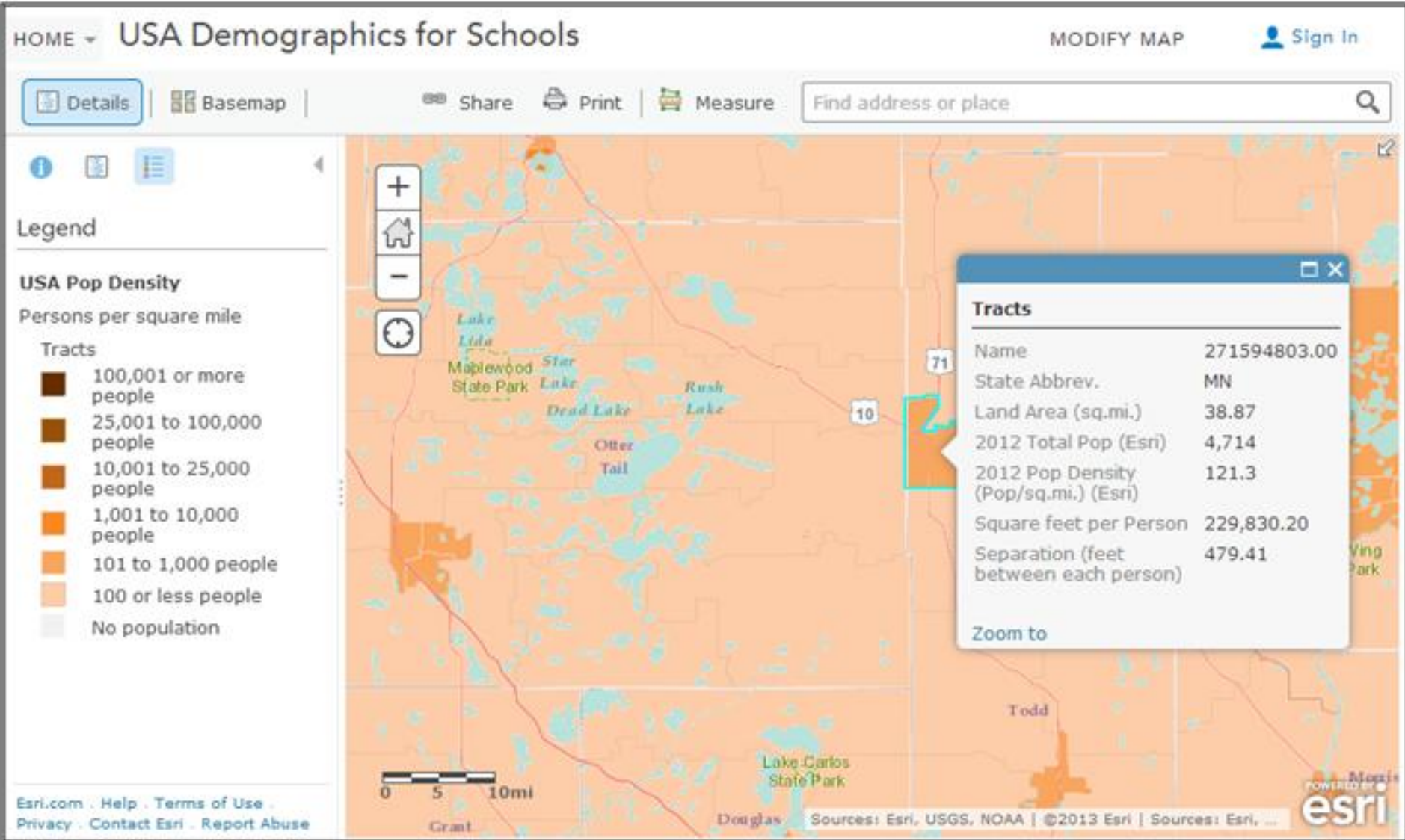


Lesson 2-Web Mapping Application: USA Demographics for Schools

Demonstration of Demographics for Schools



Zoom In - USA Pop Density changes to Tracts



Transparent Overlay on top of Other Data

HOME ▾ USA Demographics for Schools MODIFY MAP [Sign In](#)

[Details](#) | [Basemap](#) | [Share](#) | [Print](#) | [Measure](#)

Contents

- USA Pop Density
- USA Pop Change (%/yr) 2010-2012
- USA Pop Aged 0-1 Yrs
- USA Pop Aged 65+ Yrs
- USA Median Age
- USA Diversity Index
- USA Median Home Value
- USA Median Household Income
- USA Social Vulnerability Index
- USA Tapestry Segmentation
- Streets

USA Pop Density Transparency

Zoom to
[Transparency](#)
Show Item Details

Opaque Transparent
0% 50% 100%

The map displays population density data for the United States, with a focus on the central and northern regions. A transparency slider is overlaid on the map, allowing the user to adjust the opacity of the population density data. The slider is currently set to approximately 75% transparency, showing the underlying map features (roads, cities, and state boundaries) through the data overlay. The map includes labels for major cities like Minneapolis, St. Paul, and Chicago, and states like Minnesota, Wisconsin, and Iowa. A scale bar at the bottom left indicates distances up to 100 miles. The Esri logo and copyright information are visible at the bottom right.

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Identifying Race & Ethnicity in Census Tracts

Example - Census Tract in St. Paul



HOME ▾ USA Demographics for Schools MODIFY MAP [Sign In](#)

Details | Basemap | Share | Print | Measure | Find address or place

Contents

- USA Diversity Index
 - Diversity Index
 - Block Groups
 - Tracts
 - 82 to 100 (More Diverse)
 - 56 to 81 (US Index: 61)
 - 30 to 55
 - 4 to 29
 - 1 to 3 (Less Diverse)
 - No population
 - Counties
 - States
 - USA Median Home Value
 - USA Median Household Income
 - USA Social Vulnerability Index

Map Data:

- 2012 Asian (non-Hispanic): 0.282375
- 2012 American Indian (non-Hispanic): 0.024861
- 2012 Black (non-Hispanic): 0.253061
- 2012 White (non-Hispanic): 0.236735
- 2012 Hispanic: 0.143599
- 2012 Multiple Races (non-Hispanic): 0.056401

Popup Window (1 of 2):

Name	271230315.00
State Abbreviation	MN
2012 Diversity Index (Esri)	82.5
Race & Ethnicity	
<i>(Hover mouse for detail)</i>	

Produce Custom Maps using Paint & PowerPoint

Legend

USA Pop Density
Persons per square mile

Counties

- 100,001 or more people
- 25,001 to 100,000 people
- 10,001 to 25,000 people
- 1,001 to 10,000 people
- 101 to 1,000 people
- 100 or less people
- No population



Counties

Name	Otter Tail County
State Abbrev	MN
Land Area (sq.mi)	1,972.07
2012 Total Pop (Esri)	57,883
2012 Pop Density (Pop/sq.mi.) (Esri)	29.4
Square feet per Person	948,244.90
Separation (feet between each person)	973.78