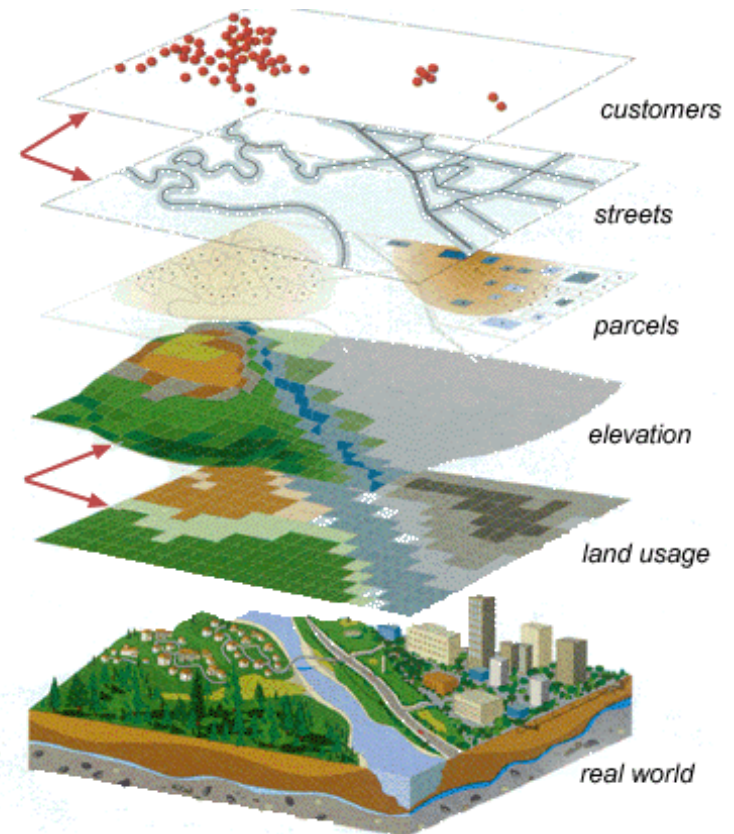


ArcGIS Online - Web Mapping

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

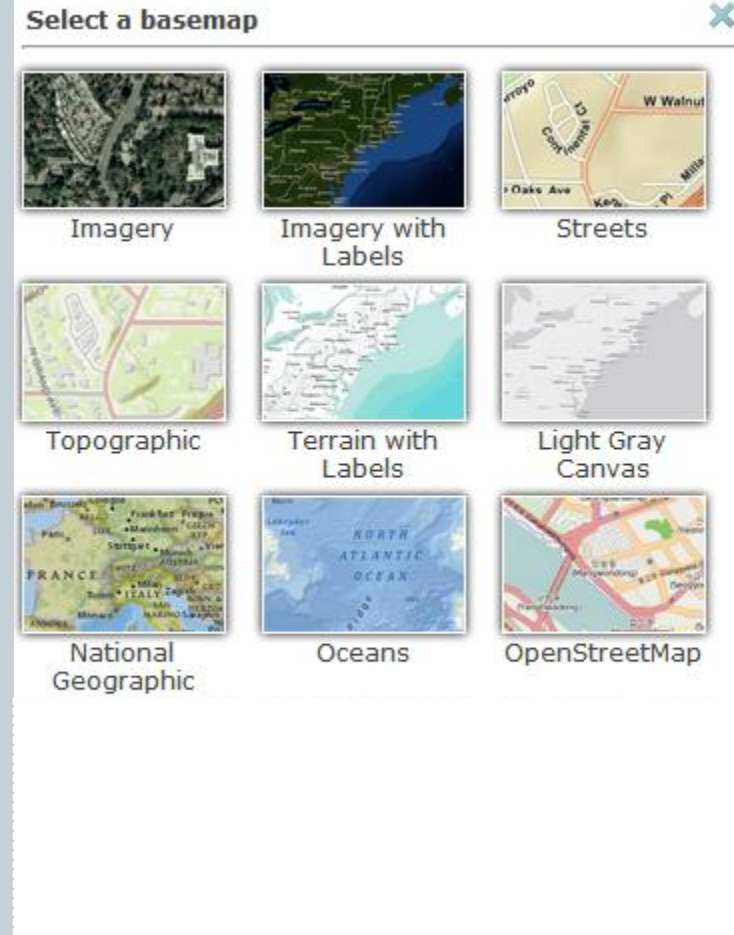
5 - Scale

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, a sidebar titled 'Make your own map' contains instructions for creating a map. The main map area shows state boundaries and major cities. A scale bar at the bottom left indicates distances up to 300 miles. A reference map insert in the top right corner shows the current map's location within a larger geographic context. Red dashed arrows point from the numbered labels to specific UI elements: 1 points to the 'Details' section in the sidebar, 2 points to the 'Map Layers' section, 3 points to the zoom controls, 4 points to the reference map insert, and 5 points to the scale bar.

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 shows the ArcGIS Online Gallery interface. At the top, there is a navigation bar with links for ArcGIS, FEATURES, PLANS, GALLERY, MAP, and HELP. A search bar and a 'Sign In' button 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'. On the left side, there is a sidebar with a 'Maps' section containing a list of categories: Show, All, Imagery, Basemaps, People, Earth, Life, Area, All, United States, and World. Below the 'Maps' section is a 'Search the website or visit' field. The main content area displays a grid of featured content items. The first row contains three items: 'US Wildfire Activity Web Map' (with a thumbnail of a wildfire), 'Hurricane and Cyclone Web Map' (with a thumbnail of a storm), and 'Hennepin County Transportation Map' (with a thumbnail of a map). The second row contains three items: a map with a yellow and purple overlay, a 'BUY FRESH BUY LOCAL Cape Cod' sign, 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

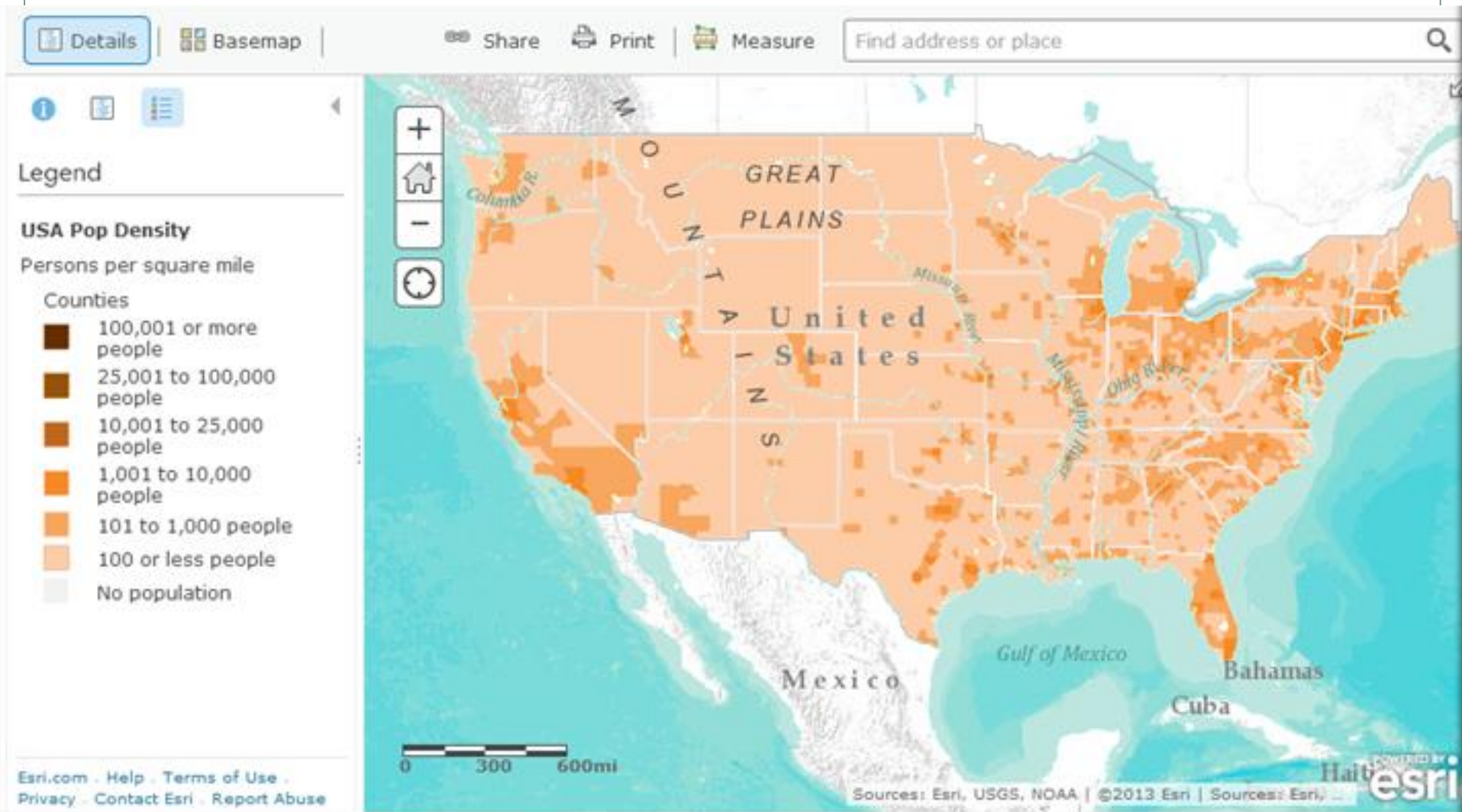
Fire-related Weather Warninas (NOAA)

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

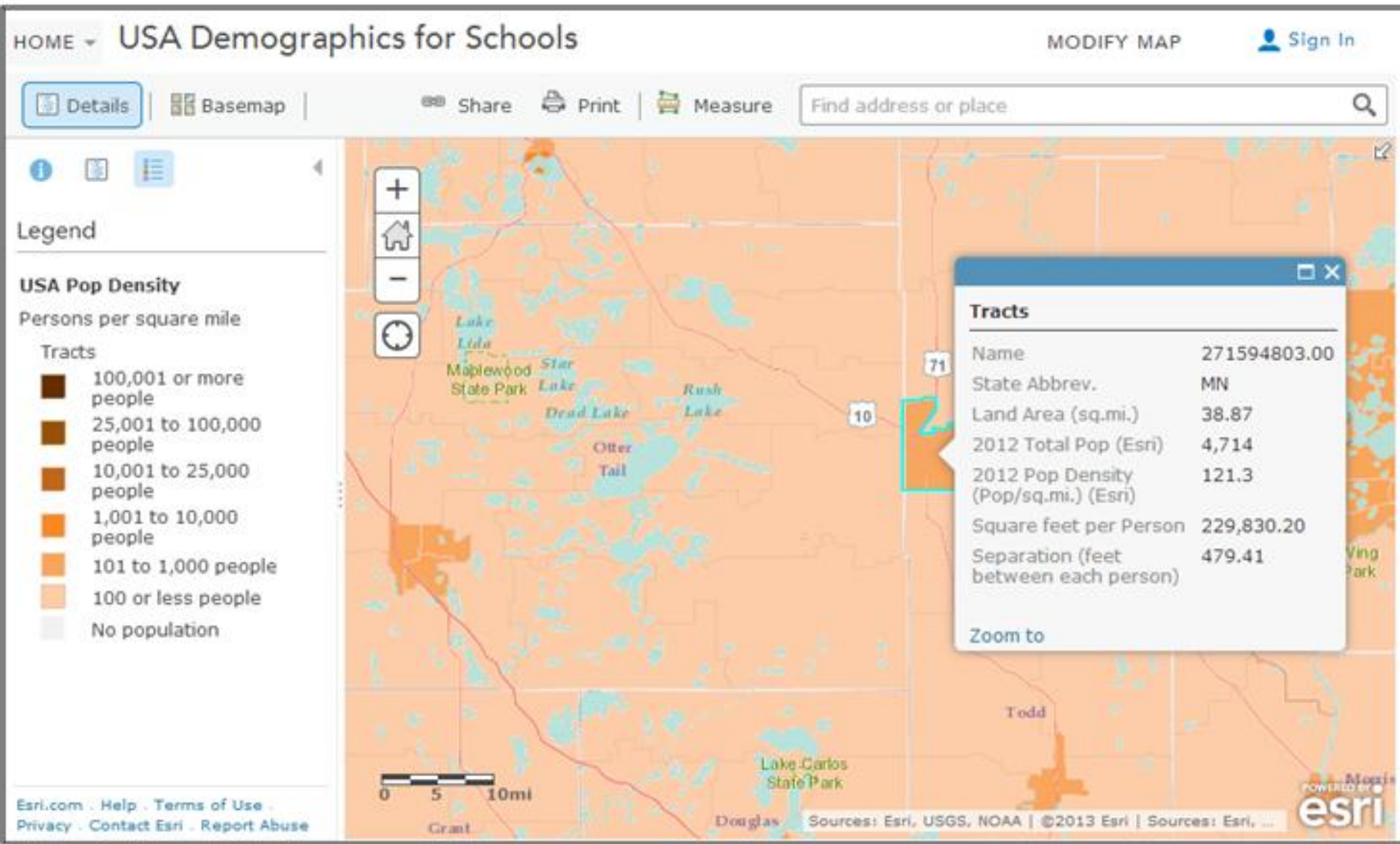


EXERCISE 4: Web Mapping Application: U.S. Demographics for Schools

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

Find address or place 

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

 Zoom to

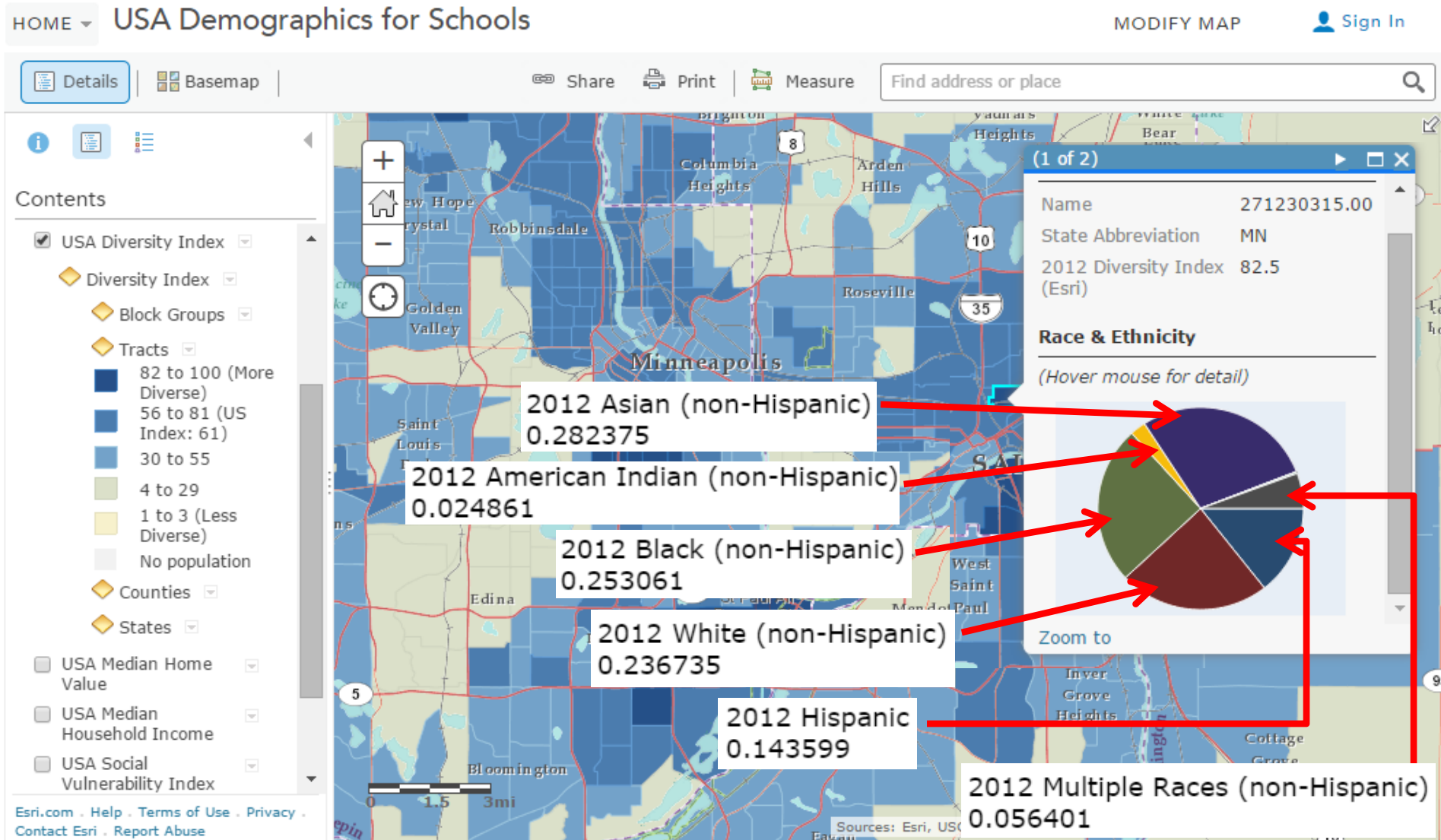
 **Transparency**

 Show Item Details



Identifying Race & Ethnicity in Census Tracts

Example: Census Tract in St. Paul



Produce Custom Maps using Paint and 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