



**Esri International User Conference | San Diego, CA**  
**Technical Workshops | July, 2011**

# **Using GIS Technology on Smartphones**

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# Overview

- **ArcGIS mobile**
- **Edit one map from four devices**
- **Create an Online map**
- **Consume an Online map**

# Mobile Platform Options\*

- Symbian from Symbian Foundation
- Android from Google Inc
- IOS from Apple Inc
- RIM BlackBerry OS
- Windows Phone from Microsoft
- Linux
- webOS from HP
- MeeGo from Nokia and Intel
- Brew OS from Qualcomm
- Windows Mobile from Microsoft
- Palm OS/Garnet OS from Access Co.
- Maemo from Nokia

# What is mobile GIS?

*Extends the reach of ArcGIS from the office to the field*

- With a mobile GIS solution you can
  - Carry your maps to the field
  - Collect and Update Geographic Information
  - Track and Geo-collaborate



# What are the benefits of mobile GIS?

*Leverages the investment of your enterprise GIS*

- **Improve Efficiency and Accuracy of Field Operations**
- **Rapid Data Collection and Seamless Data Integration**
- **Replaces paper based work flows**
- **Helps to Make Informed and Timely Decisions**



# The ArcGIS System



# Lightweight Applications and Runtime SDKs

Configurable COTS applications and Native ArcGIS Runtime SDKs

iOS	Android	Windows Phone	Windows Mobile	Windows	Linux
<b>Applications</b> <ul style="list-style-type: none"><li>• ArcGIS</li></ul>	<b>Applications</b> <ul style="list-style-type: none"><li>• ArcGIS</li></ul>	<b>Applications</b> <ul style="list-style-type: none"><li>• ArcGIS</li></ul>	<b>Applications</b> <ul style="list-style-type: none"><li>• ArcGIS</li></ul>	<b>Applications</b> <ul style="list-style-type: none"><li>• ArcGIS</li><li>• ArcGIS Explorer*</li></ul>	<b>Applications</b> <ul style="list-style-type: none"><li>• None</li></ul>
<b>Runtime SDK</b> <ul style="list-style-type: none"><li>• Objective C</li></ul>	<b>Runtime SDK</b> <ul style="list-style-type: none"><li>• Java</li></ul>	<b>Runtime SDK</b> <ul style="list-style-type: none"><li>• Silverlight</li></ul>	<b>Runtime SDK</b> <ul style="list-style-type: none"><li>• .NET</li></ul>	<b>Runtime SDK</b> <ul style="list-style-type: none"><li>• WPF, Java</li></ul>	<b>Runtime SDK</b> <ul style="list-style-type: none"><li>• Qt, Java</li></ul>
					



# Green Valley

Map showing the results of the extractive industries siting analysis for the Green Valley area.

Key to unsuitable areas

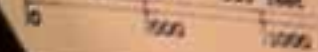
- Poorly drained
- Excessive slope
- Clay subsoil

Key to roads

- Gravel road
- Paved road



contour levels = 1000 feet





# Intelligent Maps in your pocket



Digitize

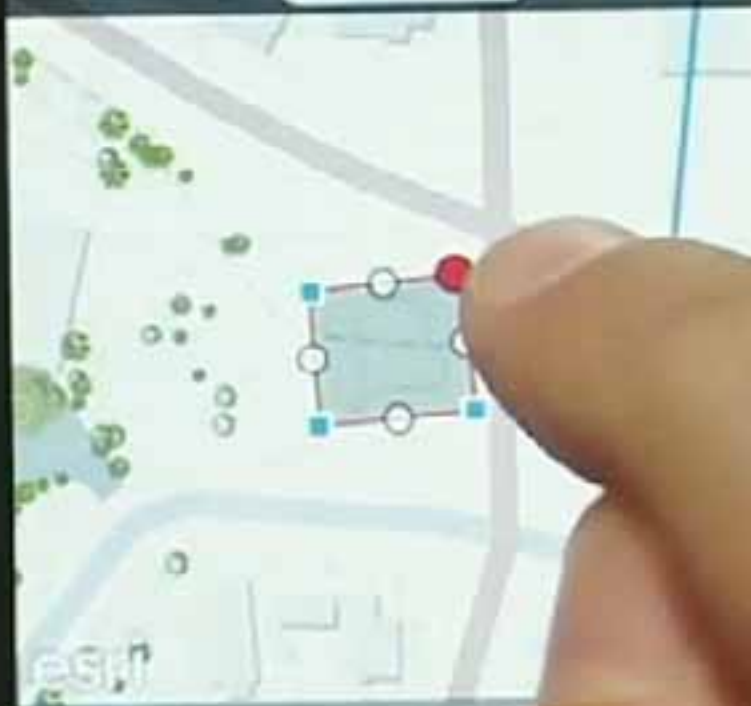
No Service 8:45 AM 94%

Cancel

Recreation

Accept

0 Square Miles



Map



Search

Magnify  
Snap

No Service 8:45 AM 94%

Cancel

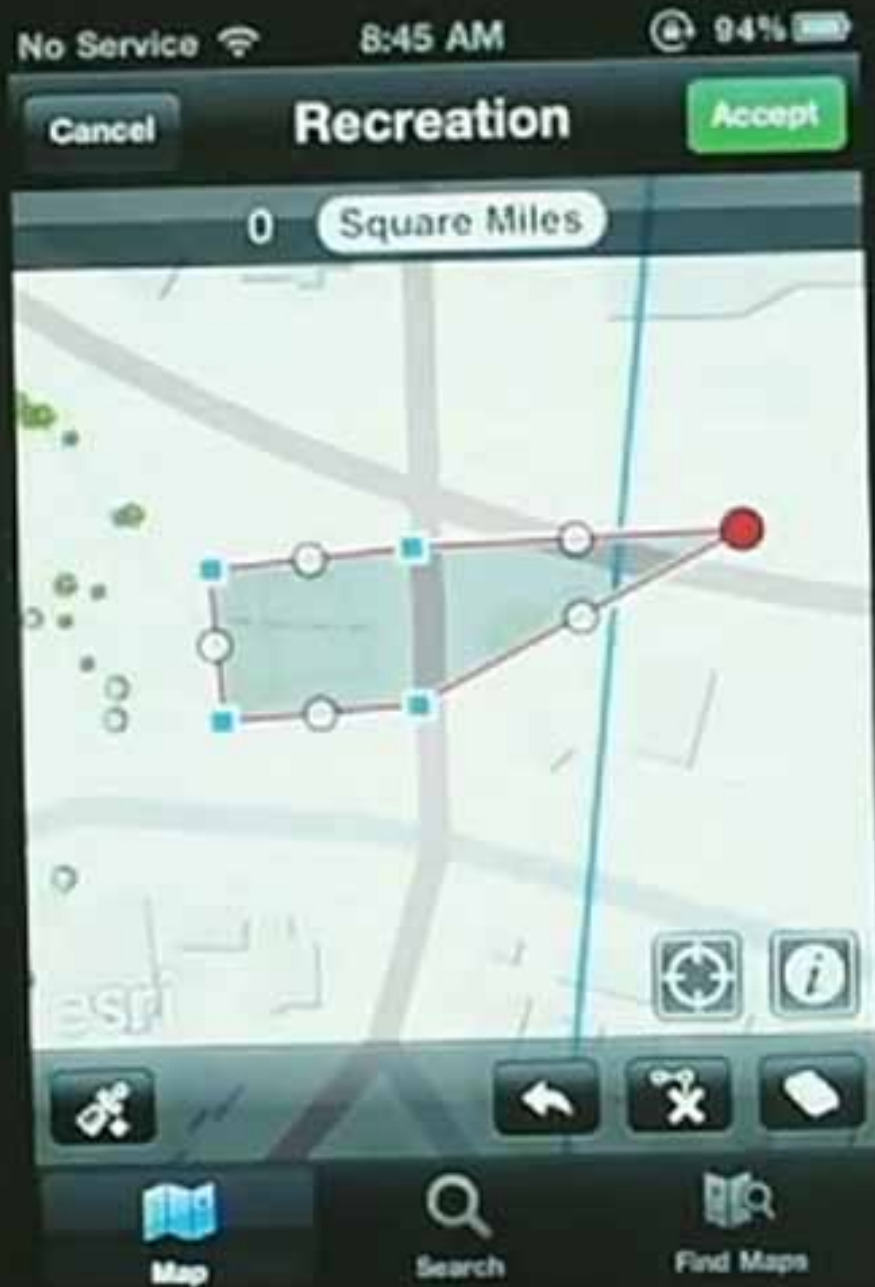
Recreation

Accept

0 Squ



Mistake?



Undo!



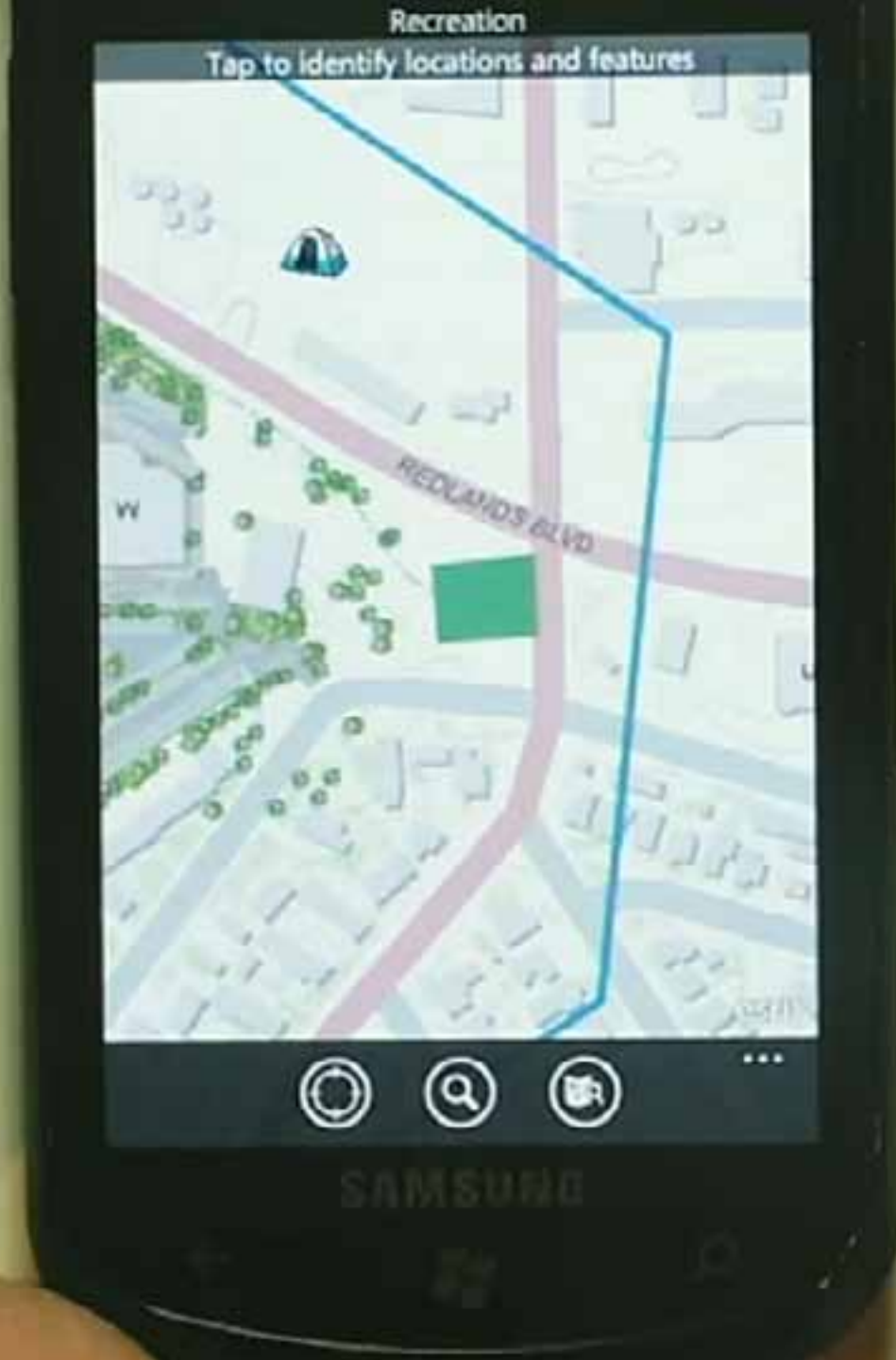


Perfect

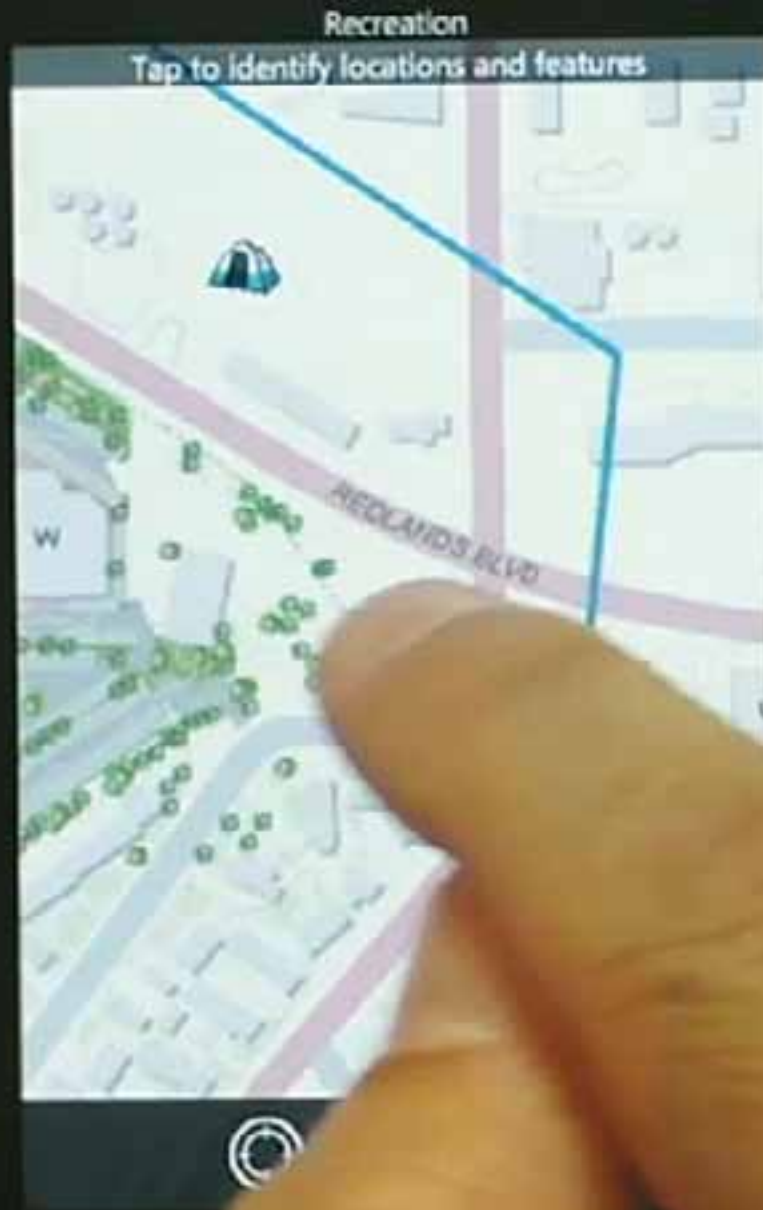




Switch  
To  
Windows  
Phone



Tap



259 TEXAS ST

Redlands, CA 92373

Lat = 34.057, Long = -117.191

## Attributes

**Name****Rating**

3

**Classification**

Municipal

**Website**

Attributes



SAMSUNG

259 TEXAS ST

Redlands, CA 92373

Lat = 34.057, Long = -117.191

[Edit Location](#)

## Attributes

Name

Rating

Classification

Website



SAMSUNG


Change

Recreation

## Attachments

# Attach Photos

or other documents

 Pick from Photo Gallery

 Take Photo with Camera



SAMSUNG







8:47

Recreation

## Attachments



27fad698f5ee.jpg

1 Attachment



...

SAMSUNG

Change  
to  
Android



Add  
URL

Recreational Area 

Attachments (1) 



Rating  
3

Website

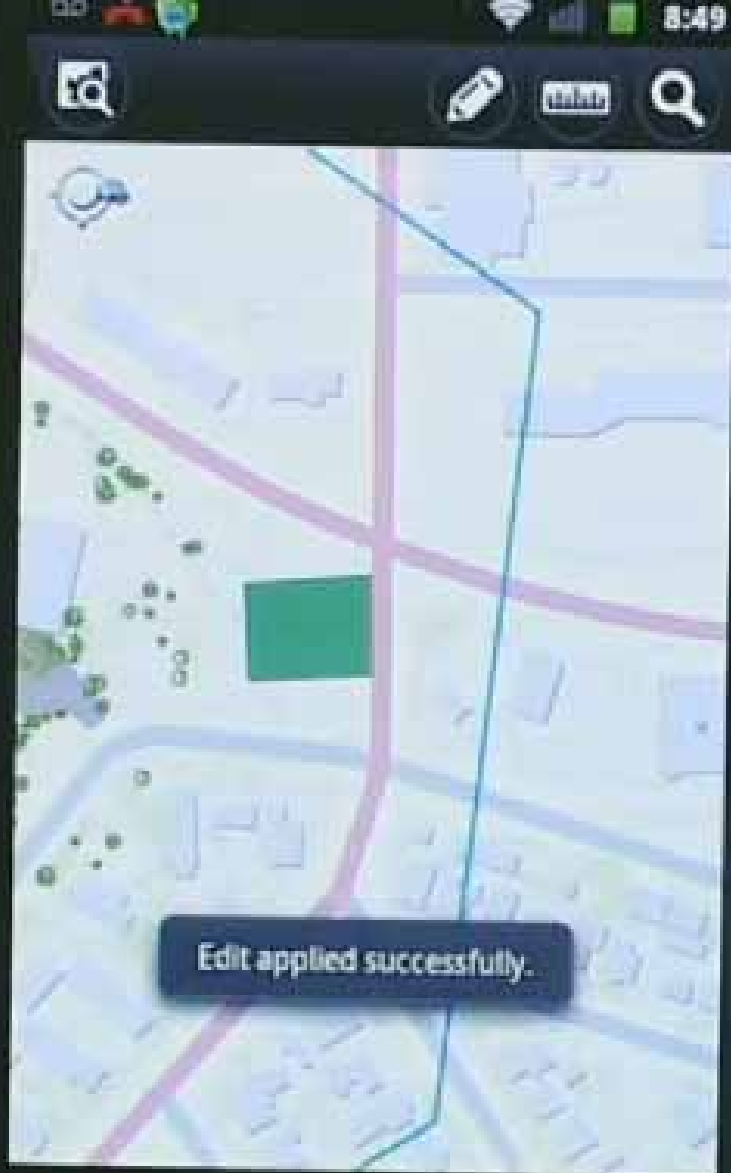
Classification  
Municipal

Name

Type





# Change to iPad

Name

Rating

3

Classification

Municipal

Website

<http://www.esd.com>

271x100x100.jpg

129.0 KB





### Featured Map

Create and Share Maps  
part34.com

Have You Checked Out the New Secrets of  
Astronomy and the Universe?

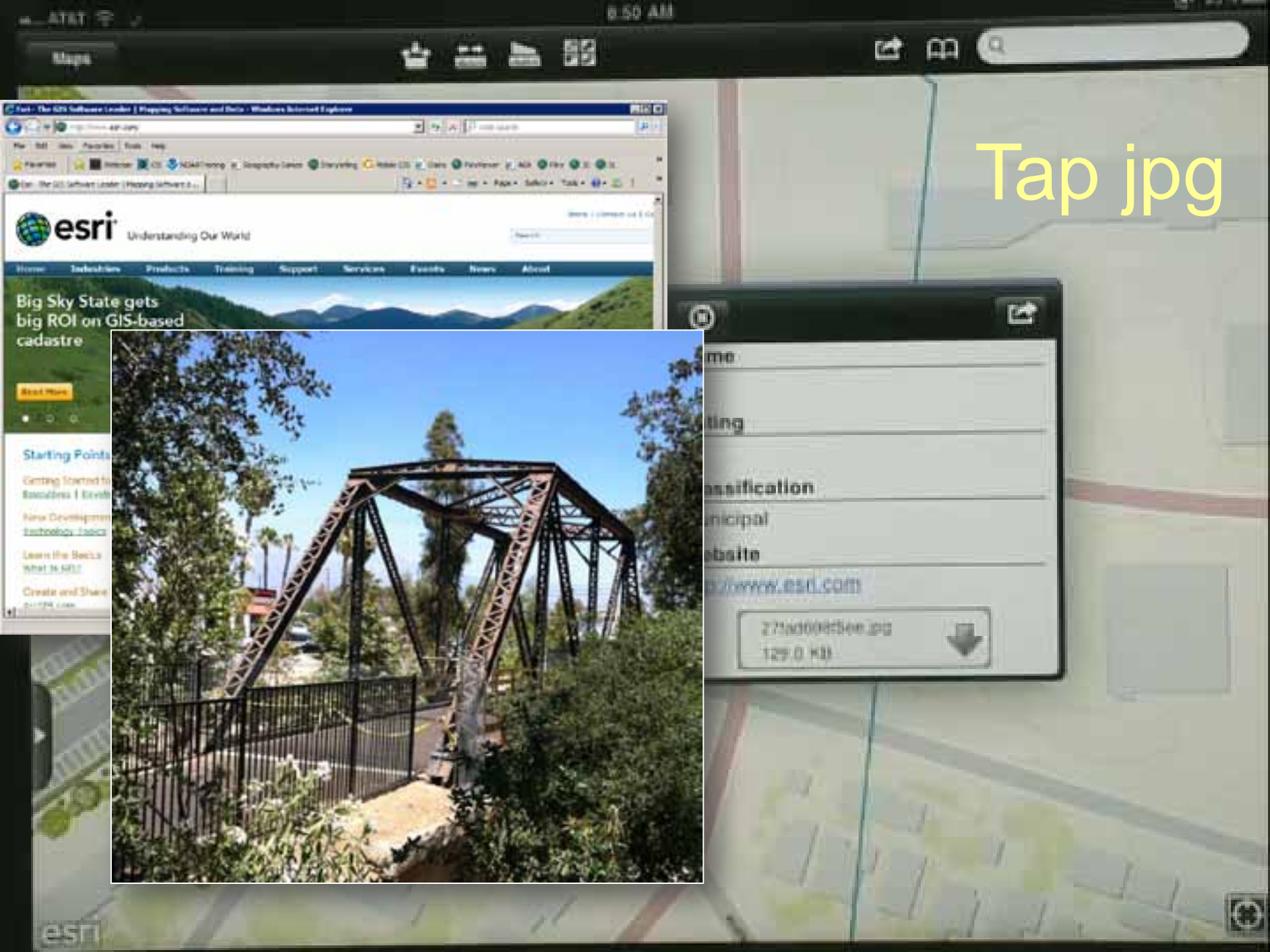


**Where's the Beef?** The Food Detective  
with a Food Detective's Perspective on Food

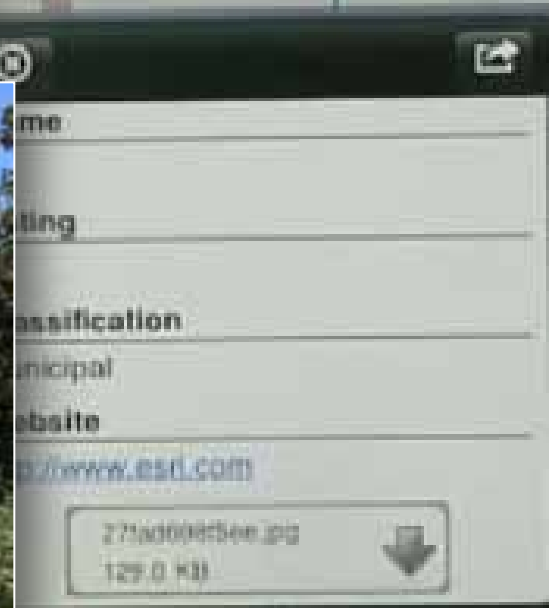
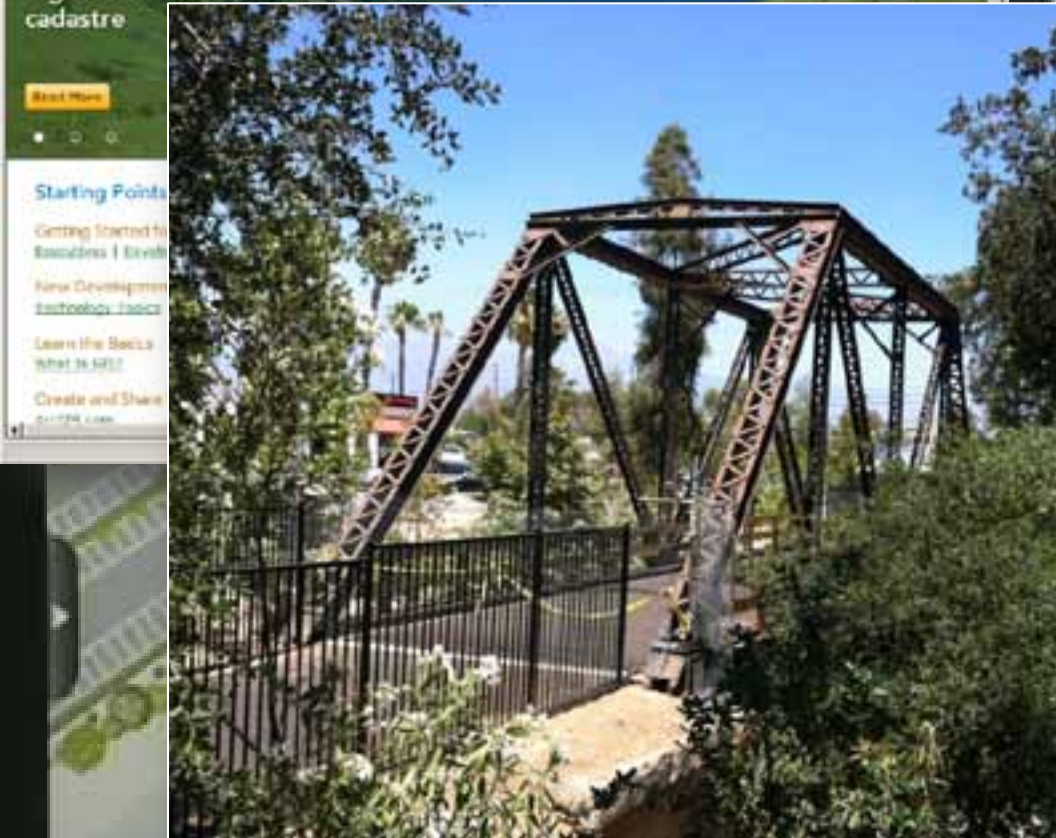
<http://www.esl.com>

1270 H. H. H.





Tap jpg



# One Map, four devices

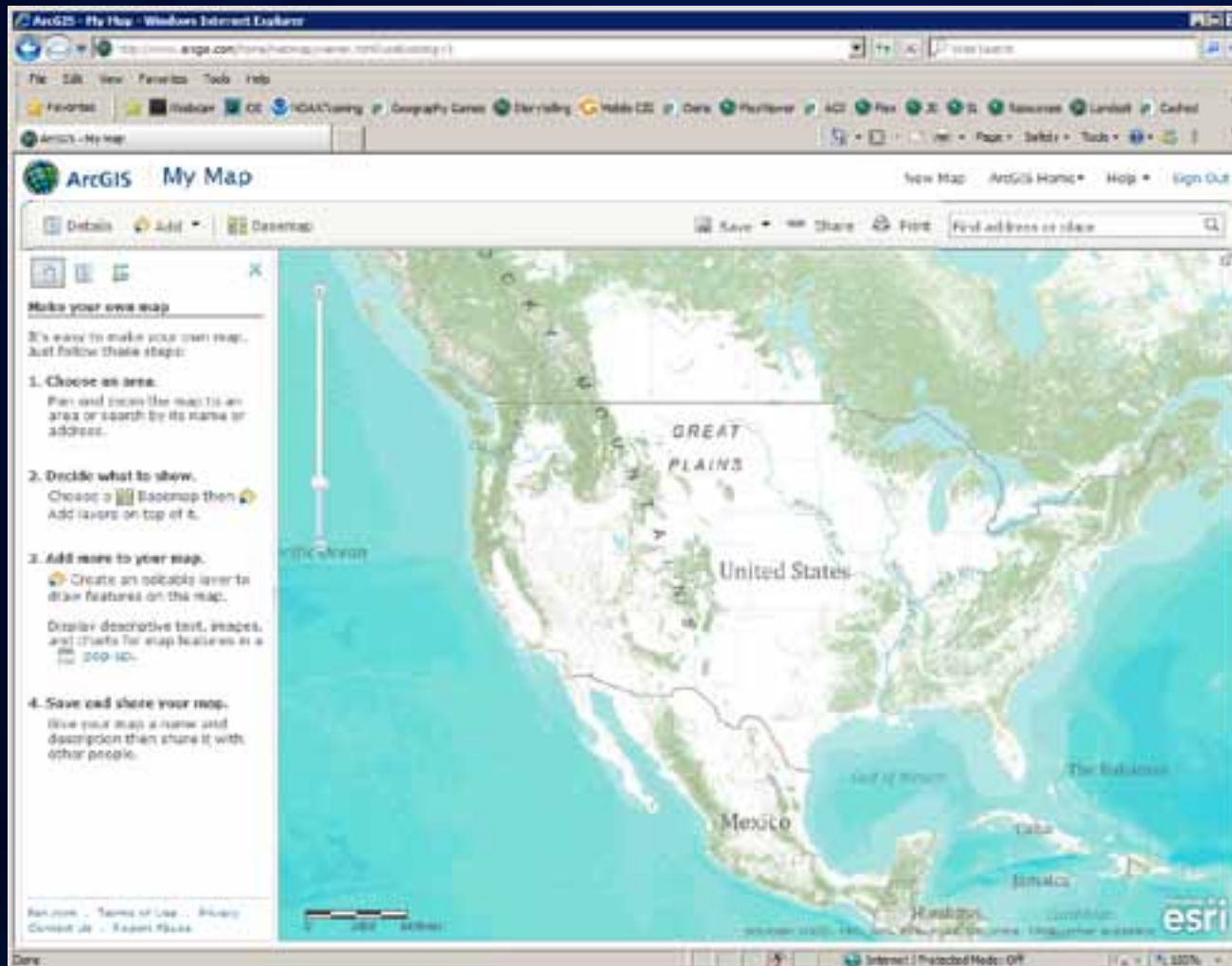




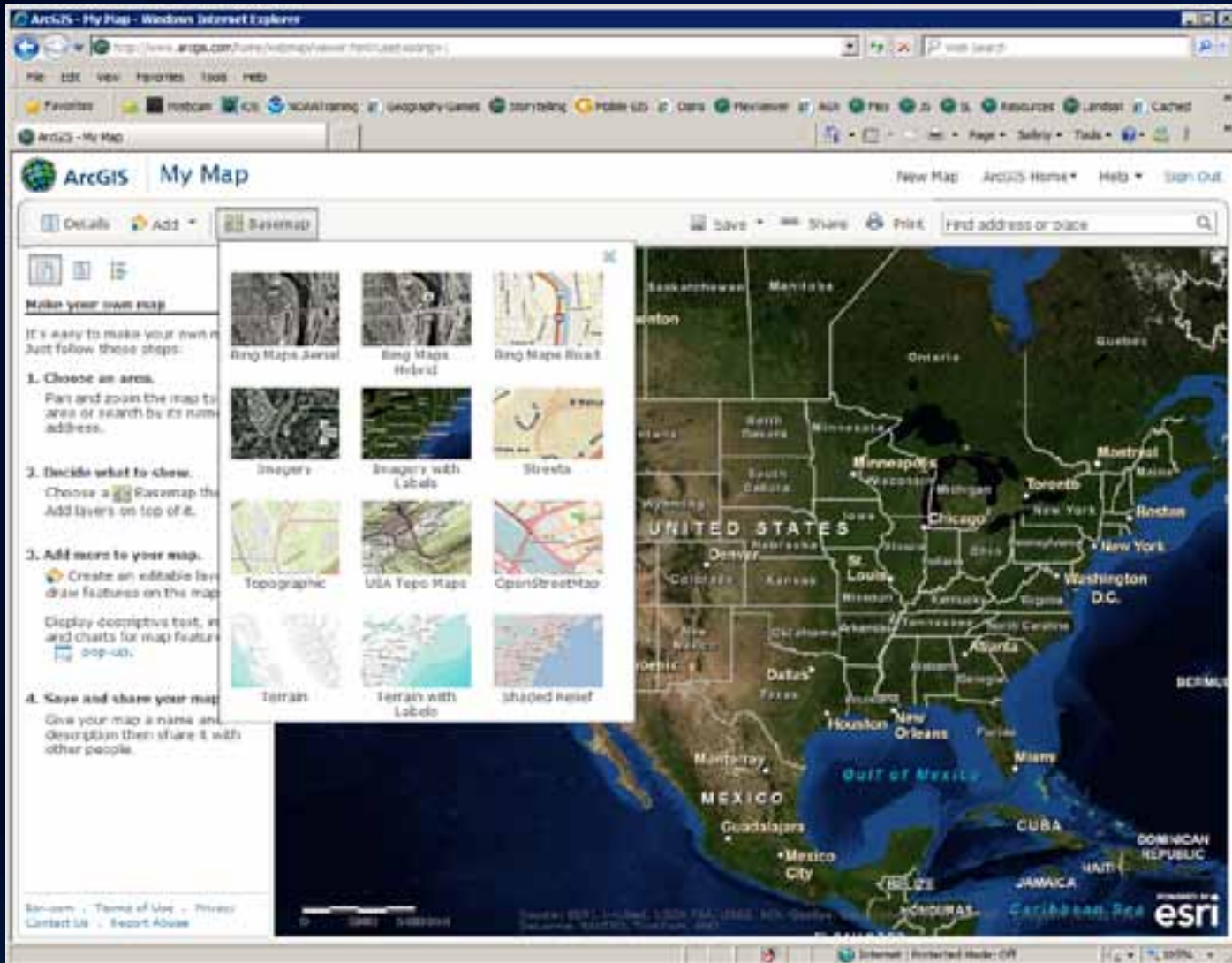
# One way to make a map



# ArcGIS.com - make a map

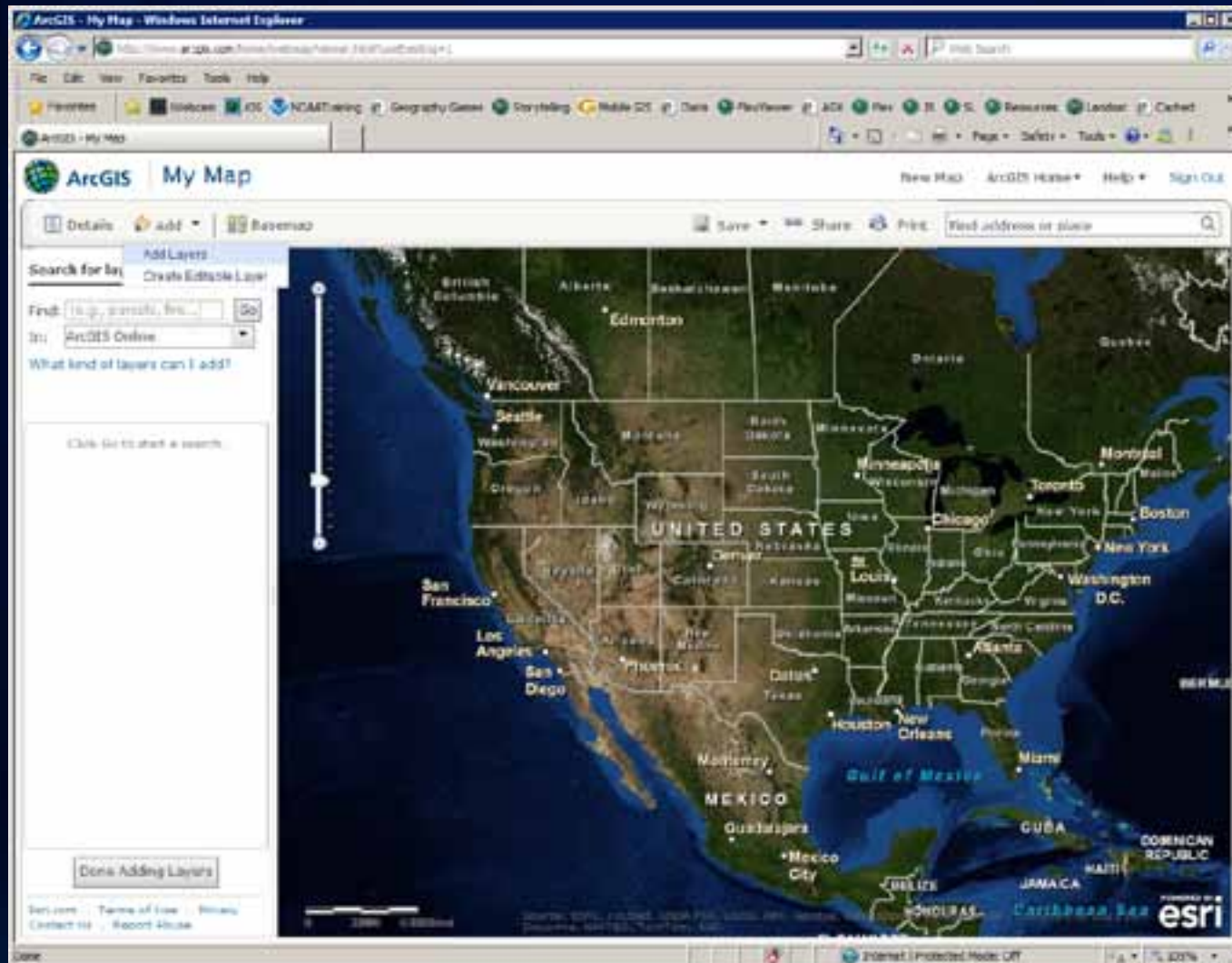


## ArcGIS online – Basemaps and more





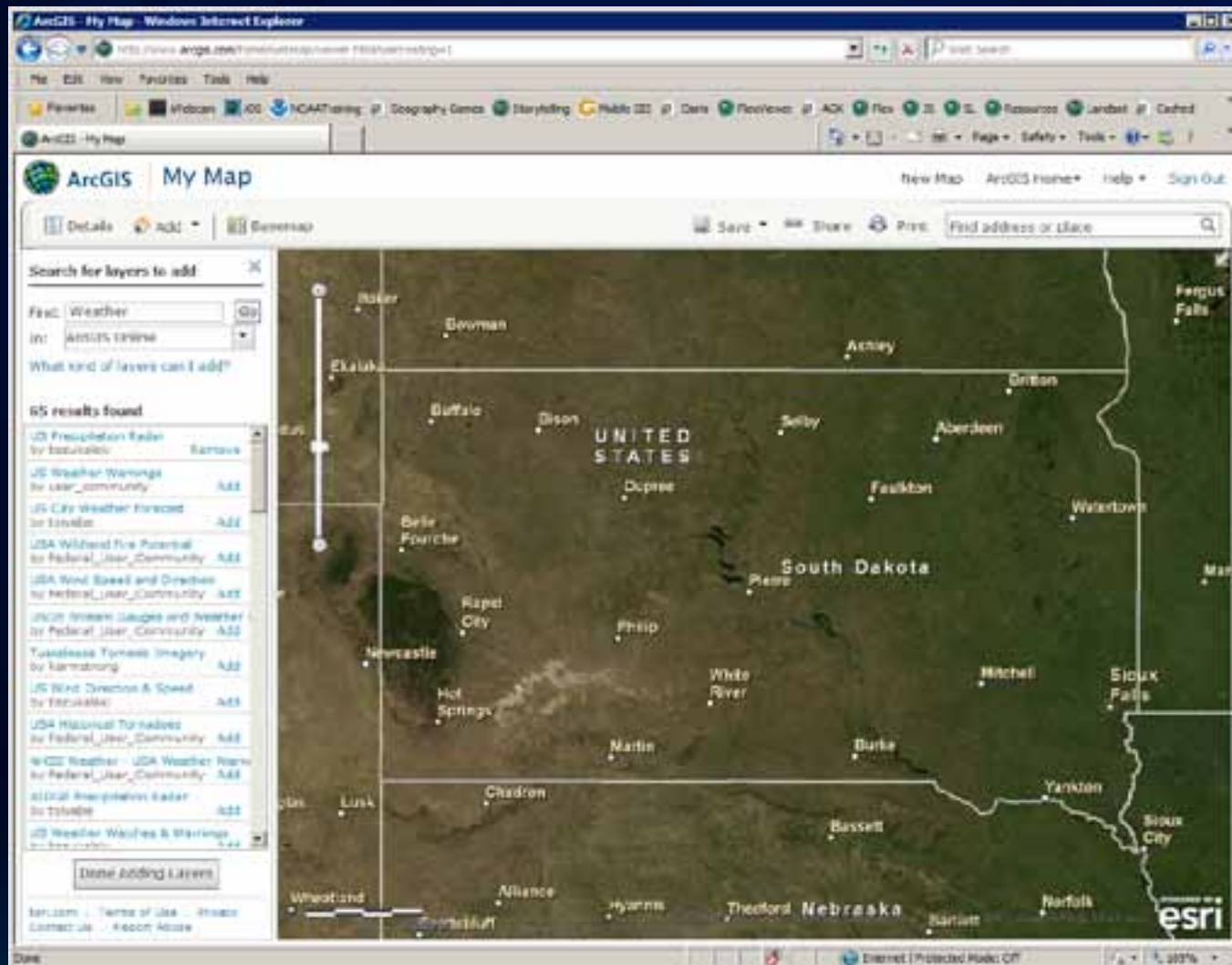
# Add more layers



# Yours, mine, and theirs



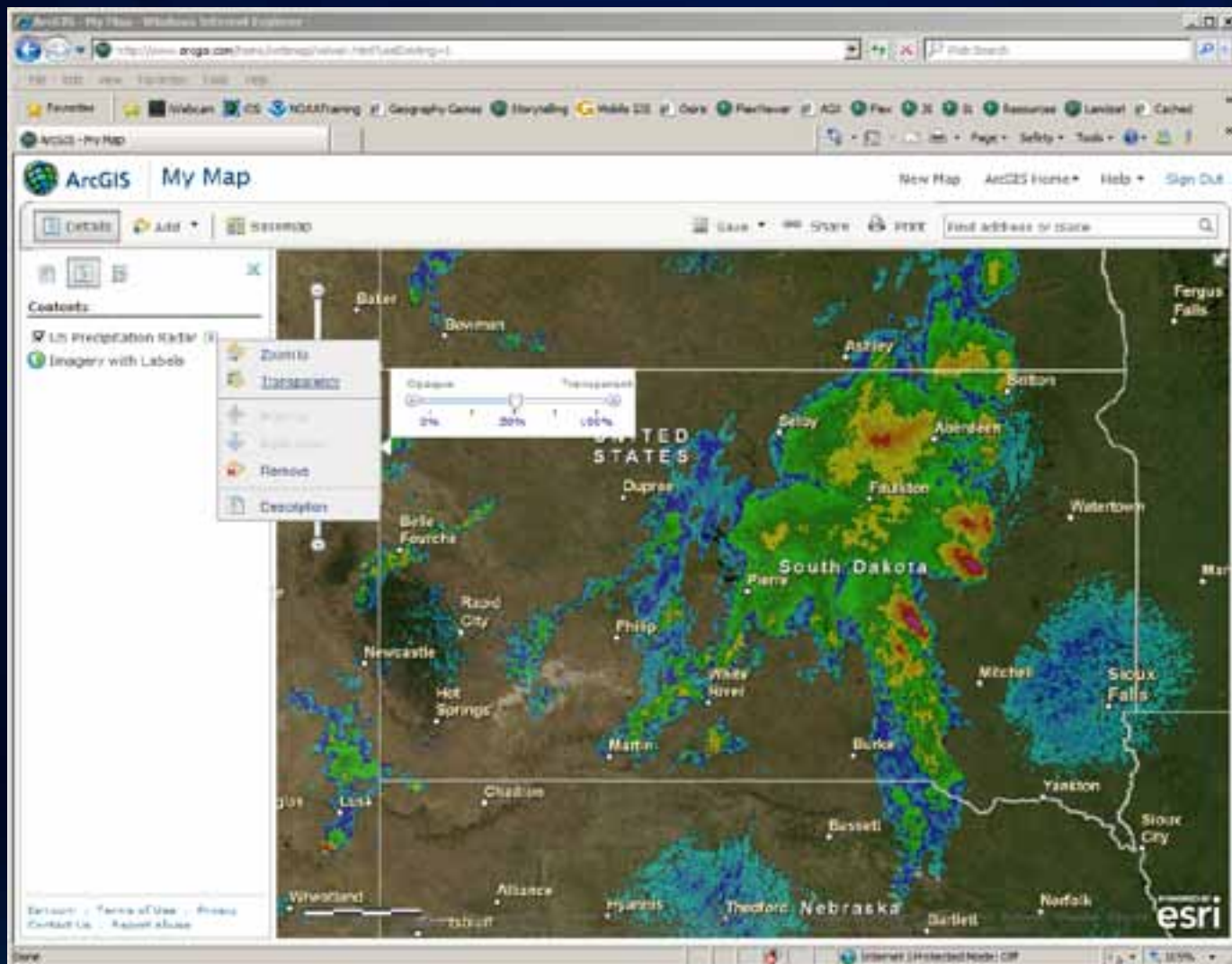
# Where on Earth?



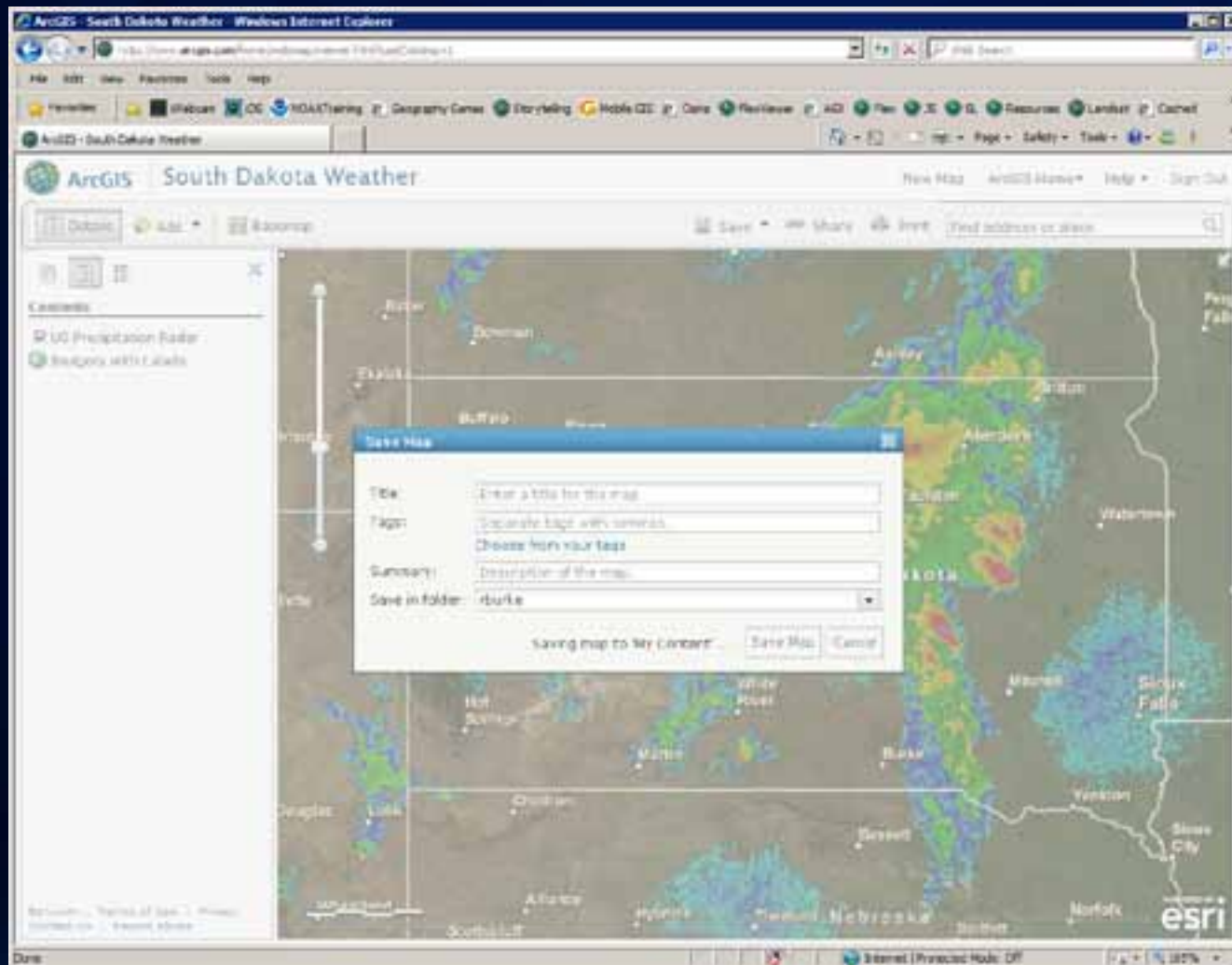


**Discussion**

# Layer settings

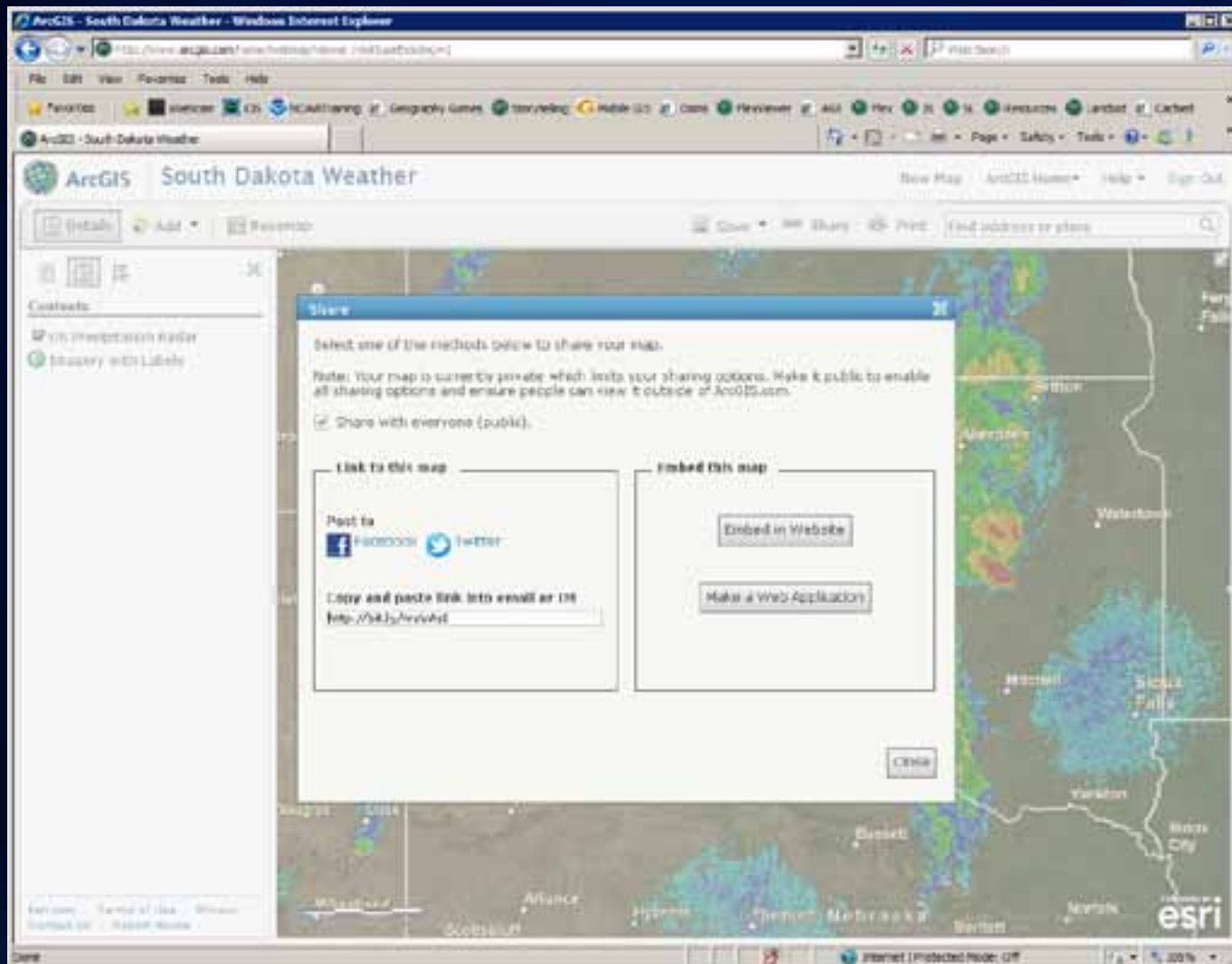


# Save the map

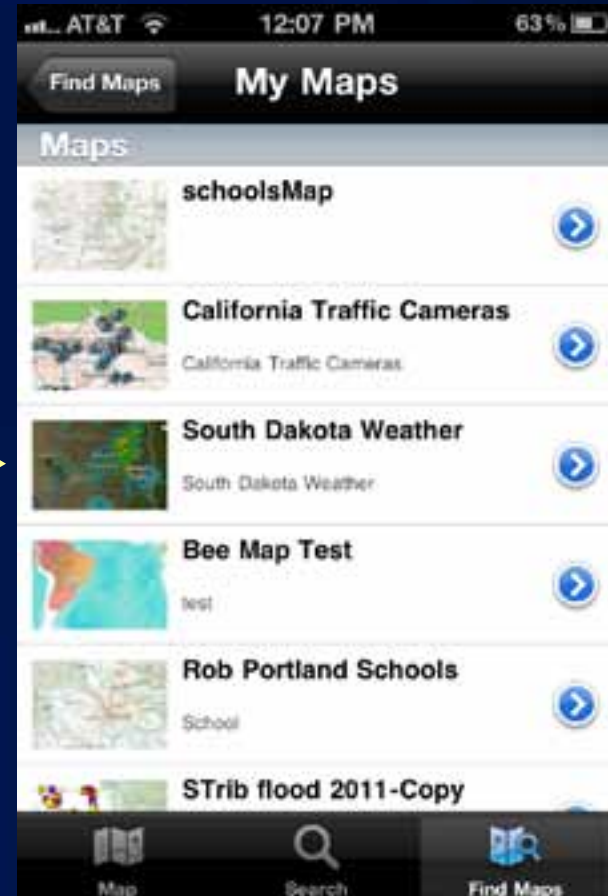




# Share it



# Phone app users can see your map



# Phone app users can see your map





# Actual deployed app examples



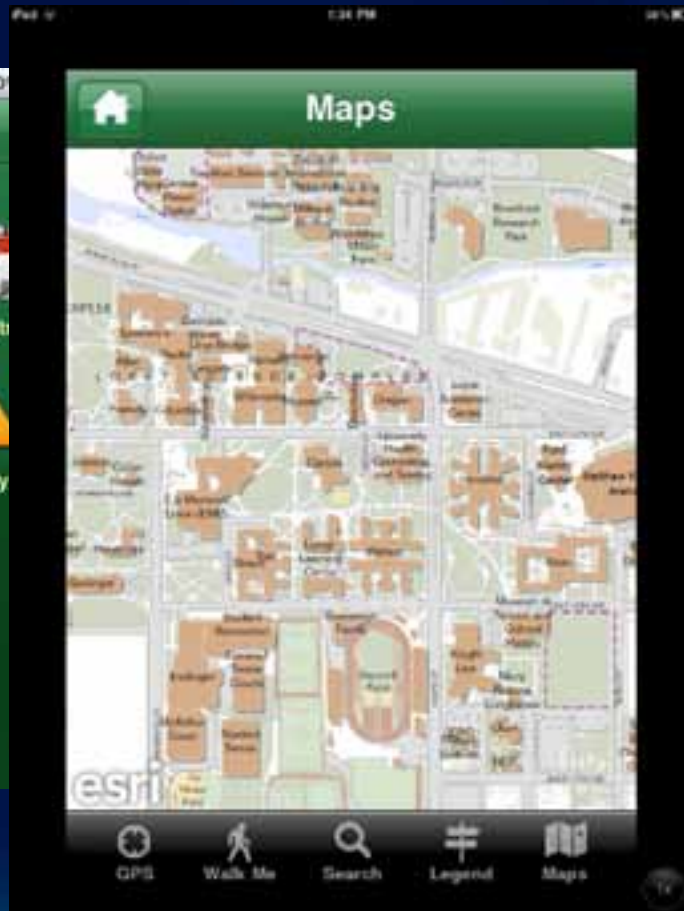
University of  
Oregon  
App Store



# Actual deployed app examples



University of  
Oregon  
App Store





# Actual deployed app examples



University of  
Oregon  
App Store



# Actual deployed app examples



University of  
Oregon  
App Store



## Actual deployed app examples

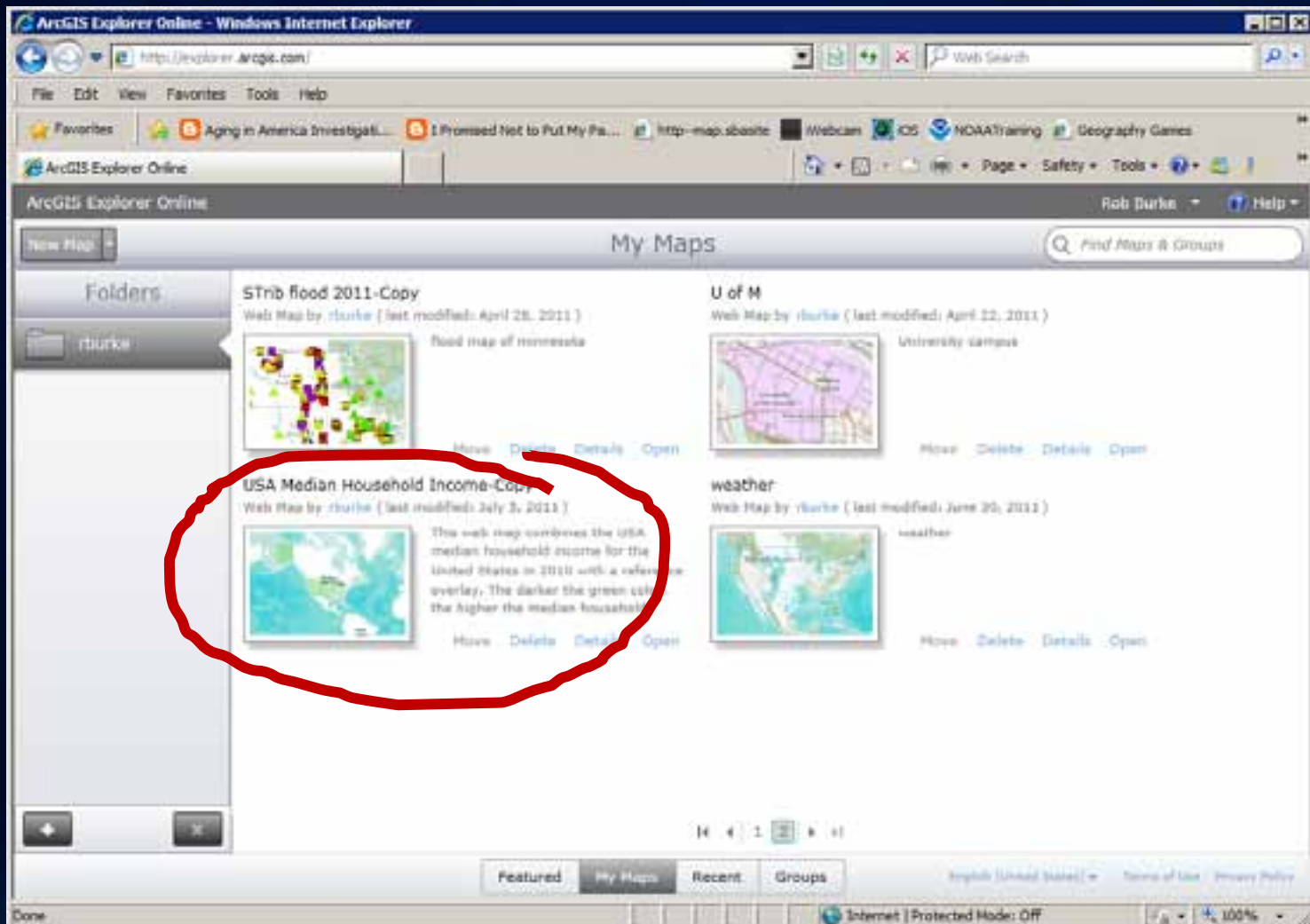


WhereTo.sg  
App Store

## Add query intelligence to a map

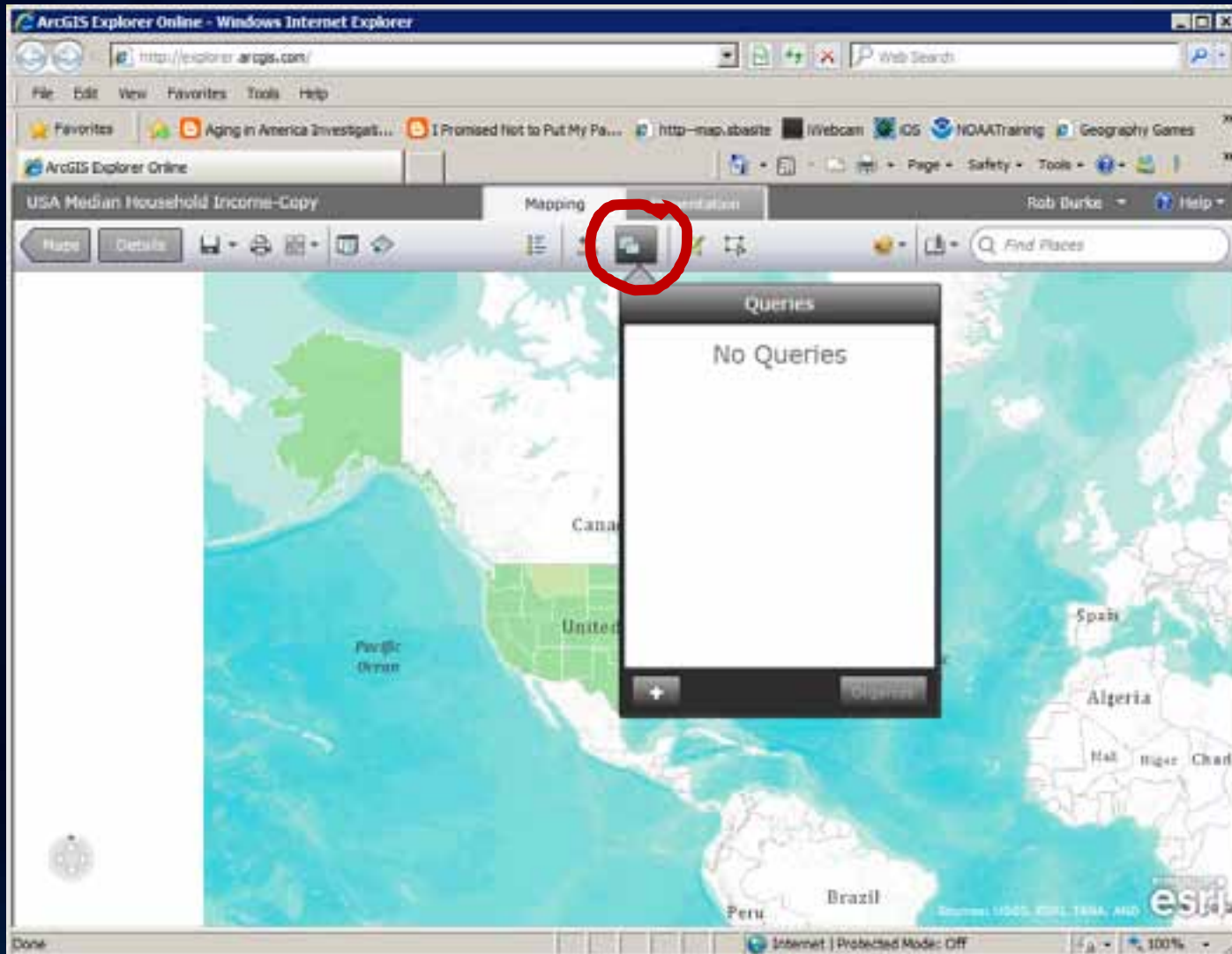
- <http://explorer.arcgis.com>

# Log in and select one of your maps



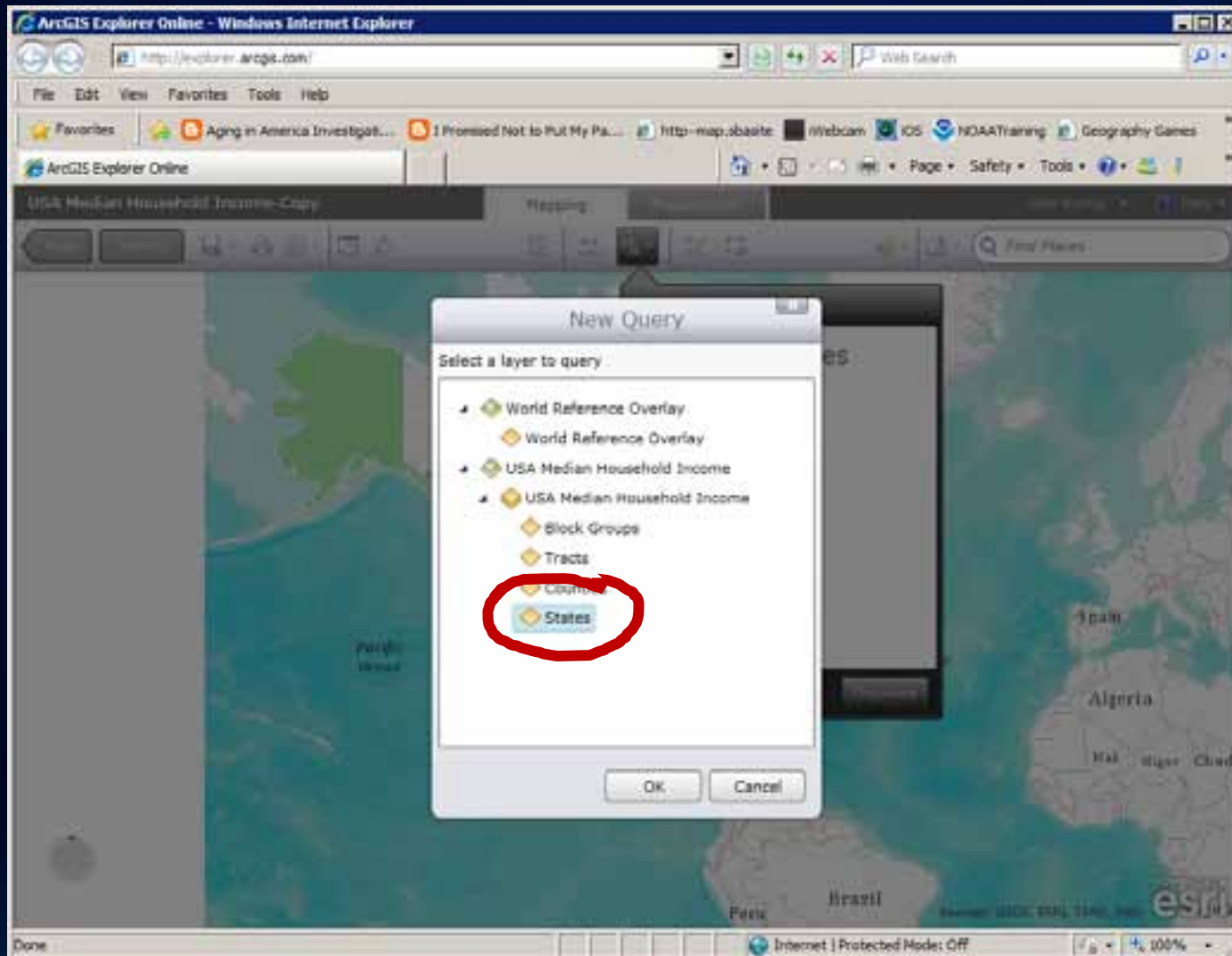


# Click Queries

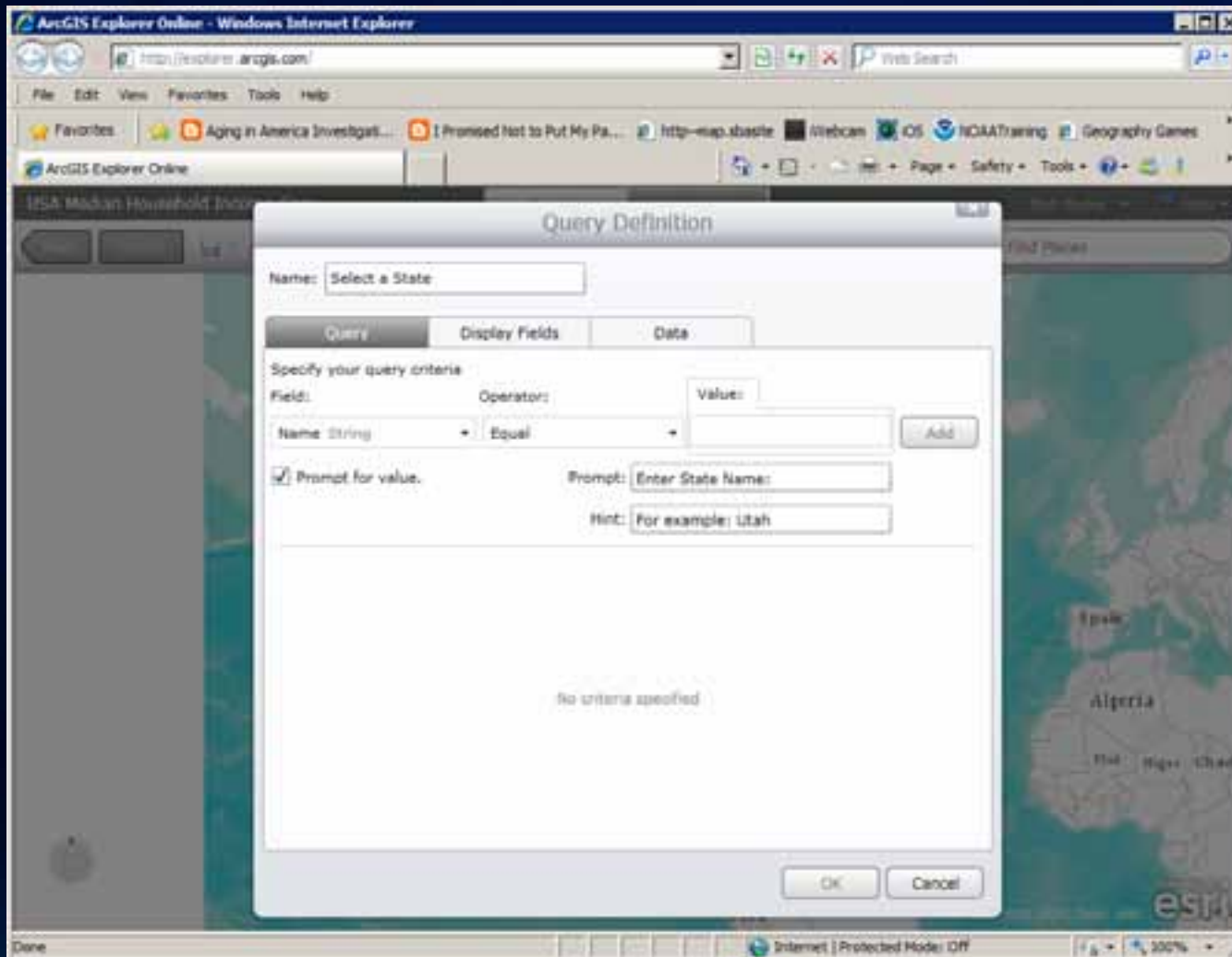




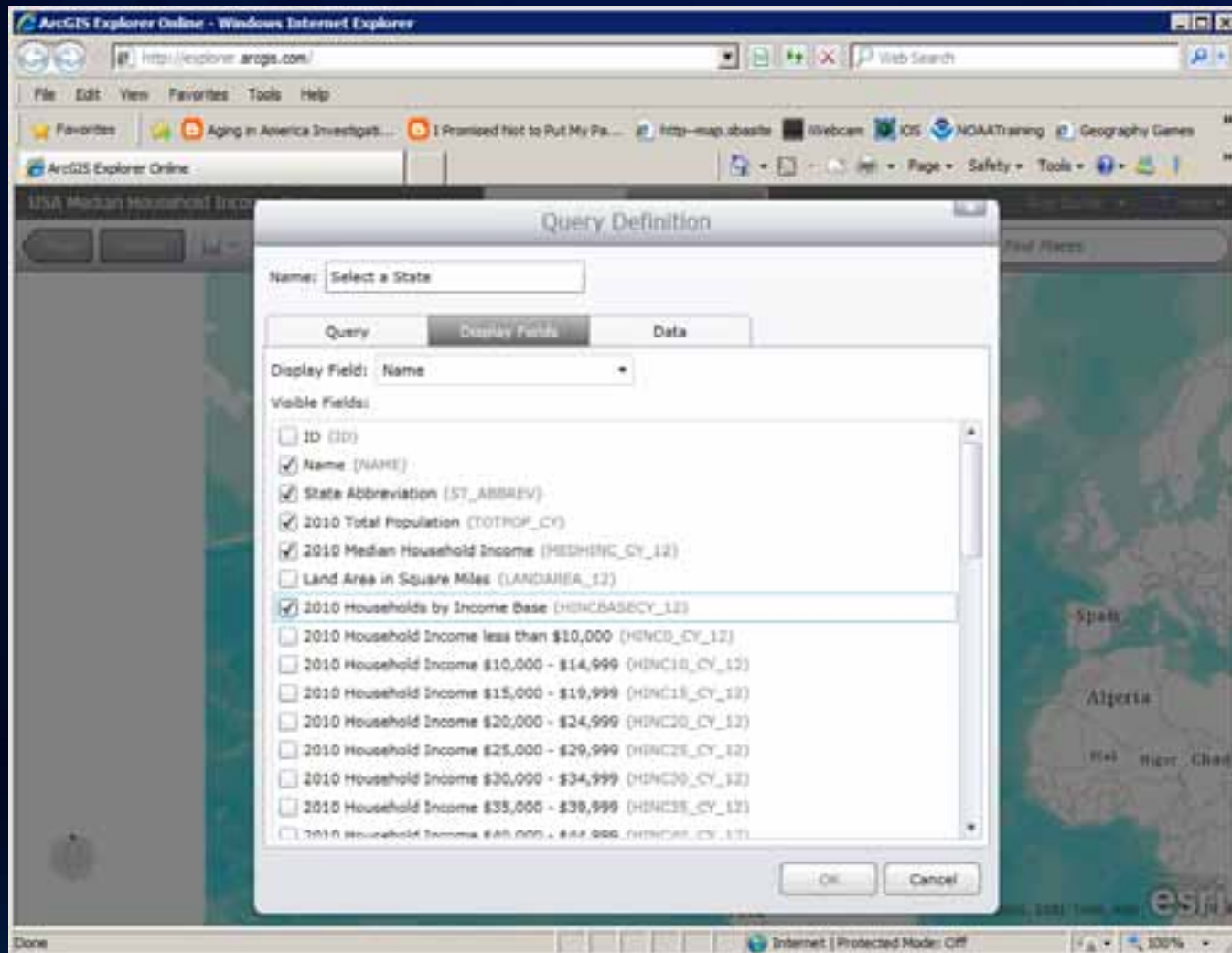
# Select a Layer



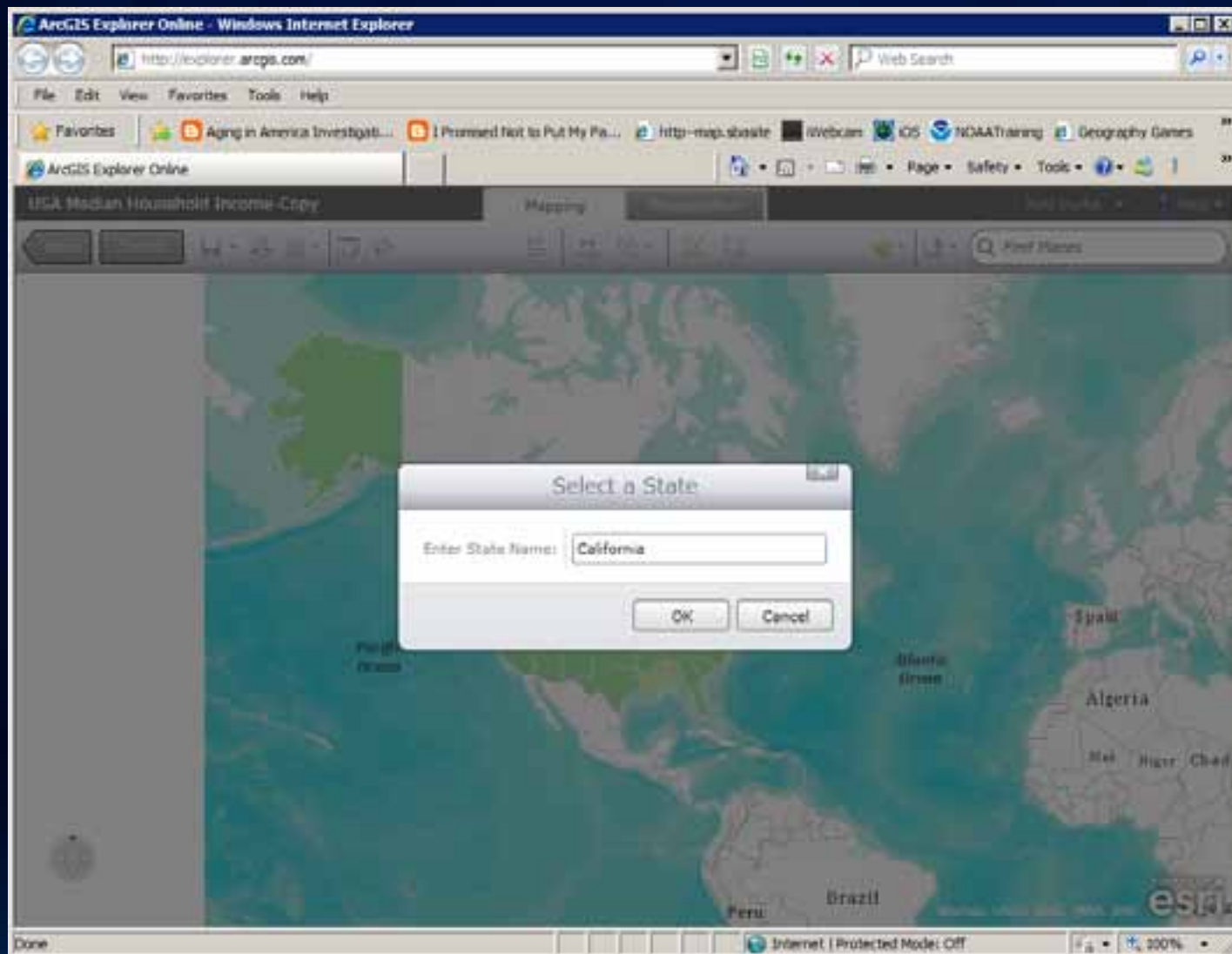
# Set up the Query: field, operator, text, & prompt



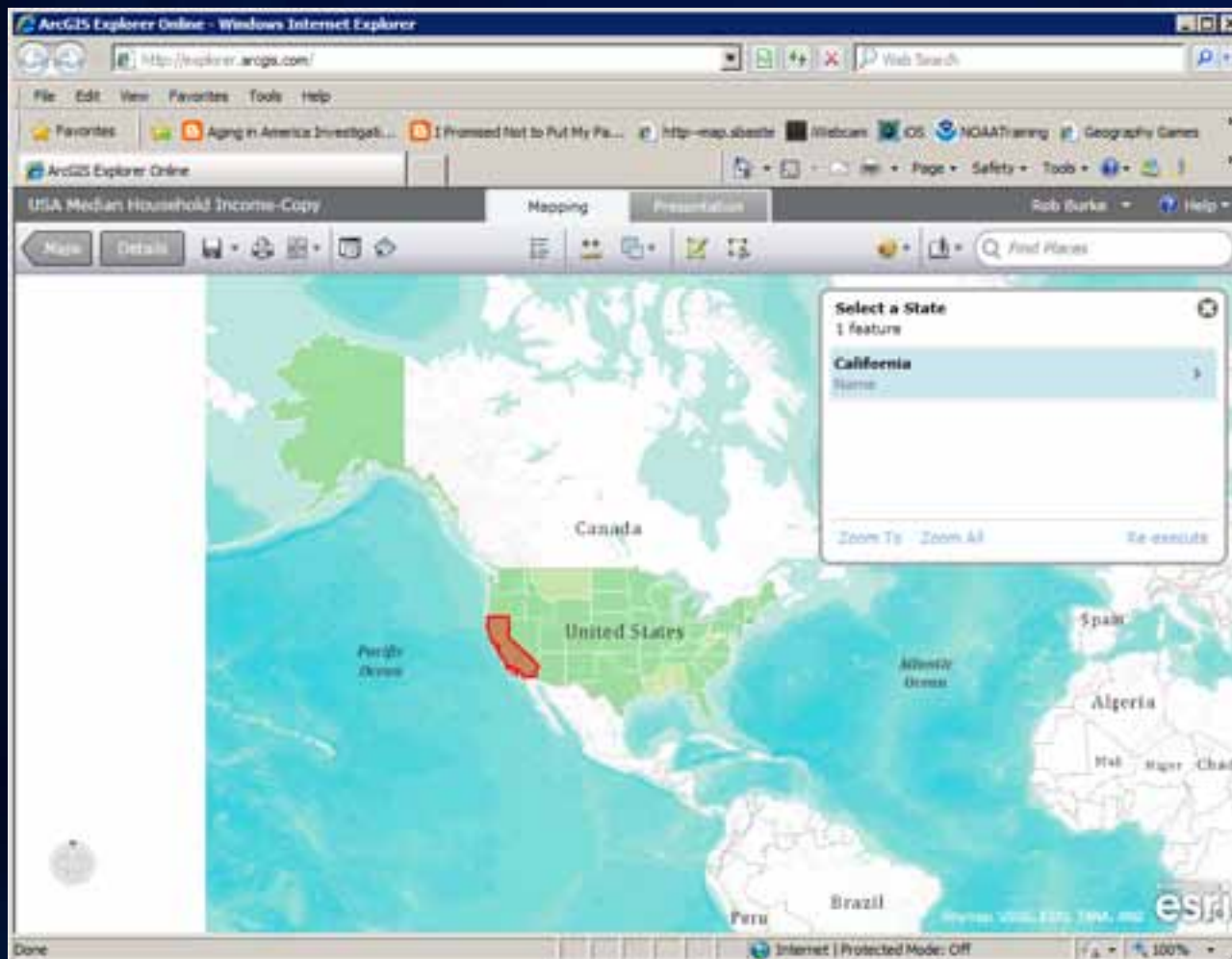
# Turn some fields off



# Test the query

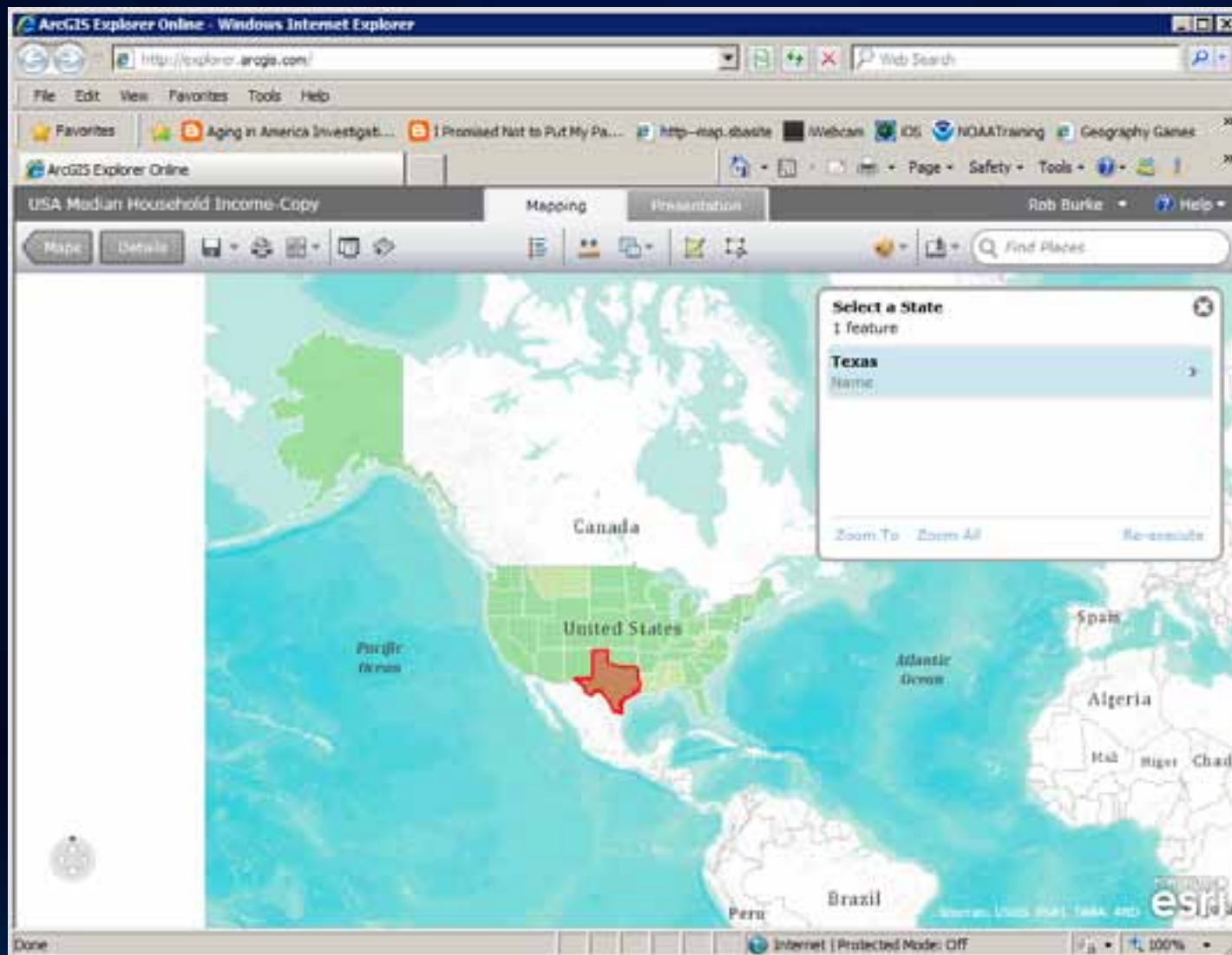


# See the selected





# Save the map



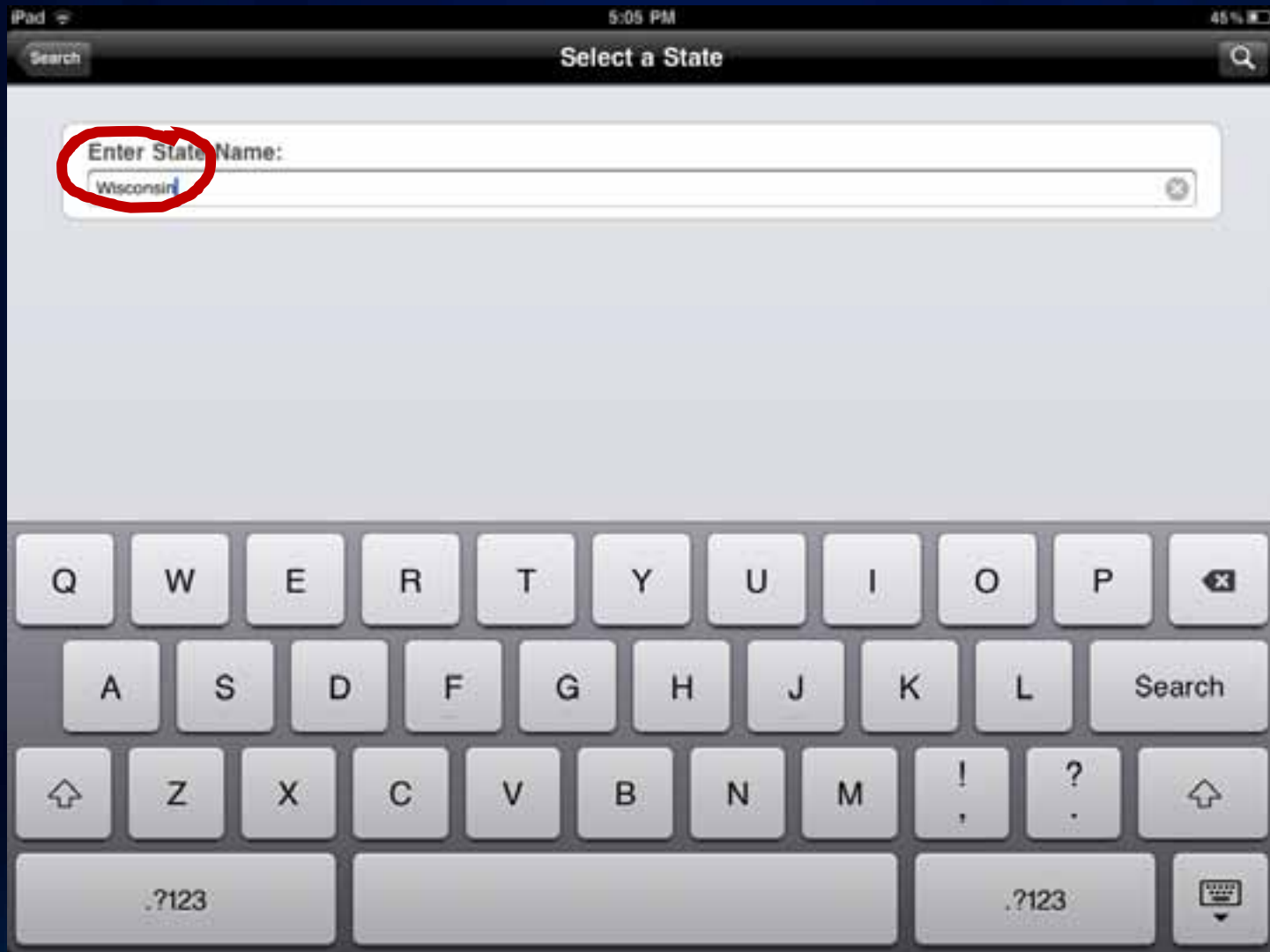
Move to a Smartphone app and open the map



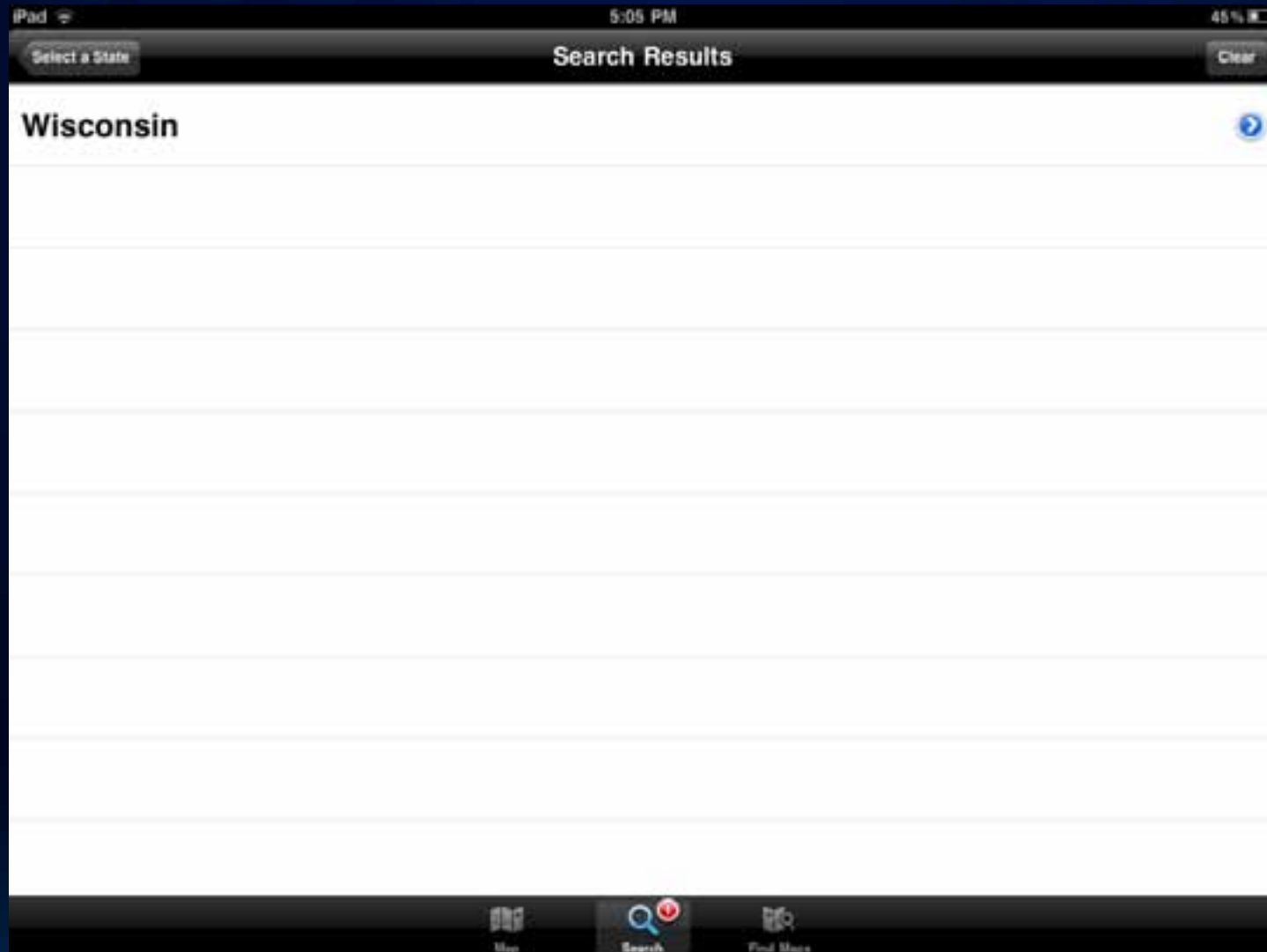
# Search to see predefined searches



# Type in a value



# Selection is made





See the selection on the map



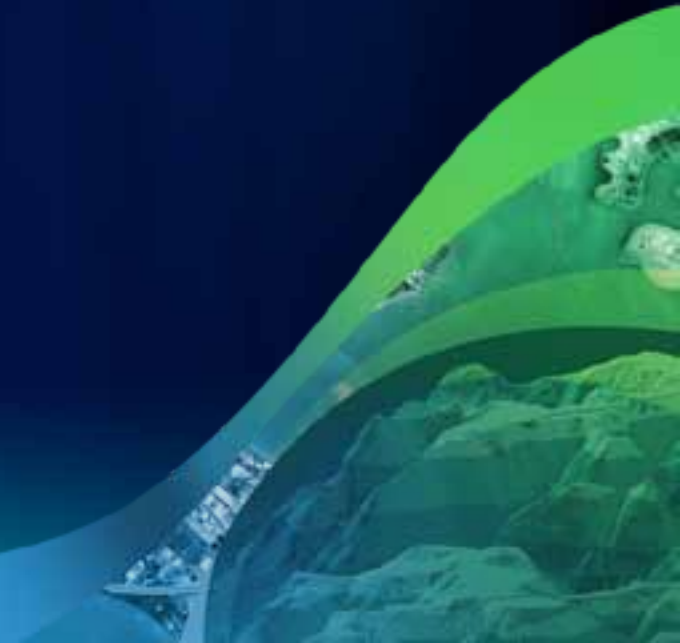
# See the exposed attributes you set in Explorer



## Other resources

- **Mobile Island (Hall B2)**
- **ArcGIS for Smartphones**
- <http://www.esri.com//smartphones/>
- **Mobile resource centers**
- <http://resources.arcgis.com/content/mobilegis/about>
- **Free web course - Mobile GIS: Creating Web Maps for Lightweight Mobile Apps**
- [http://training.esri.com/acb2000/showdetl.cfm?DID=6&Product\\_ID=995](http://training.esri.com/acb2000/showdetl.cfm?DID=6&Product_ID=995)

**Thank you**





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