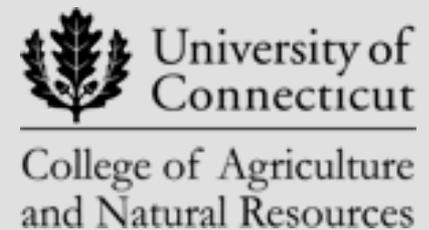


Introduction to ArcGIS Online: A User-Friendly Tool for Creating Interactive Web Maps

**Cary Chadwick &
Emily Wilson**

May 8, 2012



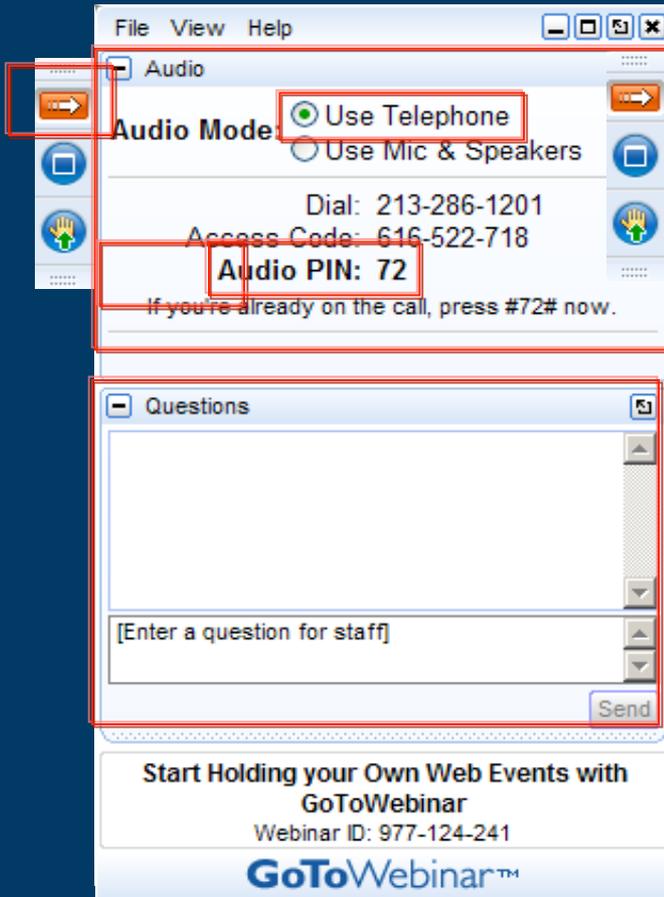
Welcome to the CLEAR Webinar Series!

This is the third webinar in the 2012 series:

- Introduction to Buildout Analyses, Now Online
- LID in CT: A Virtual Tour of Where it's Working, Now Online
- **Introduction to ArcGIS Online, May 8**
- Community Food Security in CT, July 10
- Climate Change Adaptation, September 11
- Green Infrastructure, October 16
- CT's Changing Landscape Revisited, November 13

Suggestions? Email clear@uconn.edu

How to Participate in the Webinar



- **Open and close your Panel**
- **View, Select, and Test your audio**
- **Submit text questions**
- **Pause for Q&A**
- **Polling**
- **Recording <http://clear.uconn.edu>**
- **Watch out for awkward pauses**

Center for Land Use Education and Research

CLEAR's Mission:
To provide information,
education and assistance
to **land use decision
makers** in support of
balancing growth and
natural resource
protection.

University of Connecticut

- College of Agriculture, Dept. of Extension
- College of Agriculture, Dept. of Natural Resources
- Connecticut Sea Grant

CLEAR Programs

- Connecticut NEMO
- National NEMO Network
- **Geospatial Training Program**
- Land Use Academy
- Extension Forestry Program
- Lab for Earth Resource Information Systems
- Green Valley Institute



CLEAR's Geospatial Training Program

Hands-on Short Courses in Geospatial Technologies:

- ❖ Geographic Information System (GIS)
- ❖ Global Positioning System (GPS)
- ❖ Interactive Web Mapping (ArcGIS Online, Google Maps, Google Earth)



<http://clear.uconn.edu/geospatial>

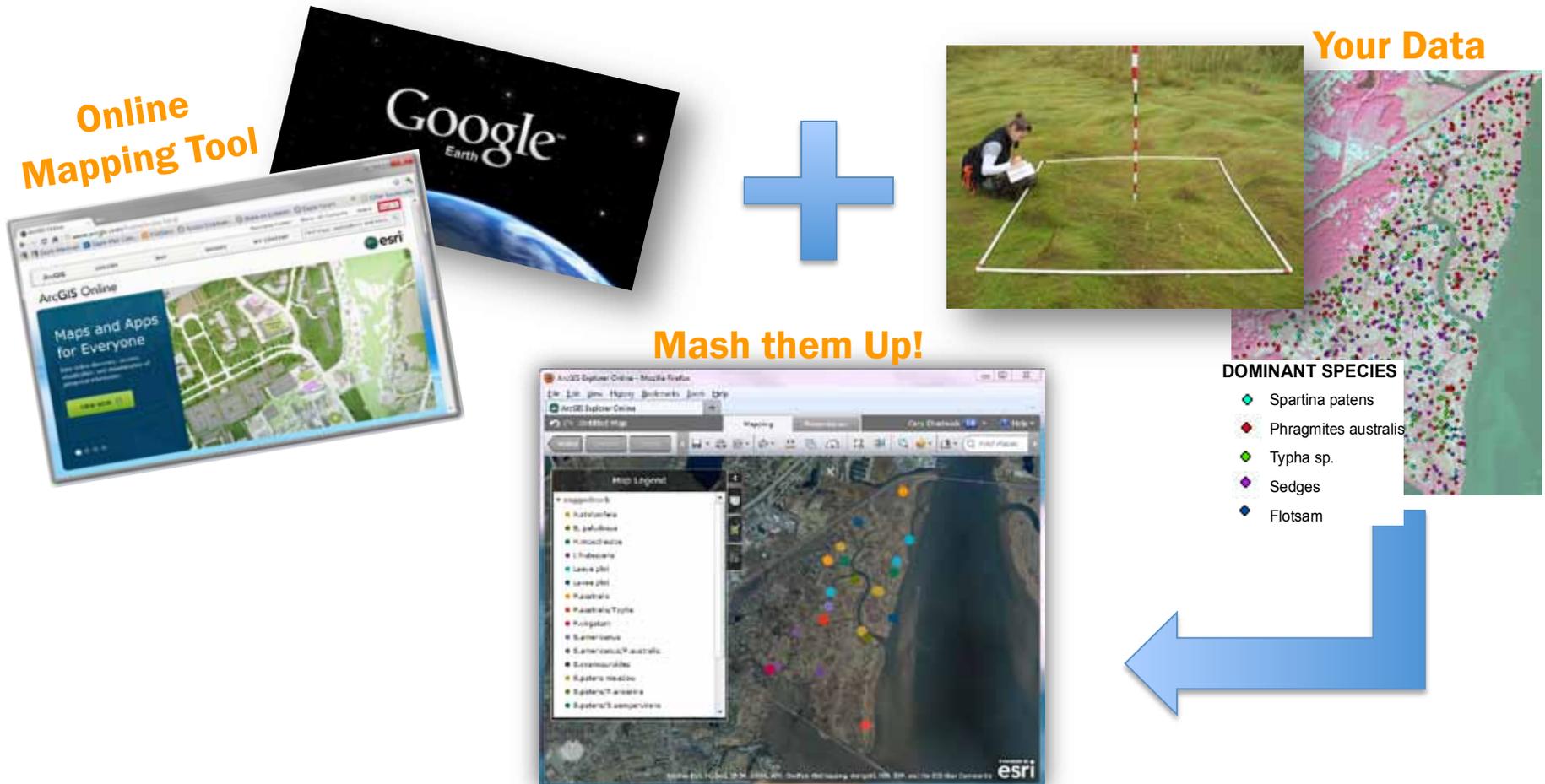


Webinar Agenda

- 1. Introduction to Web Mapping**
- 2. Move over Google, ArcGIS Online is here!**
- 3. The ArcGIS Online Map Viewer**
- 4. ArcGIS Explorer Online**
- 5. Sharing Maps, Embedding and Creating Web Mapping Applications**
- 6. Extras: Esri Smartphone App, Resources, Training**
- 7. Demos and Q& A**

Interactive Web Maps = “Mashups”

Mashups combine separate, stand-alone services or data sources to create a new, value-added product



The World's First Mapping Mashup

For Rent For Sale Rooms Sublets

City: *** Choose a city *** Price: \$1500 - \$2000 Show Filters Refresh



powered by [MapQuest](#) and [StreetView](#)
This site is in very close partnership with [MapQuest](#) or [Google](#)
[About / Feedback](#)

Map Satellite Hybrid

Drag the map with your mouse, or double-click to center.

Click on an  icon to select a city.

In each city, click on the  and  icons to see listings. You can also click the  and  icons next to each listing.

Yellow icons have pictures.

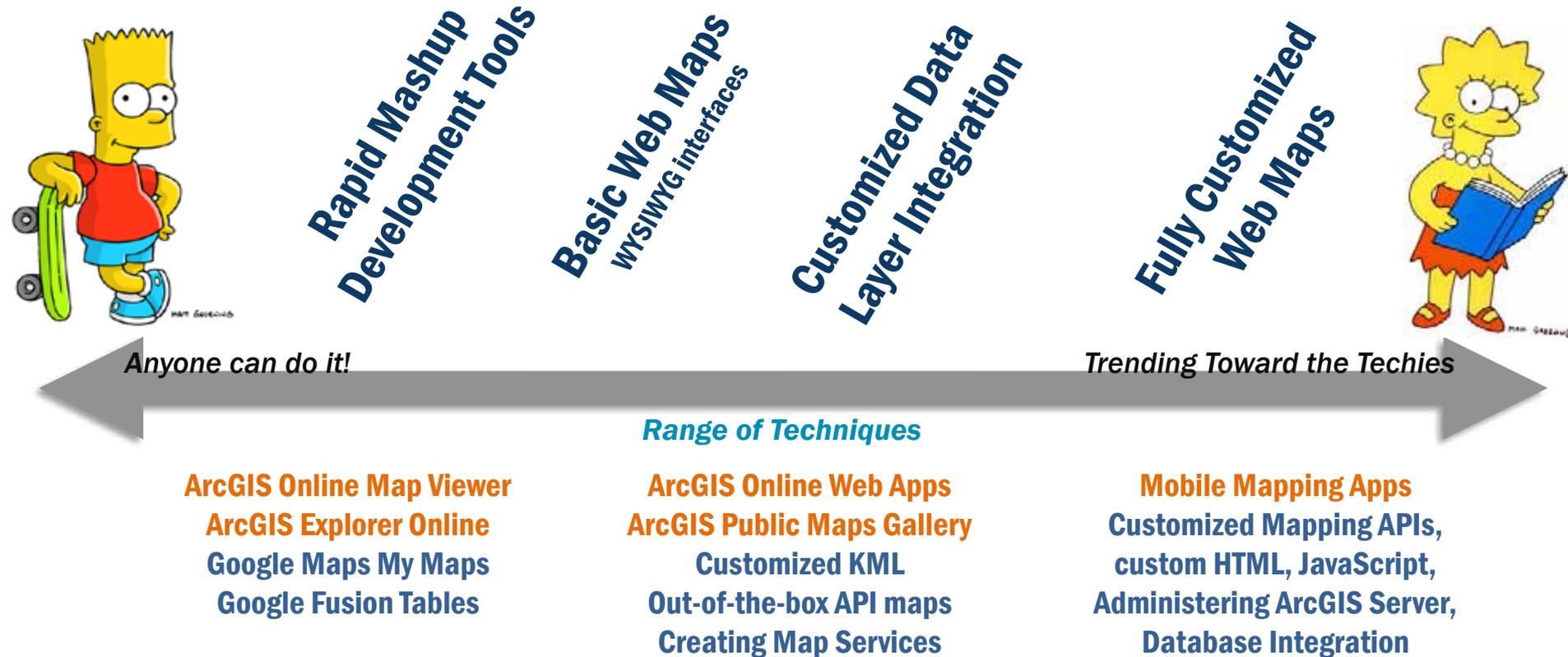
Set the price range using the drop-down menu above.

<http://housingmaps.com>

craigslist 



The Mashup Scale of Difficulty



**touched on in this
webinar*



Audience Poll

How would you rate your level of GIS expertise?



Homer



Bart



Maggie



Marge



Lisa



What does GIS stand for anyway??

I'm a GIS Master

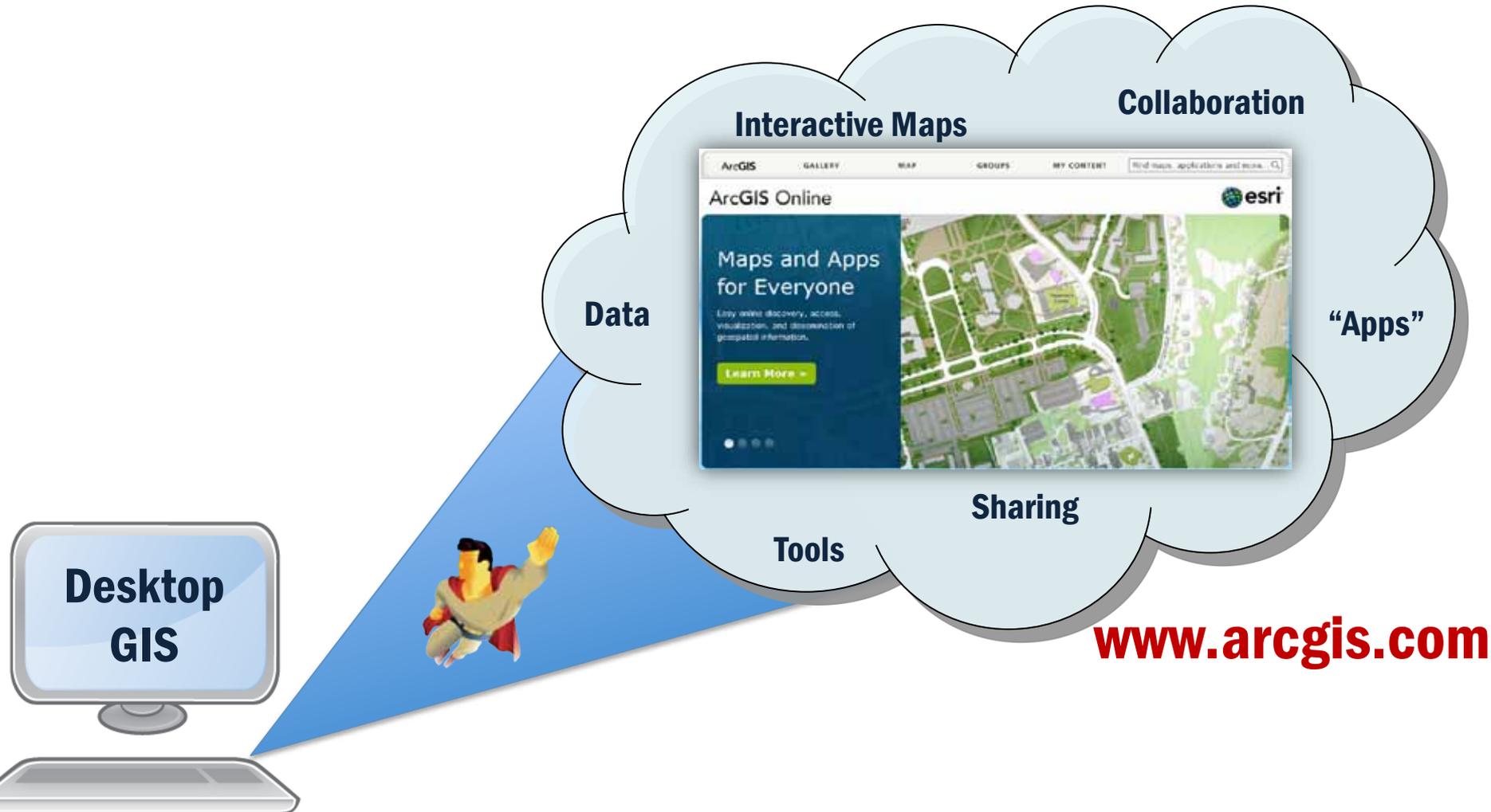
So Why Not Google?

Google paved the way for online maps. But...

ArcGIS Online has a vast GIS Kingdom behind it (Esri)



Esri's ArcGIS Online takes ArcGIS to the Cloud



www.arcgis.com

So What Exactly IS ArcGIS Online?

Esri says, “ArcGIS Online is a free, cloud based content management system for working with geographic information”

We say, “ArcGIS Online is a free, simple to use tool for creating interesting, interactive web maps by combining your own data with other public map resources. And, it’s wicked cool.”

Key Functions:

- **Create and store web maps**
- **Two separate web mapping tools for developing maps**
- **Web-enable your desktop GIS data**
- **Share maps, data and applications**
- **Find relevant basemaps, data and configurable GIS resources**
- **Collaborate with people all over the world**
- **Manage content and user groups**
- **Smartphone enabled**



Accessible through a website or mobile device

What You Need to Get Started

1. Internet Access

arcgis.com



2. A Free Esri Global Account

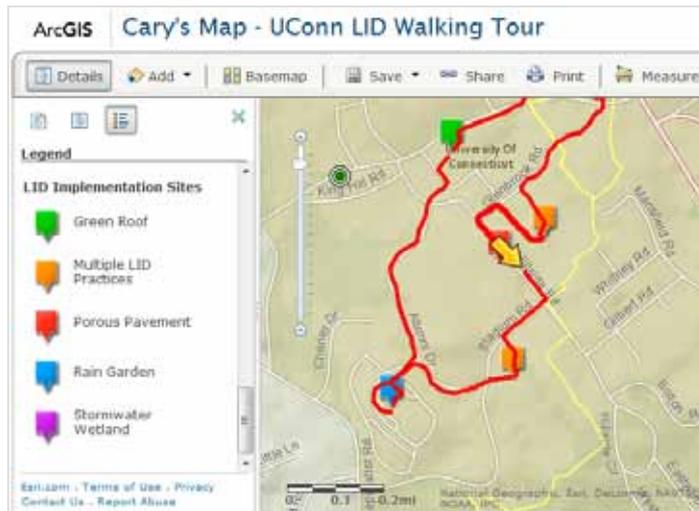
Sign In

Username:

Password:

[Need help signing in?](#)

3. Something to Map!

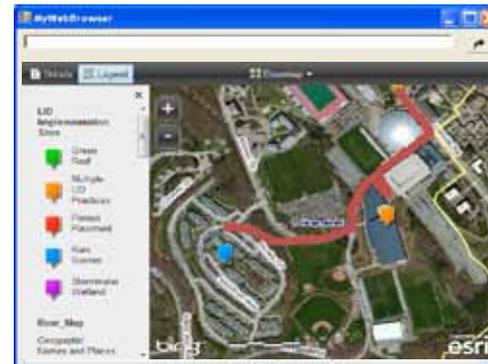


Helpful but not necessary



facebook

twitter



Supported Formats for ArcGIS Online

Supported Map Types:

- ArcGIS Online Web Map
- Map Package (.mpk)
- ArcMap Document (.mxd)
- ArcGlobe Document (.3dd)
- ArcScene Document (.sdx)
- ArcReader Document (.pmf)
- Tile Package (.tpk) (ArcGIS 10.1)



Supported Map Layers

- Feature Services
 - Map Services
 - Image Services
 - KML
 - WMS
 - Shapefile (.zip)
 - Delimited Text (.csv, .txt)
 - GPS (.gpx)
 - Layer packages (.lpk)
 - ArcGIS Explorer layer (.nmc)
 - “Map notes” layer (stored in an ArcGIS Online web map)
- From your ArcGIS Server or hosted via ArcGIS Online Subscription services (coming soon)

You Don't Always Need Your Own Data

Map Services are Everywhere!

Connecticut Environmental Conditions Online (CT ECO)

<http://www.cteco.uconn.edu>

CT ECO Connecticut Environmental Conditions Online
Maps and Geospatial Data for Planning, Management, Education and Research

► Maps ► Guides ▼ Data ► Training

Download Data Map Services Geoprocessing Tools

Map Services

- Base Map
- Base Map Political
- Northeast US
- Hurricane Surge
- Inundation
- Elevation and Bathymetry
- Habitat
- Open Space
- Soils
- Bedrock Geology
- Surficial Materials
- Quaternary Geology
- Erosion Susceptibility
- Watershed
- Water Resource Management
- Ortho 1990
- Ortho 2004
- Ortho 2006 Color NAIP
- Ortho 2008 4Band NAIP
- Ortho 2010 4Band NAIP
- Ortho 2008 Urban Area Color
- Ortho 2009 CIRCOC Color
- Ortho 2004 Coast Color
- Ortho 2004 Coast Infrared
- Ortho 2005 Coast Infrared
- Ortho 2010 Coast 4Band

Map Service Name: Base_Map
ArcGIS Server URL: http://www.ctecoapp2.uconn.edu/arcgis/services/maps/Base_Map

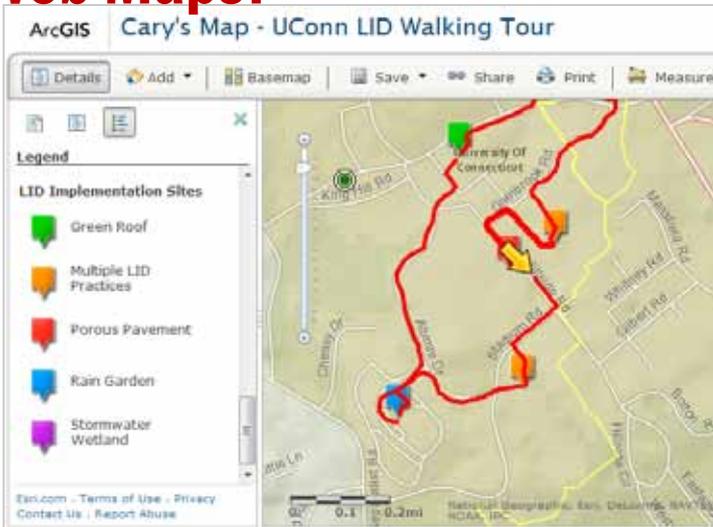


Open in ArcMap (ArcGIS 9.3 or more recent required)

Layer List	Data Guide	Metadata
Quad Index	-	Quad Index
Town Index	-	Town Index
County Index	-	County Index
Planning Region Index	-	Planning Region Index
House District Index	-	House District Index
Senate District Index	-	Senate District Index
US Congress District Index	-	US Congress District Index
Geographic Names	-	Geographic Names
Geographic Place Names	-	Geographic Place Names
Airport	-	Airport
Route	-	Route
Streets	-	No metadata available
Railroad	-	Railroad
Named Waterbody Line	-	Named Waterbody Line
Named Waterbody Poly	-	Named Waterbody Poly
Waterbody Line	-	Waterbody Line
Waterbody Poly	-	Waterbody Poly
Hydrography Line	-	Hydrography Line
Hydrography Poly	-	Hydrography Poly
Connecticut Town Line	-	Connecticut Town Line
Connecticut Town Poly	-	Connecticut Town Poly
Connecticut Mainland Poly	-	Connecticut Mainland Poly
Connecticut Mainland Line	-	Connecticut Mainland Line
Connecticut State Line	-	Connecticut State Line
Connecticut State Poly	-	Connecticut State Poly
CT and Vicinity Town Line	-	CT and Vicinity Town Line
CT and Vicinity Town Poly	-	CT and Vicinity Town Poly
Northeast State Line	-	Northeast State Line
Northeast State Poly	-	Northeast State Poly

End Products

Web Maps!



Web enabled content:

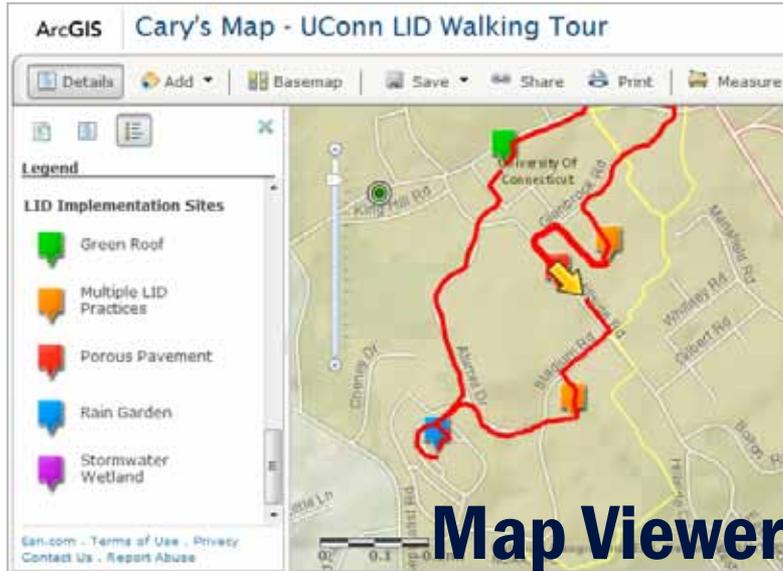


Interactive Websites:



Deploy and Distribute Data

Two Different Mapping Applications



Map Viewer



Explorer Online



ArcGIS Online has TWO mapping tools:

- The Map Viewer
- Explorer Online



Map Description Page

OK, what's the difference?!

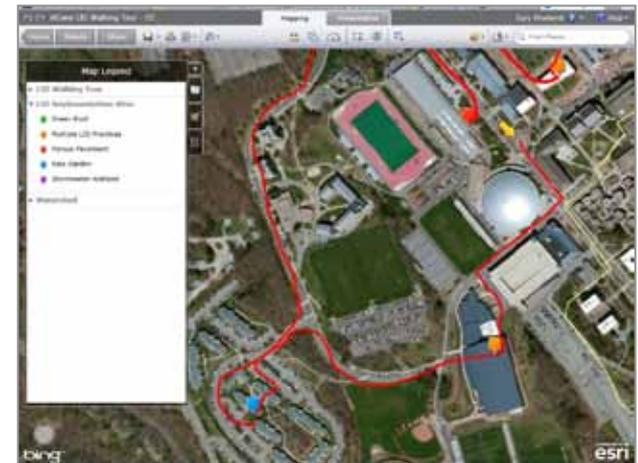
ArcGIS Map Viewer:

- Simple, user friendly interface
- Provides access to basemaps and map services
- User can create new data, customize display
- Built on Javascript API (can use on iPhone/iPad)



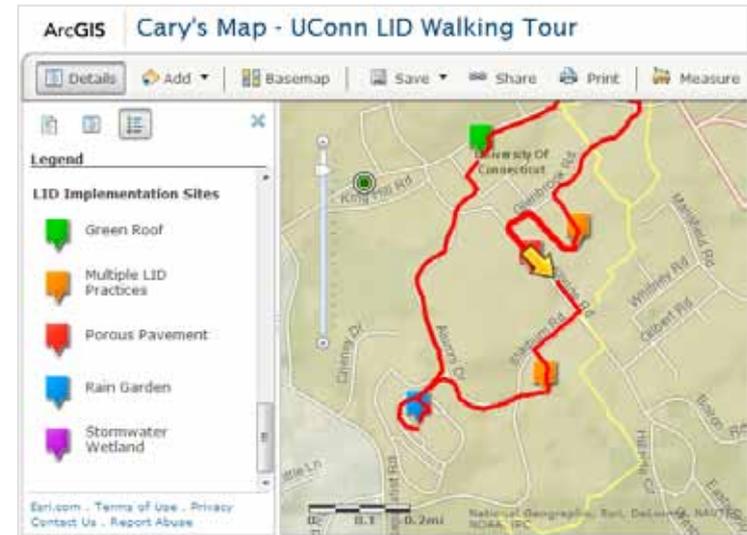
ArcGIS Explorer Online:

- More "gadgets"
- Slicker interface
- Presentation mode
- More GIS functions
- Uses Microsoft Silverlight browser plugin (can't use on iPhone/iPad)



ArcGIS Online Map Viewer - Key Functions

- **Built in basemaps, searchable data layers**
- **Built in tools:**
 - **measure features**
 - **bookmark locations**
 - **address/placename search**
 - **customization tools (colors, pop-ups, etc.)**
 - **print and share**
- **Add data from multiple sources:**
 - **layer from file (SHP, GPX, TXT, CSV)**
 - **layer from web (map service, WMS, KML, CSV)**
 - **search for layer (published by organizations that have made their map services accessible)**
 - **editable layer (map notes)**
- **Easy to use, less “buggy” than ArcGIS Explorer Online**
- **Works on iPad/iPhone. Yay!**

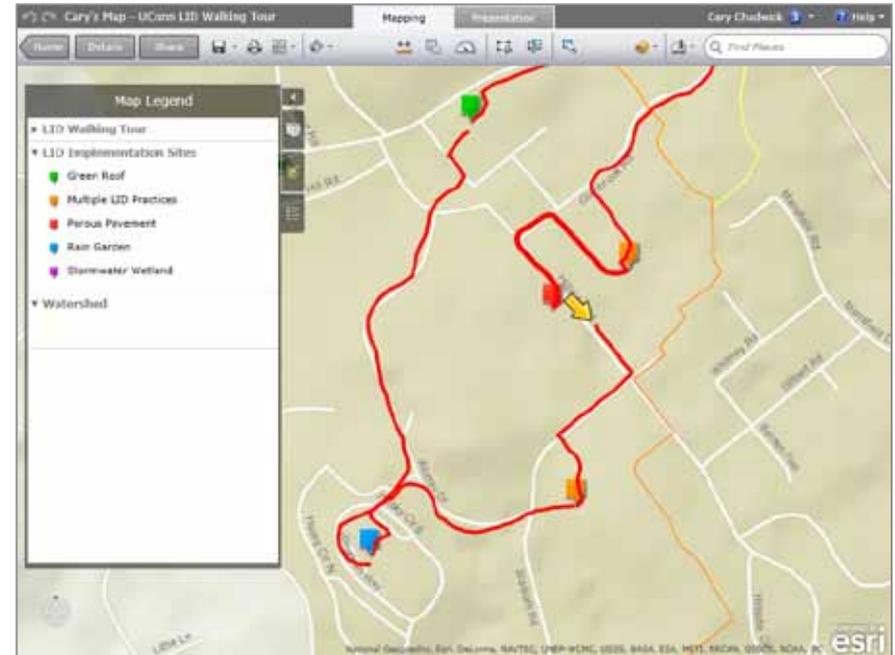


Live DEMO: The ArcGIS Online Map Viewer



ArcGIS Explorer Online- Key Functions

- **Similar to the Map Viewer:**
 - basemaps
 - basic tools and customization
 - add data from multiple sources
 - print and share
- **Additional Functions:**
 - Perform data queries
 - Add “Dashboard Gadgets”
 - Presentation Mode
 - “slicker” interface



Important Notes:

- Requires the Microsoft Silverlight Browser Plugin
- Generally found to be more “buggy” than the Map Viewer

The ArcGIS Explorer Online GUI

Toolbar *Save - Print - Basemap - Add Content - Measure - Query - Dashboard - Edit - Select - Zoom*

Sidebar

Navigation Tools

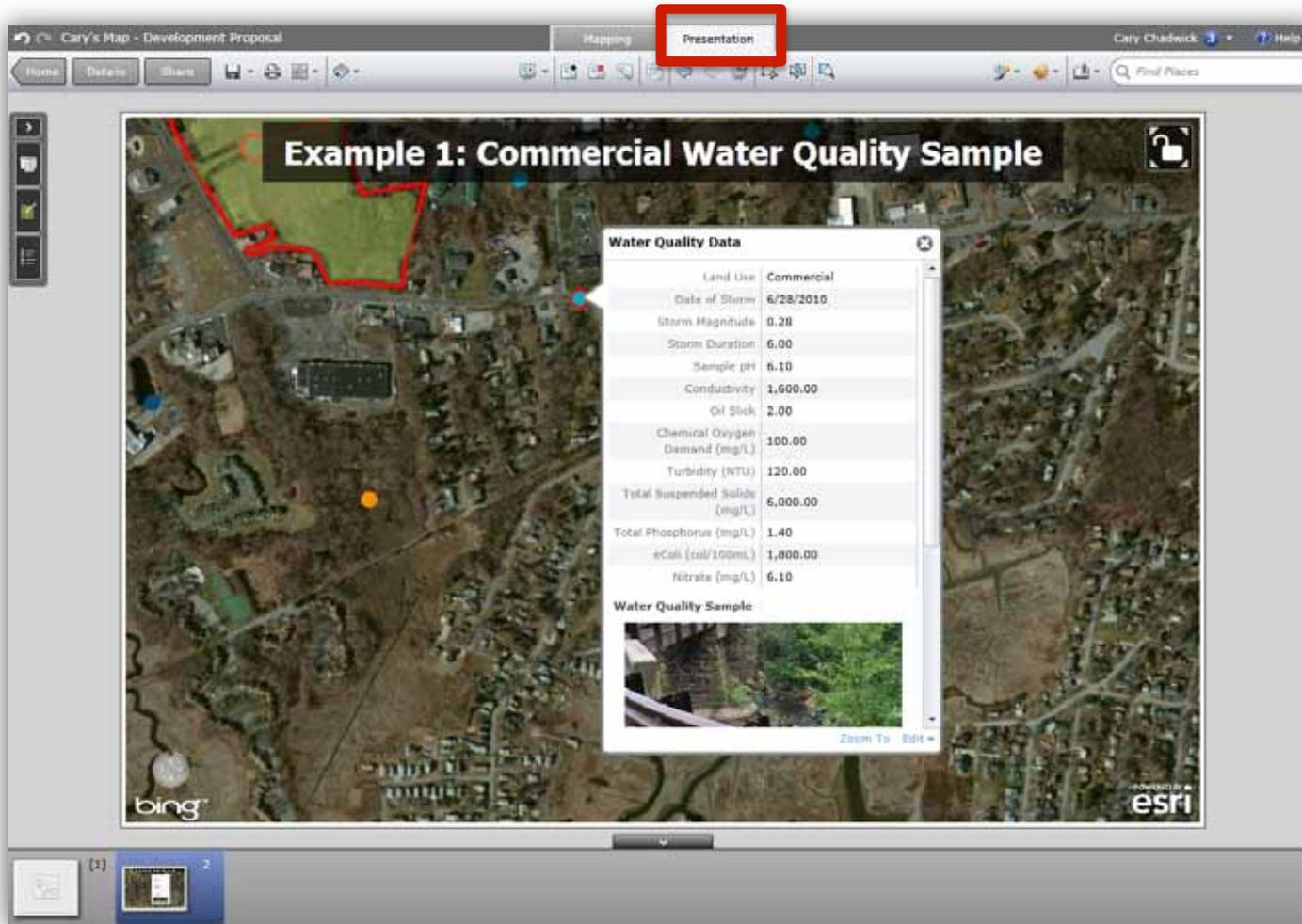
Dashboard Gadgets

Water Quality Data

The screenshot displays the ArcGIS Explorer Online interface. At the top, a toolbar contains icons for Save, Print, Basemap, Add Content, Measure, Query, Dashboard, Edit, Select, and Zoom. Below the toolbar is a sidebar with navigation and map management tools. The main map area shows an aerial view of a residential development with a green polygon highlighting a specific area. A navigation tools panel is located in the bottom-left corner. On the right side, a dashboard gadget displays water quality data. The dashboard includes a bar chart for 'Water Quality Sample Results' (Residential), a gauge for 'Total Phosphorus (mg/L)' (Residential: 0, Industrial: 4), and another gauge for 'eColi colonies' (Residential: 850, Industrial: 5800). A 'New Column Chart' gadget is also visible at the bottom of the dashboard.

Category	Value
Total Phosphorus (mg/L) - Residential	0
Total Phosphorus (mg/L) - Industrial	4
eColi colonies - Residential	850
eColi colonies - Industrial	5800

Other Nifty Functions – Presentation Mode



The screenshot shows a web application interface for a map. The browser address bar indicates the page is titled "Cary's Map - Development Proposal". The application has a navigation menu with "Home", "Details", and "Share" buttons. A "Presentation" button is highlighted with a red box. The main map area displays an aerial view with a red outline around a specific area. A popup window titled "Water Quality Data" is open, showing the following information:

Example 1: Commercial Water Quality Sample

Water Quality Data	
Land Use	Commercial
Date of Storm	6/28/2010
Storm Magnitude	0.28
Storm Duration	6.00
Sample pH	6.10
Conductivity	1,600.00
Oil Slick	2.00
Chemical Oxygen Demand (mg/L)	100.00
Turbidity (NTU)	120.00
Total Suspended Solids (mg/L)	6,000.00
Total Phosphorus (mg/L)	1.40
eColi (col/100ml)	1,800.00
Nitrate (mg/L)	6.10

Below the data table is a section titled "Water Quality Sample" with a small image of a water sample and "Zoom To" and "Edit" options.

- Create “Slides”
- Save Presentation
- Run Presentation
- Embed Presentation

Live DEMO: ArcGIS Explorer Online



ArcGIS Online Groups, Sharing & Publishing Tools

Ways to Share Your Maps:

- **Make your map “public”**
 - **Searchable, embeddable, tag-based**
 - **Create and participate in Groups**
 - **Share via URL, Social Media, email**
- **Embed in third party site:**
 - **Via HTML code snippet**
 - **Hosted or downloadable web application template**
 - **ArcGIS Online Map Gallery template**

(<http://tinyurl.com/PublicMapGallery>)



Live DEMO: Sharing Techniques



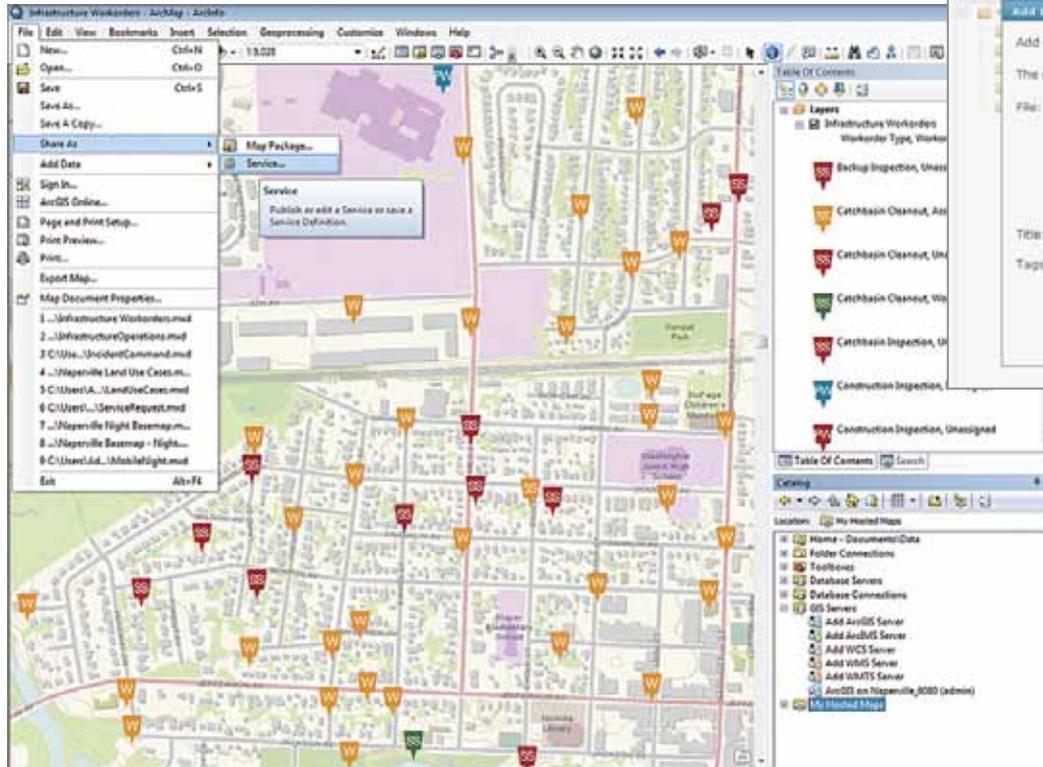
Extra Food for Thought

- **ArcGIS Online for Organizations**
- **Esri Smartphone App**
- **Resources and Training**
- **Contact Info**
- **Q&A**

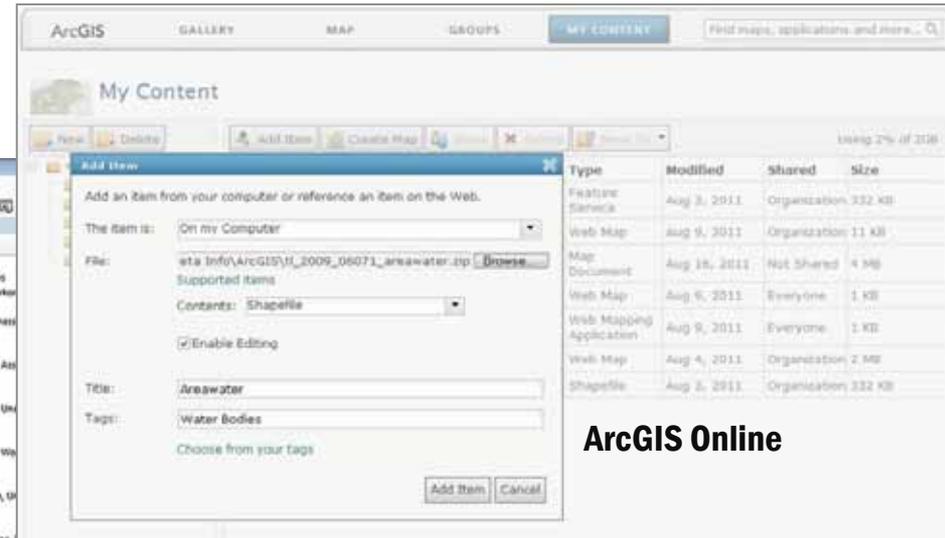


Subscription Based Services – Coming Soon!

ArcGIS Online for Organizations



ArcGIS Desktop



ArcGIS Online

- Publish map services without need for ArcGIS Server software
- Manage user roles, access and security
- Personalized ArcGIS Online homepage and URL
- Beta Fall 2011, release Q2 2012?
- Cost?

Example: Geospatial Platform

The image shows two views of the Geospatial Platform website. The left view is the homepage, featuring a large green banner with the text "Welcome to the Geospatial Platform" and a description of the platform's purpose. Below the banner are sections for "Featured Maps" and "Collaborate in Groups". The right view is a gallery page, where the "GALLERY" button in the navigation menu is circled in red. This page displays "Geospatial Platform Featured Content" with a grid of map thumbnails and their titles: "Atlantic Offshore Seabird Dataset Catalog", "National Wetlands Inventory", "NOAA Weather Radar and Weather Warnings", "EPA Cleanup sites", "United States Omernik Ecoregions", and "USGS - The National Map". A search bar and navigation menu are also visible in the gallery view.

<http://www.geoplatform.gov>



The ArcGIS Smartphone App



- **Access map galleries**
- **Navigate**
- **Search, identify, measure**
- **Collect, modify, share data**
- **Develop custom applications**



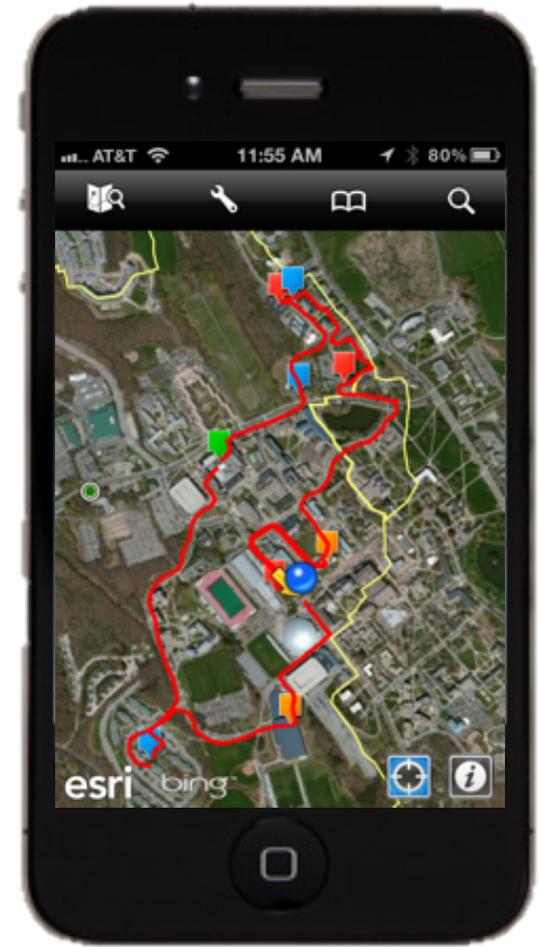
The ArcGIS Smartphone App

- **Access map galleries**



The ArcGIS Smartphone App

- **Access map galleries**
- **Open saved maps**



The ArcGIS Smartphone App

- **Access map galleries**
- **Open saved maps**
- **Navigate**



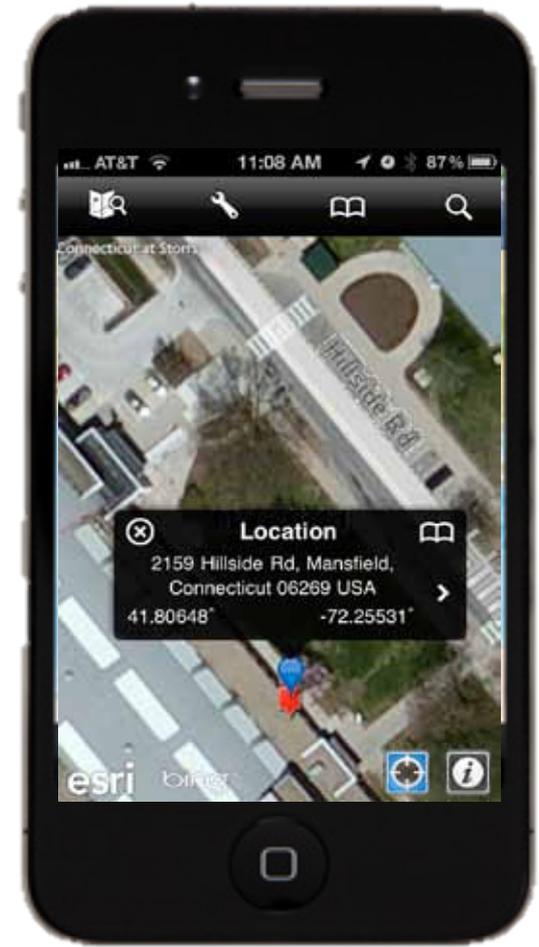
The ArcGIS Smartphone App

- **Access map galleries**
- **Open saved maps**
- **Navigate**
- **Measure**



The ArcGIS Smartphone App

- **Access map galleries**
- **Open saved maps**
- **Navigate**
- **Measure**
- **Search and Identify Features**



The ArcGIS Smartphone App

- **Access map galleries**
- **Open saved maps**
- **Navigate**
- **Measure**
- **Search and Identify Features**
- **Collect, Modify and Share Data**



Helpful Resources

<http://tinyurl.com/ArcGISOnline>

1. The ArcGIS Online User's Guide
2. The ArcGIS Online Blog
3. The ArcGIS Online Forum
4. US!



 A screenshot of the ArcGIS Resource Center website. The page title is "What is ArcGIS Online?". It features a "Beta!" banner with the text: "An ArcGIS Online subscription lets you manage your geospatial assets and publish maps and data to the cloud. The ArcGIS 10.1 community is now invited to join the beta testing program. See the [ArcGIS Beta Community](#) for more information." Below this, there is a paragraph describing ArcGIS Online as a complete, cloud-based, collaborative content management system. At the bottom of the page, there is a diagram showing several groups of people (represented by icons) connected to a central globe, illustrating a collaborative network. The website navigation includes "Help", "Blogs", and "Forums" links.

Hands On Training

UConn CLEAR Geospatial Training Program

Using ArcGIS Online to Create and Share Interactive Web Maps

June 7th

9 AM-4:30 PM

Haddam, CT

clear.uconn.edu/geospatial



Thanks!

<http://clear.uconn.edu>



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Q&A

