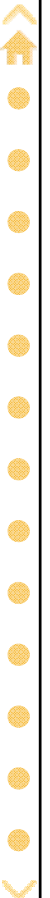


Introduction to ArcGIS Online and Story Maps

Presented by the University of Connecticut's
Center for Land Use Education and Research
(CLEAR)



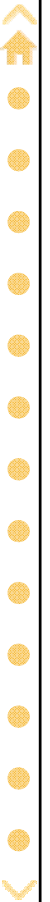
Welcome!


- Instructor Introductions
- Course logistics
- Student Introductions
 - Name
 - Organization
 - Role in Organization
 - Any mapping experience?



Overall Learning Objectives


- Introduction to Web GIS
- Understanding Esri's ArcGIS Online Infrastructure
- Web Maps – building, customizing, using them
- Access and use of online GIS data
- Sharing – links, embed, apps and...
- Story maps!



UConn UNIVERSITY OF CONNECTICUT


Workshop Webpages

UConn UNIVERSITY OF CONNECTICUT



Geospatial Training Program

A part of UConn's Center for Land Use Education and Research

Home
About
Geospatial 101
Training
Data Resources
Projects
Contact
CLEAR

Introduction to ArcGIS Online & Esri Story Maps

Workshop Agenda & Overview | [Story Map sections & text](#) | [Final story maps](#)

Workshop Agenda, Details and Links

9:00 Introductions, logistics, overview

Part I: Introduction to ArcGIS Online

9:20 Introduction to GIS & ArcGIS Online

ArcGIS Online
A GIS Story

Exercise 1: Follow the Leader: ArcGIS Online Overview

9:45 AM The ArcGIS Online Web Map


Exercise 2a: ArcGIS Online Web Map Basics

Introduction to ArcGIS Online & Esri Story Maps

Workshop Agenda & Overview | [Story Map sections & text](#) | [Final story maps](#)

Building Your Story Map Journal

The content below is referenced by the workshop manual which provides step-by-step instructions for creating a Story Map Journal. Normally, you would spend a significant amount of time doing your own research and planning for a story map. For the purposes of this workshop, we did that work for you. Below is a link to the [final story map](#) as an example. Use it as a reference while building your story map.

CLEAR


The Connecticut Valley Railroad: Then to Now

By the University of Connecticut, Center for Land Use Education and Research (CLEAR) for use in Geospatial Training

The introduction of the Connecticut Valley Railroad in 1871 offered a faster and more efficient way to transport both goods and people through the Connecticut River Valley.

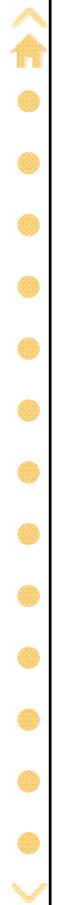
During the 19th century, Hartford, Connecticut was one of the fastest growing cities in the United States. Goods and people traveled through the Connecticut River Valley.

Instructions:

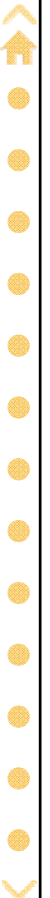
The story map journal content follows. Each heading represents a different section of the Map Journal. Follow the guided exercise in the workshop manual to get started.

The title of the Map Journal story map is: **The Connecticut Valley Railroad: Then to Now.**

<http://s.uconn.edu/storymaps>



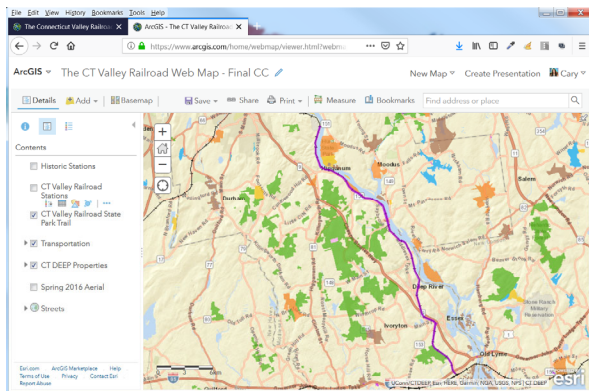
Workshop Agenda



- **Part I: Introduction to ArcGIS Online**
 - AGOL basics
 - The Web Map
 - Navigation
 - Data and sources
 - Working with layers, customization
 - Sharing
- **Part II: Introduction to Story Maps**
 - What are Story Maps?
 - How Story Maps work
 - Build a Map Journal Story Map
 - Build a Story Map Tour
 - Resources, Extras and more

Web Map vs. Story Map

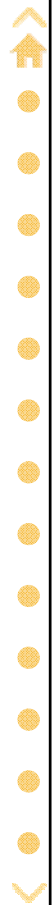
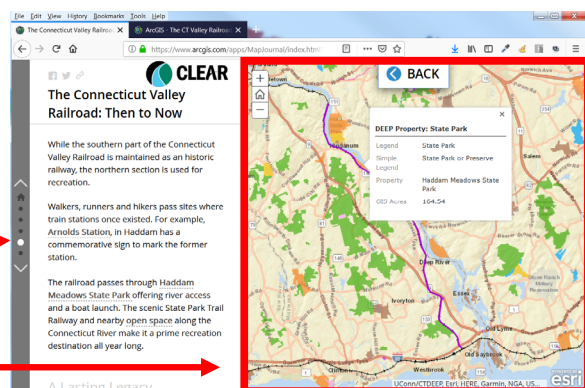
ArcGIS Online Story Map



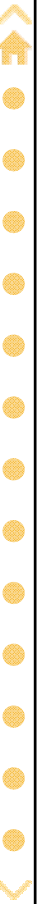
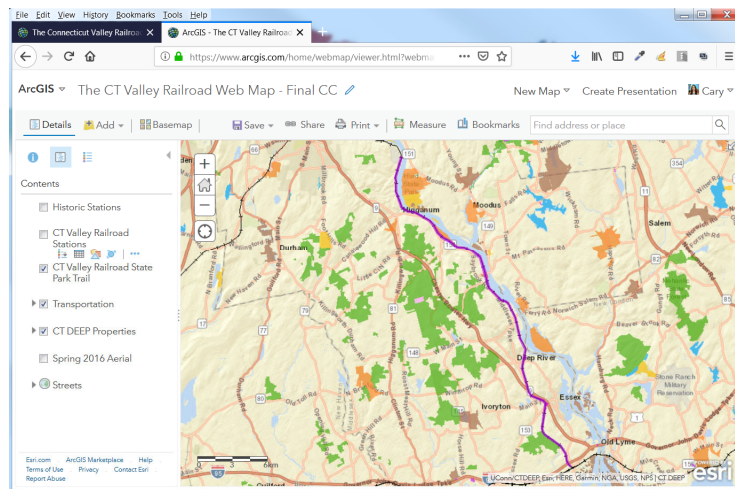
ArcGIS Online Web Map



Demo!



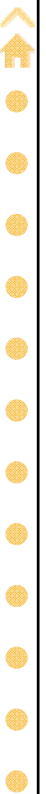
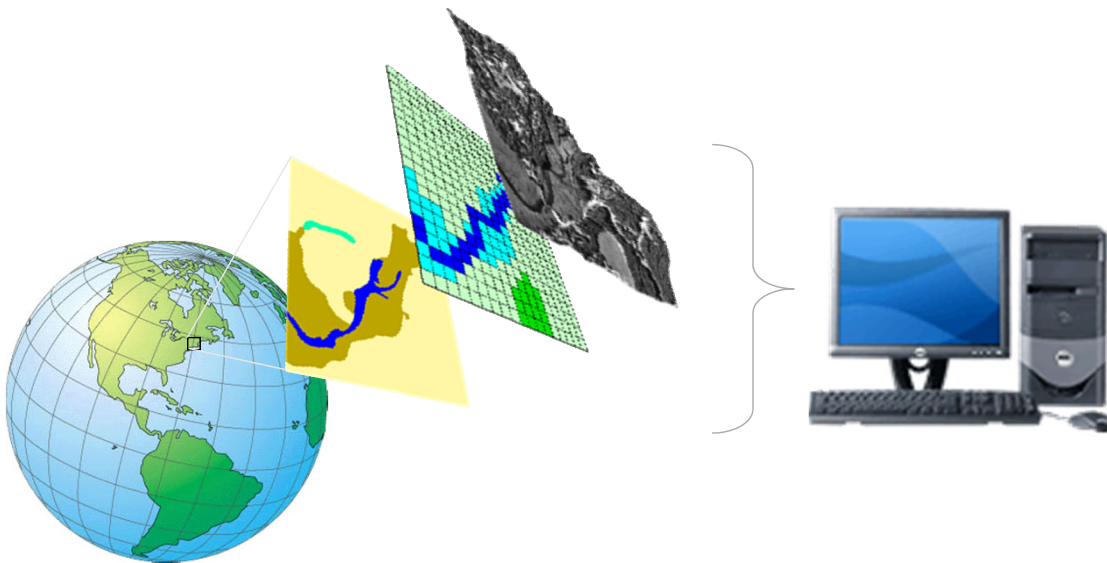
Part I: Introduction to ArcGIS Online



A Little Background

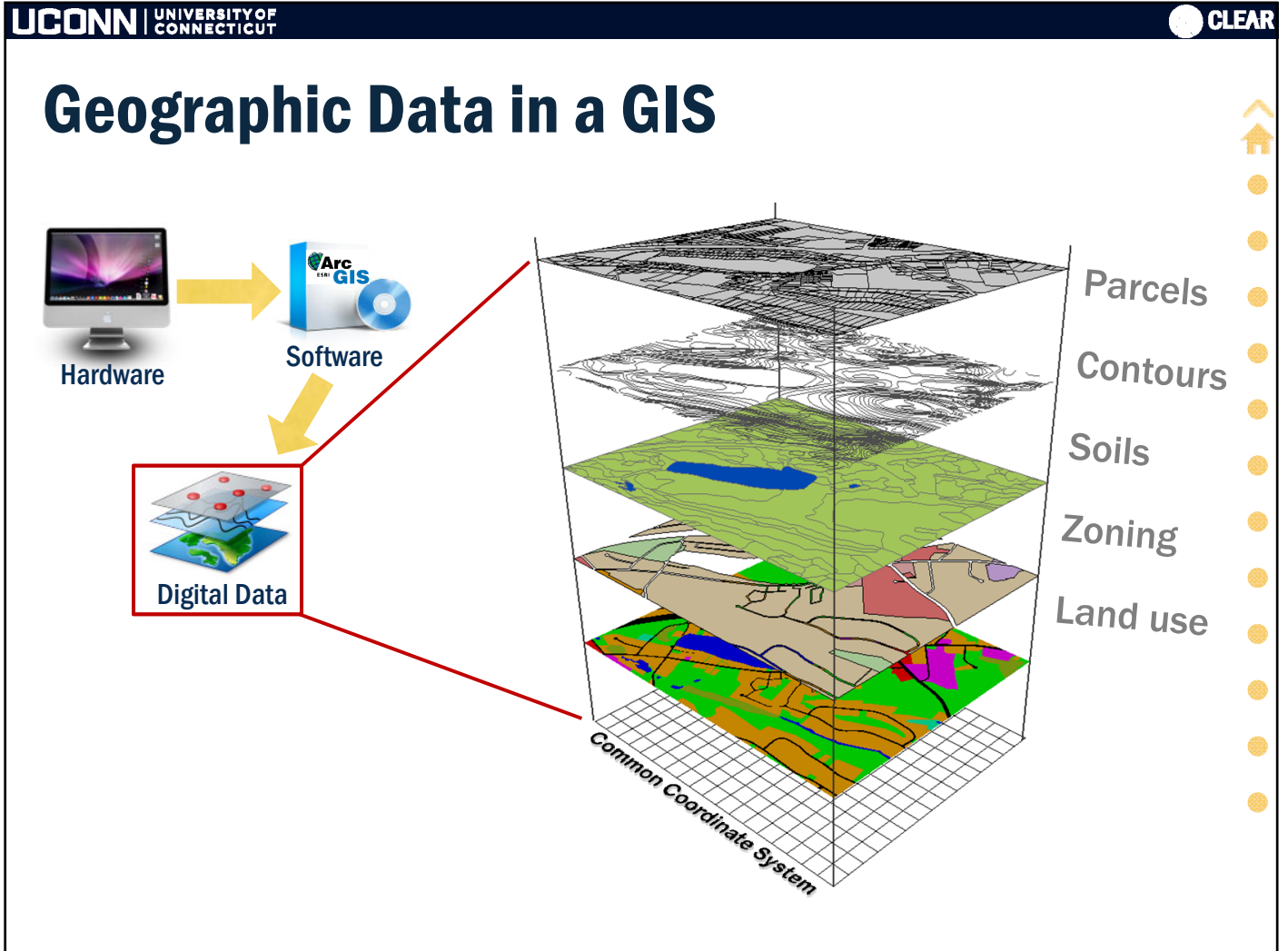
Geographic Information System

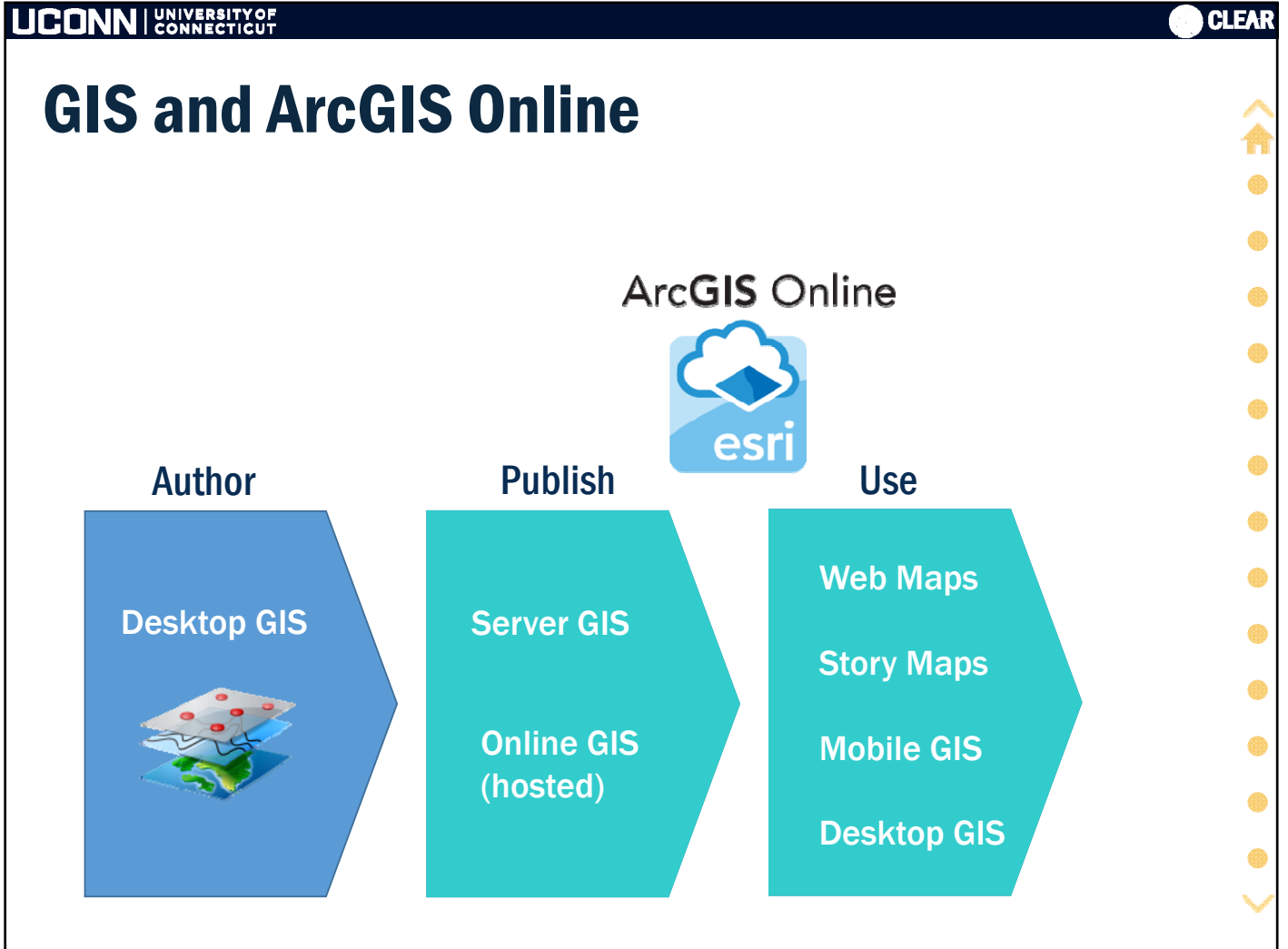
A computer system that hold and uses data describing places on the earth's surface.



There's a Story Map for That!





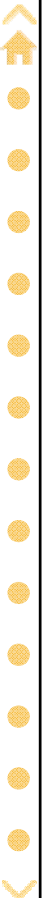


A Note about Esri



Who is Esri?

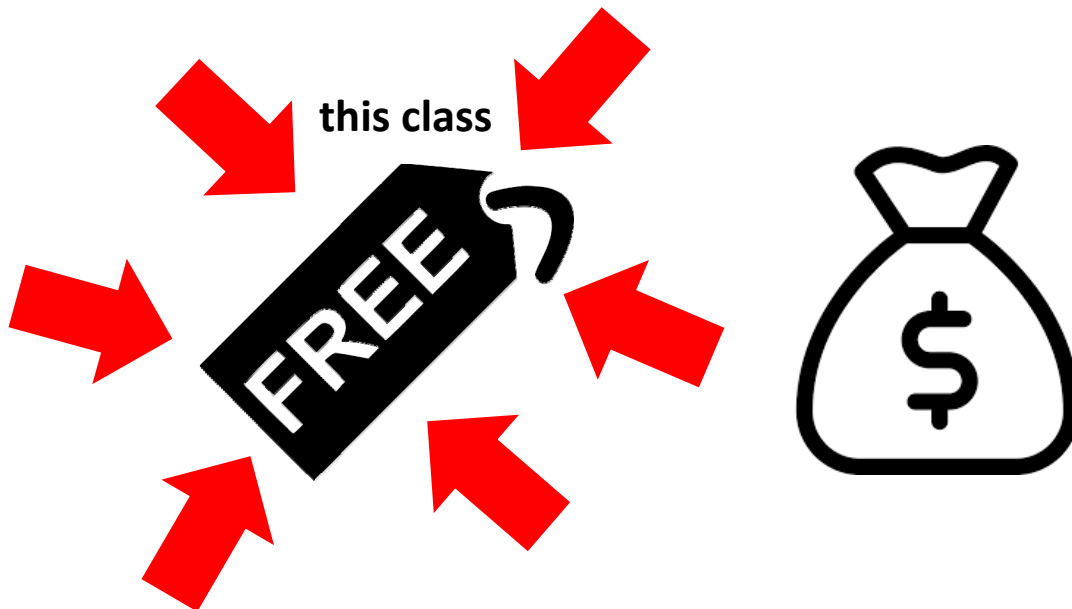
- GIS powerhouse (ArcGIS Desktop)
- GIS data on the web (Server GIS, hosted services)
- Consume GIS data on the web (ArcGIS Online)
 - Customize maps
 - Share and collaborate
 - Web mapping applications
 - Developer APIs
 - Story maps!



ArcGIS Online Basics

Your User Account

- Free Public Accounts
- Subscription-based Organization Accounts



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ArcGIS Online Basics

https://www.arcgis.com

The ArcGIS Online Home Page

Title Bar

ArcGIS Overview Pricing Map Scene Groups Content

Search **Log in**

Featured Content

Country Population Estimates, 2015, from United States
Seismic Seafloor Feature Anomalies (Mature Support)
Southern Pine Beetle Prevention Program
Streets

Resources

✓ **Apps for Everyone**
 Use ArcGIS apps to get the job done.

📄 **Make a Map**
 Create a map that can be viewed in a browser, desktop or mobile device. Share it on a blog, via email, or embed it in a website.

📁 **ArcGIS for Developers**
 Build custom web and mobile applications that incorporate your maps and data.

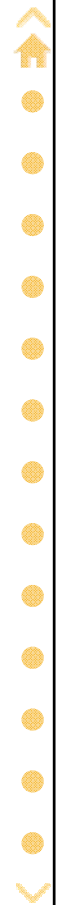
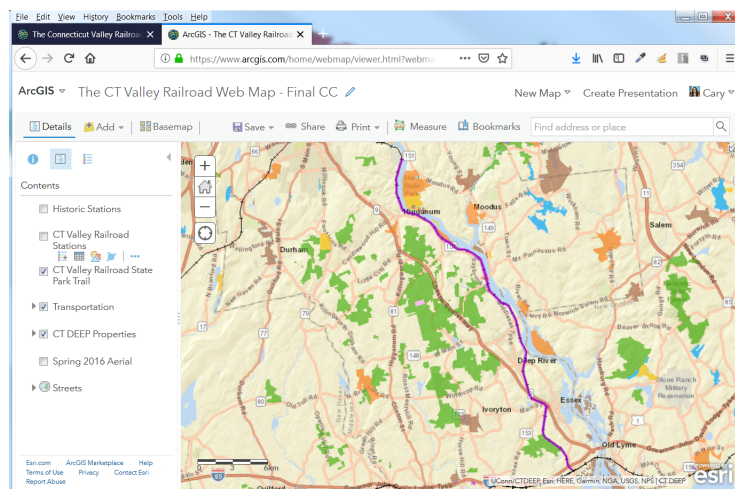
📖 **Discover Lessons**
 Take hands-on lessons based on real-world problems.

Hands-on: Follow the Instructor

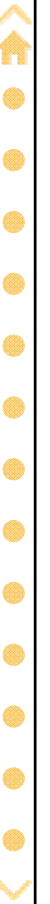
- Log into ArcGIS Online
- Click through the heading tabs
 - Content
 - Groups
 - Map
- Search for content



The ArcGIS Online Web Map



The AGOL Web Map



Web Map Overview


- GUI, tools and basemaps
- Searching and finding data in AGOL
- Adding data from a GIS server

Saving, Sharing & Using a Web Map

- My Content
- Public v. Private
- Share links, embed code and web apps
- Content source for story maps

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AGOL Home Links **You!**

ArcGIS ▾ My Map **Header/Toolbar** New Map  Cary ▾

Details Add ▾ Basemap Save ▾ Share Print ▾ Measure Bookmarks Find address or place




Navigation Tools


Map

Details/Contents

Make your own map


It's easy to make your own map. Just follow these steps:

- 1. Choose an area.**
Pan and zoom the map to an area or search by its name or address.
- 2. Decide what to show.**
Choose a  Basemap then  Add layers on top of it.
- 3. Add more to your map.**
 Add map notes to draw features on the map.

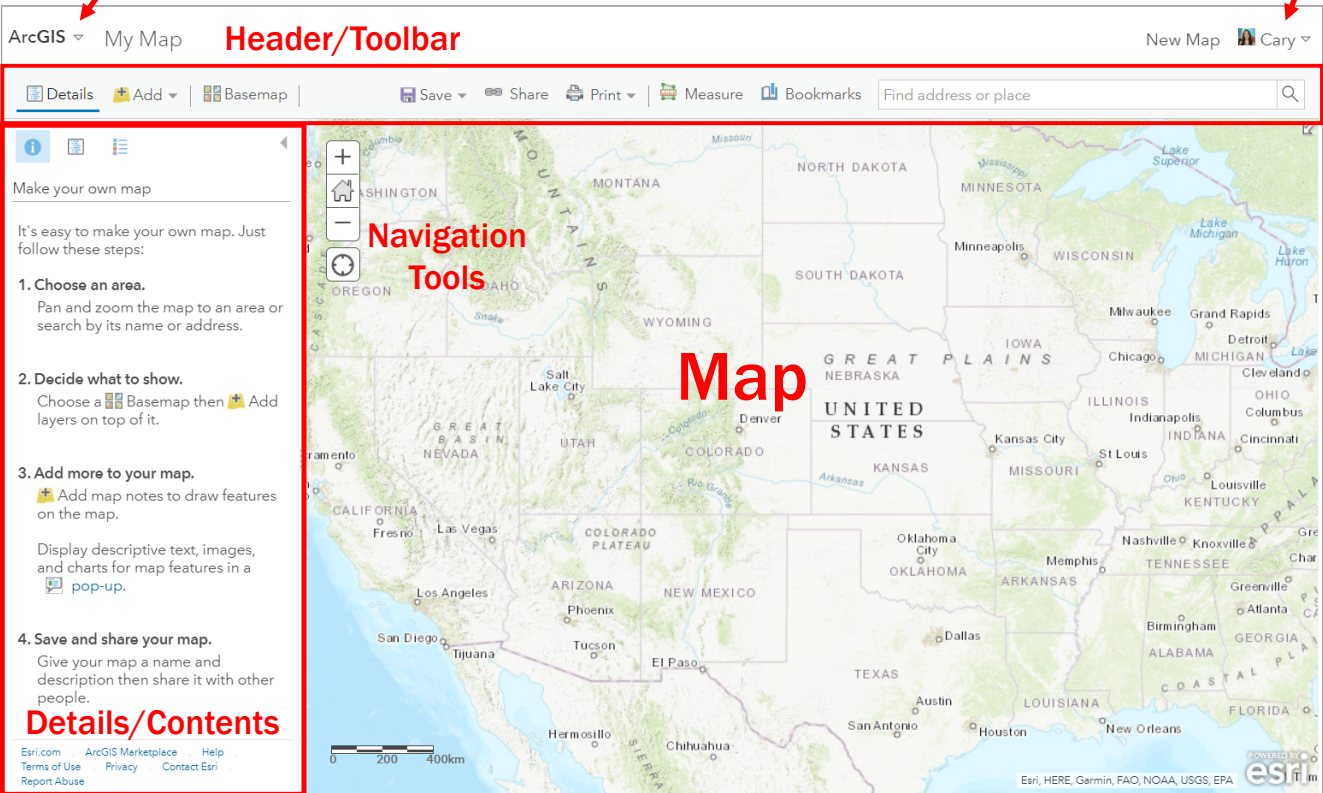
Display descriptive text, images, and charts for map features in a  pop-up.
- 4. Save and share your map.**
Give your map a name and description then share it with other people.

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

0 200 400km

POWERED BY  esri

Esri, HERE, Garmin, FAO, NOAA, USGS, EPA



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ArcGIS My Map **Change Basemap/Add Data Options** New Map Cary

Details Add Basemap Save Share Print Measure Bookmarks Find address or place

Select a basemap

Make your own map

It's easy to make your own map. Follow these steps:

- Choose an area.**
Pan and zoom the map to the area you want to use.
- Decide what to show.**
Choose a Basemap layer on top of it.
- Add more to your map.**
Add map notes to the map.
Display descriptive text and charts for map features.
- Save and share your map.**
Give your map a name and description then share it with people.

Imagery Imagery with Labels Streets

Topographic Dark Gray Canvas Light Gray Canvas

National Geographic Terrain with Labels Oceans

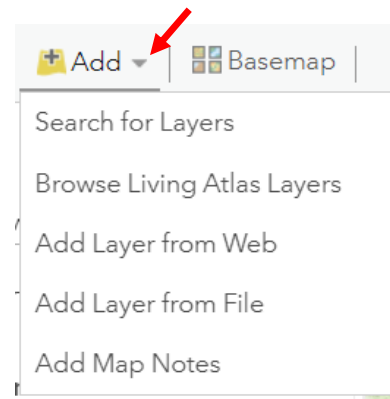
OpenStreetMap USA Topo Maps USGS National Map

Esri.com ArcGIS Marketplace Terms of Use Privacy Contact Esri Report Abuse

Esri

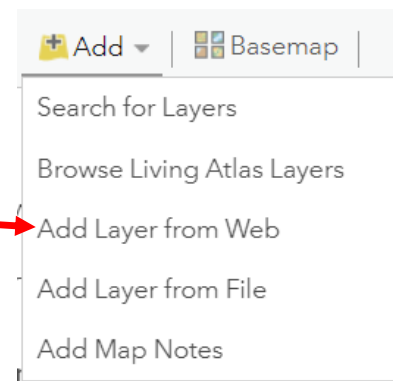
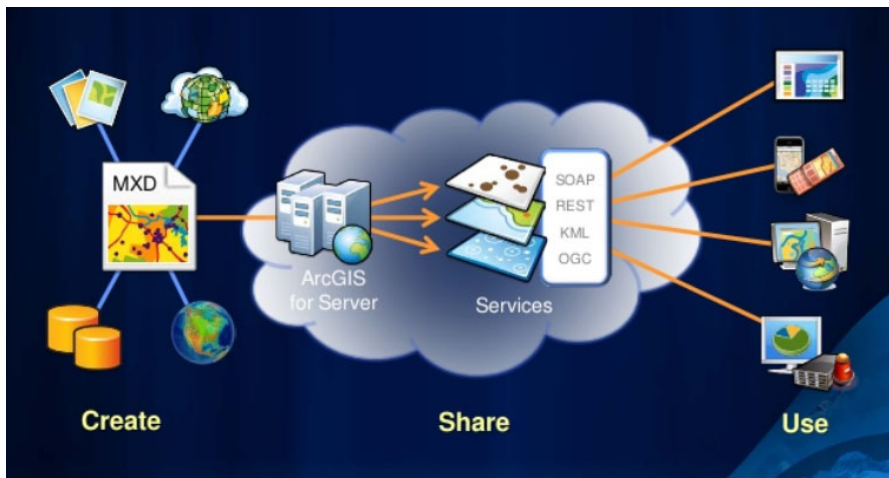
Adding Data to Your Map

- **Search for Layers**
 - Search all GIS data registered by AGOL users as “public” information
- **Browse Living Atlas Layers**
 - Search Esri’s curated GIS data, some restrictions apply
- **Add Layer from Web**
 - Add GIS data from a GIS web server
- **Add Layer from File**
 - Upload GIS data from your computer
- **Add Map Notes**
 - Create a new data layer in your map



Let's Talk about REST

REST = Representational State Transfer

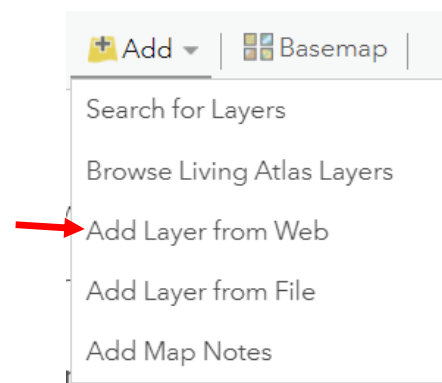


Least Talk about REST

REST = REpresentational State Transfer

For ArcGIS Server, the default endpoint is as follows:

```
https://<host>/<site>/rest/services/<folder>/<serviceName>/<serviceType>
```

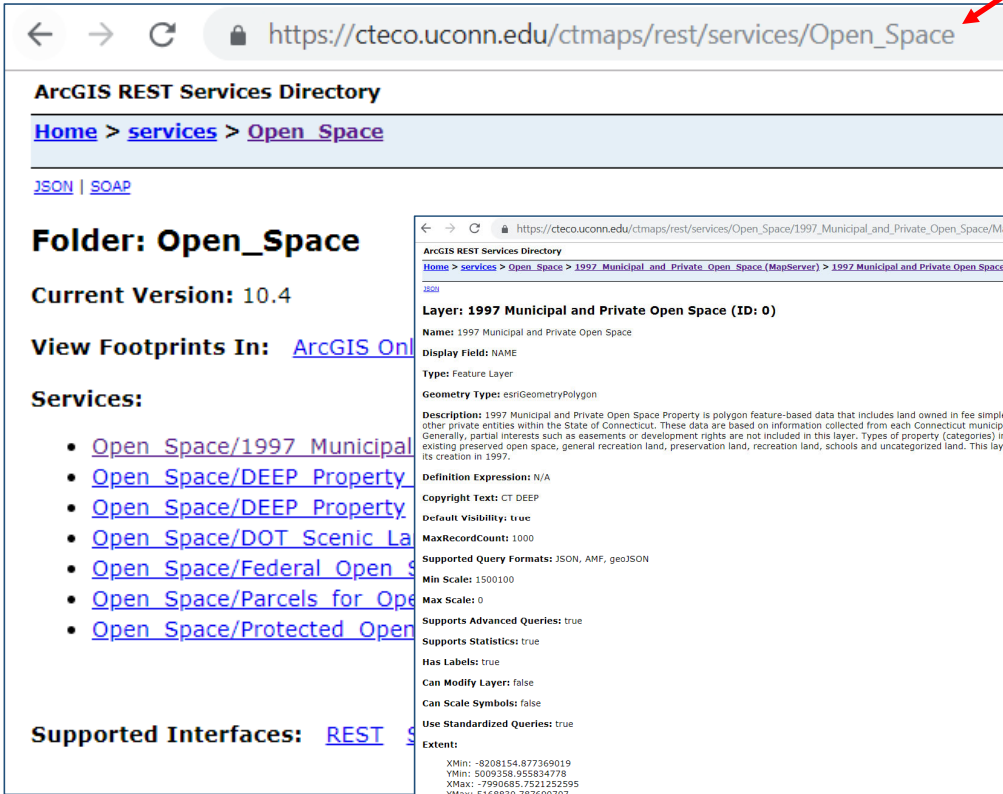


The screenshot shows the 'Map and Image Services' section of the CT ECO website. It features a sidebar with categories like 'Base Maps', 'Biodiversity', 'Built Environment', 'Coastal', 'Elevation', 'Geology', 'Hydrography', 'Open Space', 'Political Boundaries', and 'Soils'. The 'Open Space' category is selected, displaying a list of services including '1997 Municipal and Private Open Space'. A map of Connecticut is visible on the right side of the page.

The screenshot shows the ArcGIS REST Services Directory for the 'Open_Space' folder. The URL is https://cteco.uconn.edu/ctmaps/rest/services/Open_Space. The page displays the folder name 'Open_Space', the current version '10.4', and a list of services including 'Open_Space/1997_Municipal_and_Private_Open_Space', 'Open_Space/DEEP_Property_tiled', 'Open_Space/DEEP_Property', 'Open_Space/DOT_Scenic_Land_Strips', 'Open_Space/Federal_Open_Space_1997', 'Open_Space/Parcels_for_Open_Space_Mapping', and 'Open_Space/Protected_Open_Space_Mapping'. Supported interfaces are listed as REST, SOAP, Sitemap, and Geo_Sitemap.

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Least Talk about REST



ArcGIS REST Services Directory

[Home](#) > [services](#) > [Open_Space](#)

[JSON](#) | [SOAP](#)

Folder: Open_Space

Current Version: 10.4

View Footprints In: [ArcGIS Online](#)

Services:

- [Open_Space/1997 Municipal and Private Open Space](#)
- [Open_Space/DEEP Property](#)
- [Open_Space/DEEP Property](#)
- [Open_Space/DOT Scenic Land](#)
- [Open_Space/Federal Open Space](#)
- [Open_Space/Parcels for Open Space](#)
- [Open_Space/Protected Open Space](#)

Supported Interfaces: [REST](#) | [SOAP](#)

Map Service URL

https://cteco.uconn.edu/ctmaps/rest/services/Open_Space/1997_Municipal_and_Private_Open_Space/MapServer/0

Layer URL

https://cteco.uconn.edu/ctmaps/rest/services/Open_Space/1997_Municipal_and_Private_Open_Space/MapServer/0

ArcGIS REST Services Directory

[Home](#) > [services](#) > [Open_Space \(MapServer\)](#) > [1997 Municipal and Private Open Space](#)

[JSON](#)

Layer: 1997 Municipal and Private Open Space (ID: 0)

Name: 1997 Municipal and Private Open Space

Display Field: NAME

Type: Feature Layer

Geometry Type: esriGeometryPolygon

Description: 1997 Municipal and Private Open Space Property is polygon feature-based data that includes land owned in fee simple interest by the municipalities, land trusts, and other private entities within the State of Connecticut. These data are based on information collected from each Connecticut municipality up to 1997 and mapped at 1:24,000 scale. Generally, partial interests such as easements or development rights are not included in this layer. Types of property (categories) in this layer include cemeteries, conservation land, existing preserved open space, general recreation land, preservation land, recreation land, schools and uncategorized land. This layer is not current and has not been updated since its creation in 1997.

Definition Expression: N/A

Copyright Text: CT DEEP

Default Visibility: true

MaxRecordCount: 1000

Supported Query Formats: JSON, AMF, geoJSON

Min Scale: 1500100

Max Scale: 0

Supports Advanced Queries: true

Supports Statistics: true

Has Labels: true

Can Modify Layer: false

Can Scale Symbols: false

Use Standardized Queries: true

Extent:

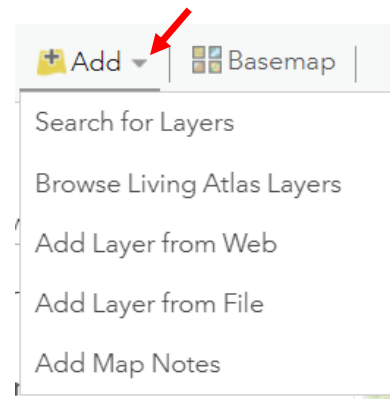
```

XMMin: -9208154.877369019
YMMin: 5009358.955834778
XMMax: -7990685.7521252595
YMMax: 5168830.787650707
Spatial Reference: 102100 (3857)

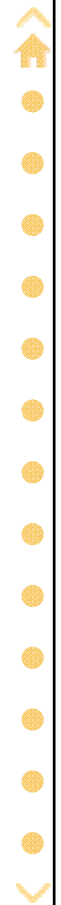
```

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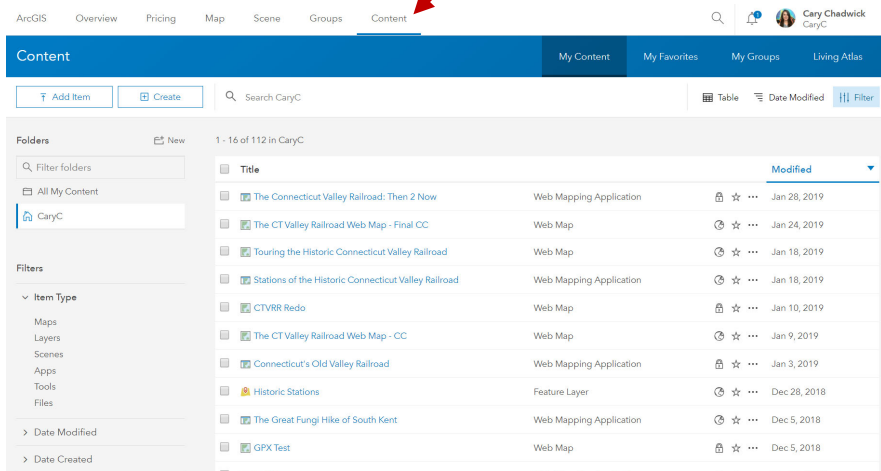
Demo!



Saving Your Map

Content

- Saved content and uploaded content
 - Web maps
 - Saved layers (map notes)
 - Uploaded content (data, images)
 - 50+ content types

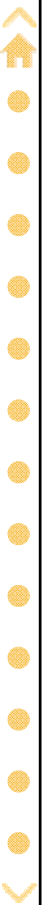


The screenshot shows the ArcGIS Online interface. The top navigation bar includes 'ArcGIS', 'Overview', 'Pricing', 'Map', 'Scene', 'Groups', and 'Content'. A red arrow points to the 'Content' tab. Below the navigation bar, there are buttons for 'Add Item' and 'Create', and a search bar for 'CaryC'. The main content area displays a list of items with the following columns: Title, Item Type, and Modified. The 'CaryC' folder is selected in the left sidebar.

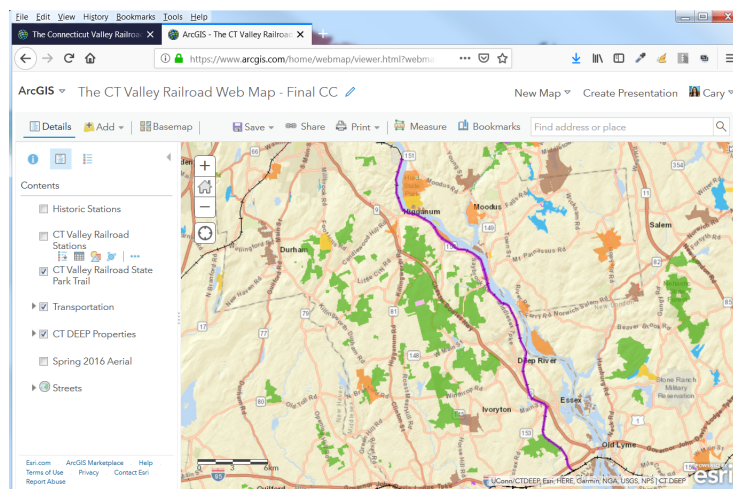
Title	Item Type	Modified
The Connecticut Valley Railroad: Then 2 Now	Web Mapping Application	Jan 28, 2019
The CT Valley Railroad Web Map - Final CC	Web Map	Jan 24, 2019
Touring the Historic Connecticut Valley Railroad	Web Map	Jan 18, 2019
Stations of the Historic Connecticut Valley Railroad	Web Mapping Application	Jan 18, 2019
CTVRR Redo	Web Map	Jan 10, 2019
The CT Valley Railroad Web Map - CC	Web Map	Jan 9, 2019
Connecticut's Old Valley Railroad	Web Mapping Application	Jan 3, 2019
Historic Stations	Feature Layer	Dec 28, 2018
The Great Fungi Hike of South Kent	Web Mapping Application	Dec 5, 2018
GPX Test	Web Map	Dec 5, 2018

Exercise 2a: ArcGIS Online Web Map Basics

- Navigation tools and search for location
- Basemaps
- AGOL toolbar
 - Bookmarks
 - Measure
- Add Data
 - Search for Layers
 - Add Layer from Web
 - Map Service
 - Single Layer
- Working with Layers
 - Reorder layers
 - Rename a layer
- Save your map!



Working with Data in the Web Map

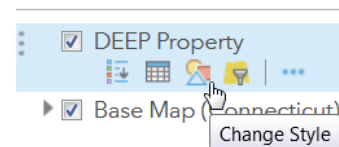


Working with Data in the Web Map

Symbology (Style)

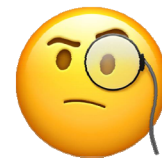
- Changing colors, symbols

Contents



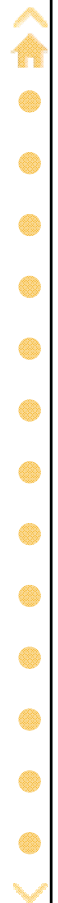
Working with Tables

- Filters
- Selecting records
- Sorting & summary stats



Demo!

CT DEEP Properties - DEEP Property (Features: 487, Selected: 0)			
Legend	Simple Legend	Property	GIS Acres
State Park Scenic Reserve	State Park or Preserve	Above All State Park Scenic Reserve	24.00
State Park Trail	State Park or Preserve	Airline State Park Trail (North Trail)	65.04
State Park Trail	State Park or Preserve	Airline State Park Trail (Northern Section)	201.35
State Park Trail	State Park or Preserve	Airline State Park Trail (Southern Section)	206.49
State Forest	State Forest	Algonquin State Forest	2,473.13



Exercise 2b: Working with Data in the Web Map

- Feature attributes
- Symbology (Style)
- Creating a Filter
- Updating the Legend
- Working with Tables
 - Selecting records
 - Sorting
 - Summary statistics

