How to Build an ArcGIS Open Data Site for Health and Human Services

Technical Workshop
Presenter: Jared Shoultz
Workshop Goals

• What is an ArcGIS Open Data site?
• Who are the different users and possible use cases?
• What are the capabilities?
• How to prepare data?
• How to create an ArcGIS Open Data site?
What is open data and why GIS?

- Definition
- Easily accessible and interoperable
- Authoritative
- Geography and GIS can provide a backbone and framework to unlock, integrate and manage data

GIS & Open Data: Better Understanding Our World
Why does Esri care about open health data?

- Place Matters
- Over 350,000 clients
- Example HHS users:
  - 70% of large US health jurisdictions
  - All 50 state health departments
  - 130 of 200 National Ministries of Health including USA
How do we leverage open data in health?

- Address health data structure, characteristics and access
- Engage stakeholders on complex health issues
Why does open data matter?

- transparency
- accountability
- participation
- innovation
- economic development
But is it accessible?
Dear Mr. Benedict:

This is in response to your Freedom of Information Act (FOIA) request, dated June 5, 2006, and received by the U.S. Geological Survey (USGS) on June 9, 2006. You have requested copies of USGS 7.5 Minute Series Digital Raster Graphic (DRG) topographic maps for the state of Rhode Island.

Under 43 C.F.R. § 2.7(a) of Department of the Interior’s FOIA regulations, FOIA requests may be made for records that are not “routinely available.” See 43 C.F.R. § 2.4, 2.7(a). The topographic DRG maps you have requested are routinely available from the USGS. To further assist you, we are enclosing a page from our website (http://topomaps.usgs.gov/drg/) that explains how to order DRG’s. If you have any questions regarding the ordering process, please call 1-888-ASK-USGS.

You should also be aware that the USGS has been provided with statutory authority to establish fees for the maps you are seeking. Section 42 of Title 43 of the United States Code provides in pertinent part:

The Director of the [United States] Geological Survey be, and is hereby, authorized and directed, on the approval of the Secretary of the Interior, to dispose of the topographic and geologic maps and atlases of the United States, made...
## FTP websites

### Transportation
<table>
<thead>
<tr>
<th>Description</th>
<th>Date of Data</th>
<th>SHP (zipped)</th>
<th>DWG</th>
<th>KML</th>
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<td>Snowmobile Bylaw Trails</td>
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<td>Trails - NonMotorized</td>
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<td>TRAIL - Motorized Winter</td>
<td>2012</td>
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<td>DWG</td>
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<tr>
<td>TRAIL - Motorized Summer</td>
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<tr>
<td>Transit Bus Stops</td>
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<td>Roads - Center Lines</td>
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### Environment
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</table>
Solutions: ArcGIS Open Data

Integrated Workflows to Share Geospatial and Tabular Data

Open Data Portals

Portal for All Open Data

OpenData.ArcGIS.com
• Data-centric view
• Open formats
• Hosted and configurable
• Included with ArcGIS subscriptions
User Interface and Experience
Using ArcGIS Open Data: open data principles

Accessible

Discoverable

Explorable

Collaborative
Open Data is accessible

- Users can easily access the data they want
- Users can connect with the data at the source
- Users know the licensing information
Open Data is discoverable

- Users can view all datasets on a site
- Users can search for specific datasets
- Users can see suggested related datasets
Open Data is explorable

- Users can filter and sort data
- Users can search by location
- Users can visualize data using different smart mapping and chart options
Open Data is collaborative

- Download data in multiple open formats
  - Spreadsheet (CSV)
  - KML
  - Shapefile
  - APIs: GeoJSON, GeoService
- Share and embed datasets and dataset views
- Add data Desktop, ArcGIS Online or other tools
- Data can be linked with CKAN & Data.gov
Demonstration
Using an ArcGIS Open Data site
Data Preparation and Organization Workflows
Preparing your data

Make the data easy to understand

- Delete unnecessary fields
- Hide attributes that don’t add meaning
  - Keep Object ID and Shape field
- Set attribute aliases
  - Less than ten characters
Add items to ArcGIS Online

Leverage workflows you know

• Keep all your data in ArcGIS Online
  - Upload local items from the web or Desktop (ArcMap, ArcGIS Pro, Esri Maps for Office, etc.)
  - Register from ArcGIS Server

• Open Data supports different file types:
  - Map services
  - Feature services
  - Image services
  - CSVs
  - PDFs and Word docs
Create effective metadata

Metadata helps make your data more authoritative and provides context

- Titles
- Description
- Licensing
- Tags
- Icons
- Leverage existing metadata
Turn on Open Data

• Enable Open Data for your ArcGIS Organization
  - In your ArcGIS Online organization settings
• Set user roles as desired
• Does not mean all data is publicly accessible
Specify Open Data groups

Control what content appears on your Open Data site

- Create or edit groups to organize Open Data content
  - One large Open Data group
  - Smaller thematic Open Data groups
- Set groups to public and designate as Open Data
- Share items to your Open Data groups
Persistent linkages

- Update your data in one place
- Automatic updates across all sites
- Users get authoritative and timely data
Demonstration
Preparing and organizing data for ArcGIS Open Data
Site Creation and Administration
Manage sites

Create as many sites as you like

- For an entire agency
- For individual departments
- For specific events
Configuring your Open Data site

Setting basic information
- Set title
- Site URL
  - data.yourorg.opendata.arcgis.com
  - Custom URL
- Public or private
- Map extent
- Basemap
Configuring capabilities

**Functionality**

- Charts
- Enhanced Search
- Location Summary
- Geohash Visualization
- Smart Map Visualization
- Local Projections
- User Sign In
- Comments
Adding your data

Manage data and review status

• Search Open Data groups
• Add groups from your org
• Add groups from other orgs
• Review harvesting status
Designing your site layout

Customize your look and feel

- **Use the wizard**
  - Different widgets
    - Text
    - RSS feed
    - Image
    - Data listings
- **Use custom HTML/CSS**
  - Have more control over your site’s design
- **Use both**
  - Use some custom CSS in the header to change theme colors
  - Use widgets in the main body
Demonstration

Creating and administering an ArcGIS Open Data site
Engaging your community

Make your open data count

• Start a two-way conversation
  - Set up a twitter account or blog
  - Speak at local seminars or conferences

• Connect to the local data community
  - Civic hacking groups

• Host events
  - Hackathons, datapaloozas
  - Contests

• Showcase how people are using your data
Esri Human Health and Climate Change App Challenge

- **Hackathons and Application Challenges:** Examples of how open data can be applied to solve complex health issues

- **Resilience ArcGIS Online Portal:** resilience.maps.arcgis.com

- **Health and Climate ArcGIS Open Data Portal:** health.geoplatform.opendata.arcgis.com
Summary

• Open your data to solve complex health issues
• Replace resource intensive alternatives
• Open your data in minutes, not months
• Keep open data current
• Spur innovation
• Increase stakeholder engagement
• Increase transparency
How do I get ArcGIS Open Data?

• Existing ArcGIS users
• New users
• ArcGIS Trial: esri.com/software/arcgis/free-trial
Resources

ArcGIS Open Data
• Main site and help: opendata.arcgis.com
• Showcase: dc.esri.com/showcase
• Live Training Seminar: bit.ly/OpenDataLTS

Health and Human Services
• Industry Page: esri.com/industries/health
• Newsletter: esri.com/esri-news/publications/newsletters

General
• ArcGIS Blog: blogs.esri.com/esri/arcgis
• GeoNet: geonet.esri.com