



ArcGIS Open Data

Get Started – and Use Best Practices

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Esri

Agenda

- What is Open Data – and why it matters
- What is ArcGIS Open Data?
 - *Exercise 1: Explore ArcGIS Open Data sites*
- Data preparation and organization workflows
 - *Exercise 2: Create content for ArcGIS Open Data*
- Creating an Open Data site
 - *Exercise 3: Create an ArcGIS Open Data site*
- Customizing the Open Data site
 - *Exercise 4: Customize your ArcGIS Open data site **
- Promoting your Open Data site
- Advanced topics

* Time permitting

What is Open Data – and why it matters

Open Data principles



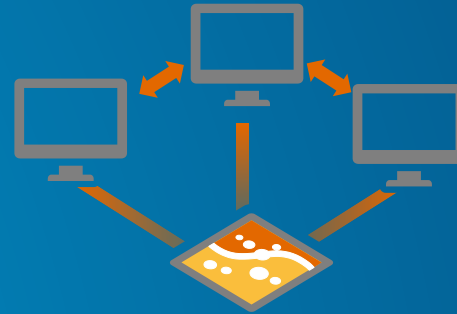
Accessible



Discoverable

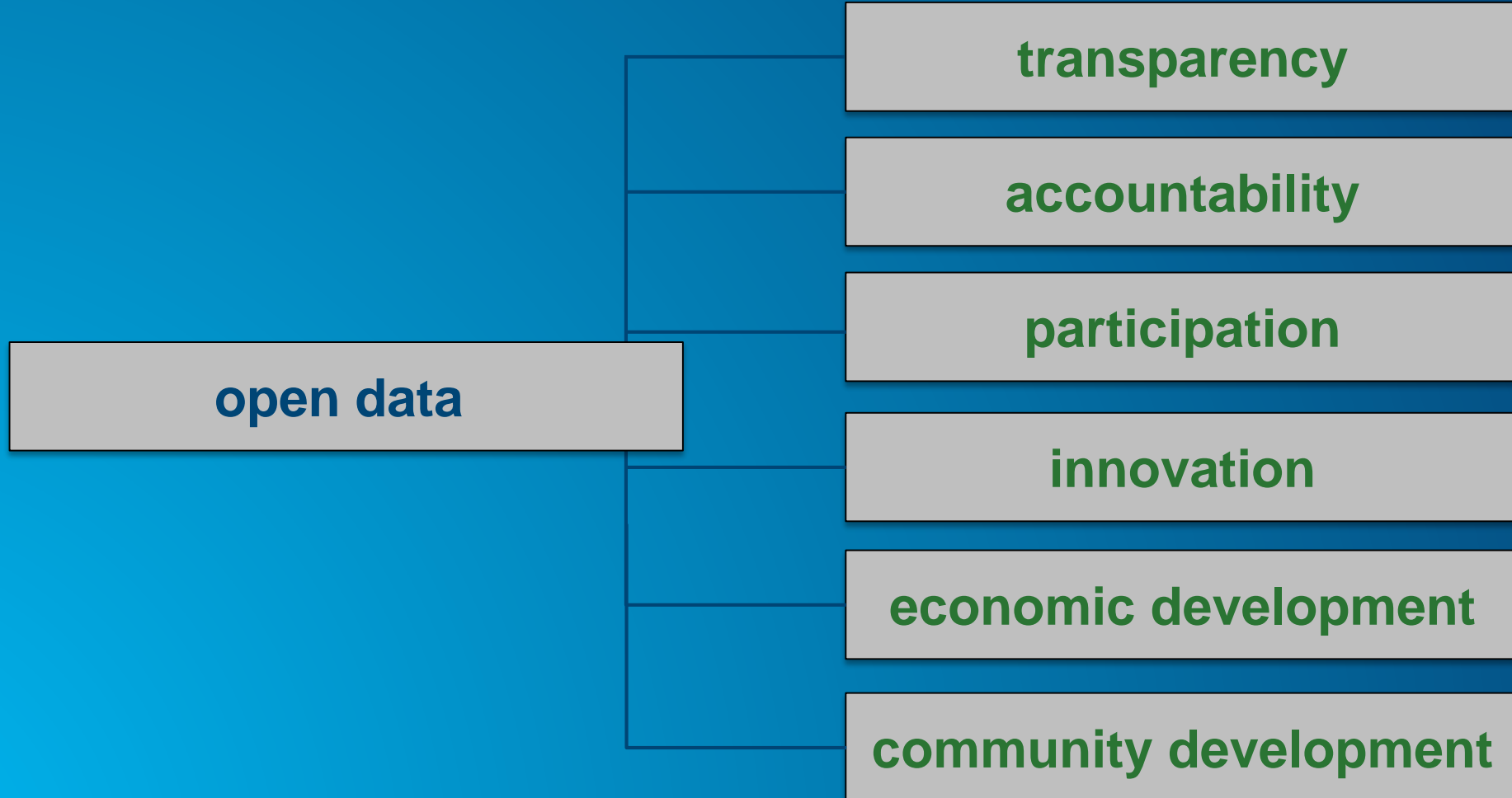


Explorable



Collaborative

Why does Open Data matter?



What is ArcGIS Open Data?

Share Live ArcGIS Open Data in Minutes

As part of your ArcGIS Online subscription, you can use ArcGIS Open Data to share your live authoritative open data. Esri-hosted ArcGIS Open Data gives you a quick way to set up public-facing websites where people can easily find and download your open data in a variety of open formats.



You Can Easily Share
Data with the Public



Anyone Can Use Open
Data for Free



Your Data Helps Real
People Solve Real
Problems



Explore ArcGIS Open
Data



You Can Create Your
Own Public Open Data
Sites



You Can Easily Share Data with the Public

ArcGIS Open Data uses the ArcGIS Online groups you already have to identify open data, allowing you to quickly publish or remove your open data. Your open datasets automatically sync with the latest version of your sources. It can even integrate with other open data platforms, such as CKAN.

[Explore ArcGIS Open Data](#)

Share

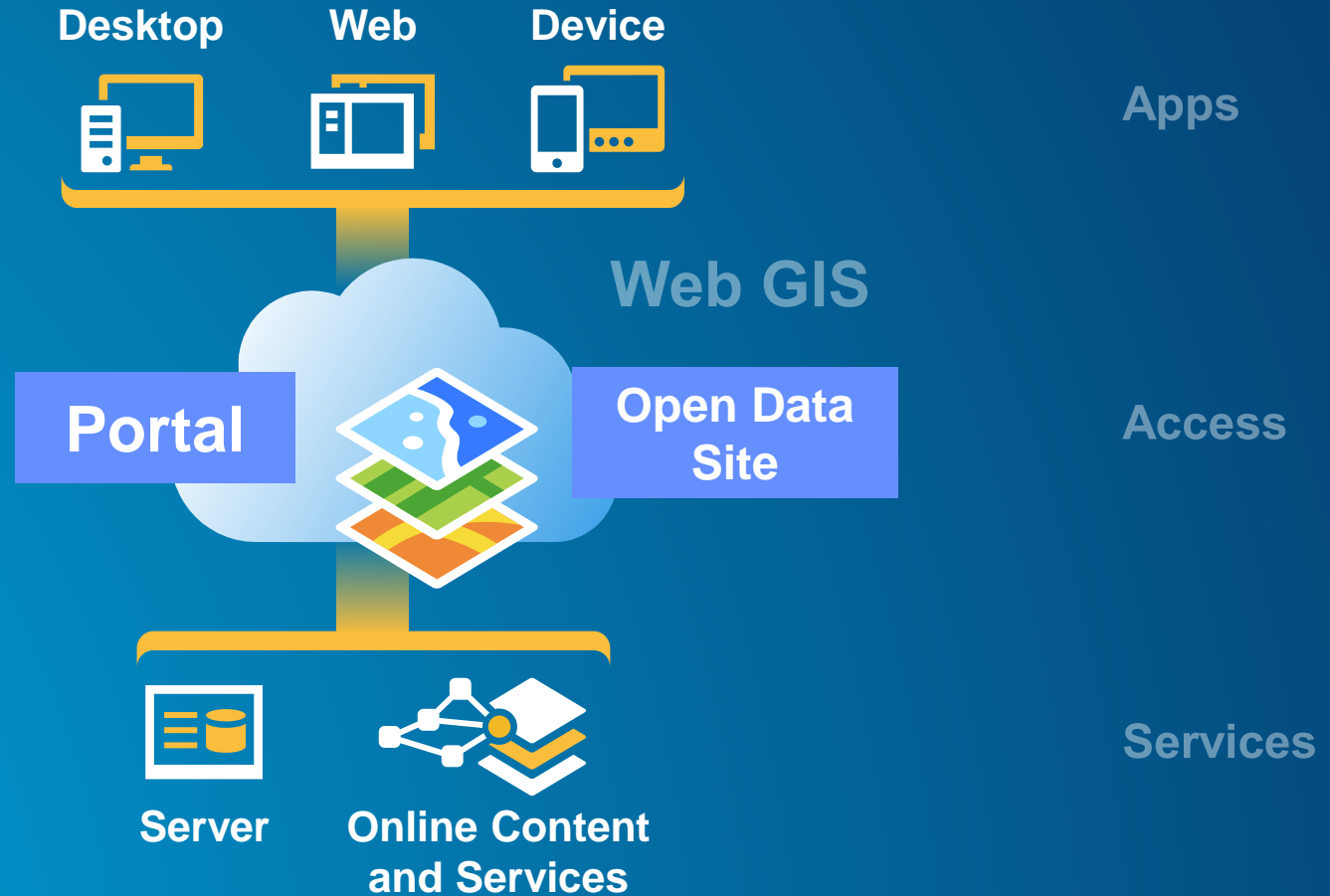


Your data will be available via:

ArcGIS Open Data is part of the ArcGIS Platform

Providing open access to your published data

Simple
Integrated
Open



ArcGIS 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



FTP websites

Transportation

| Description | Date of Data | SHP (zipped) | DWG | KML |
|--------------------------|--------------|---------------------|---------------------|---------------------|
| Snowmobile Bylaw Trails | 10 May 2012 | SHP | DWG | KML |
| Trails - NonMotorized | 2005 | SHP | DWG | KML |
| Trails - Ski | 2003 | SHP | DWG | KML |
| Trails - Ski - GPS | 2003 | SHP | DWG | KML |
| Trails - Motorized | 2005 | SHP | DWG | KML |
| TRAIL - Motorized Winter | 2012 | SHP | DWG | KML |
| TRAIL - Motorized Summer | 2012 | SHP | DWG | KML |
| Transit Bus Routes | 2012 | SHP | DWG | KML |
| Transit Bus Stops | 2012 | SHP | DWG | KML |
| Roads - Right of Ways | 2014 | SHP | DWG | KML |
| Roads - Center Lines | 2014 | SHP | DWG | KML |

Environment

| Description | Date of Data | SHP (zipped) | DWG | KML | Extra |
|---|--------------|---------------------|---------------------|---------------------|------------------------|
| Vegetation Inventory 2005 | Sept 2005 | SHP | DWG | KML | Manual |
| Soil Inventory 2005 (Text) | Sept 2005 | SHP | DWG | KML | |
| Soil Inventory 2005 (Polygons) | Sept 2005 | SHP | DWG | KML | |
| Terrain (Text) | Sept 2005 | SHP | DWG | KML | |
| Terrain (Polygons) | Sept 2005 | SHP | DWG | KML | |
| Draft Water Inventory - Lakes | approx 2004 | SHP | DWG | KML | |
| Draft Water Inventory - Rivers | approx 2004 | SHP | DWG | KML | |
| Draft Water Inventory - Streams | approx 2004 | SHP | DWG | KML | |
| Draft Water Inventory - Streams Indefinite | approx 2004 | SHP | DWG | KML | |
| Draft Water Inventory - Watersheds | approx 2004 | SHP | DWG | KML | |
| Draft Water Inventory - Wetlands | approx 2004 | SHP | DWG | KML | |
| Sensitive Areas | approx 2004 | SHP | DWG | KML | |
| Sensitive Areas as used by Bylaw for 2011/12 ATV and Snowmobile bylaws | approx 2011 | SHP | DWG | KML | |
| Additional Slopes as used in the ATV/Snowmobile bylaw as additional sensitive areas | approx 2004 | SHP | DWG | KML | |
| Protected Areas 2004 | approx 2004 | SHP | DWG | KML | |

ArcGIS Open Data is discoverable

- Users can view all datasets on a site
- Users can search for specific datasets
- Users can see suggested related datasets



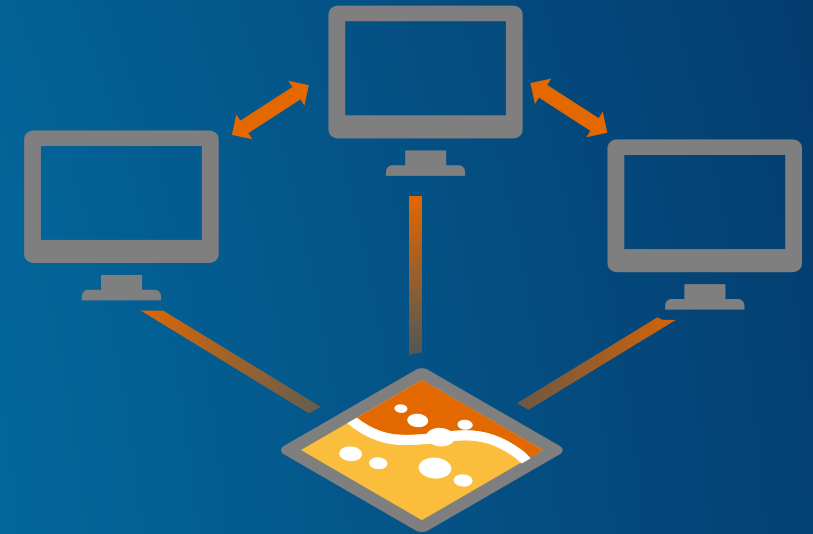
ArcGIS Open Data is explorable

- Users can filter and sort data
- Users can search by location
- Users can visualize data in different smart mapping and chart options



ArcGIS Open Data is collaborative

- Users can download data in multiple open formats
 - Spreadsheet (CSV)
 - KML
 - Shapefile
 - APIs: GeoJSON, GeoService, OGC WMS
- Users can share and embed datasets
- Users can add data to ArcMap or ArcGIS Online
- Data can be linked with CKAN & data.gov





Demonstration

Using ArcGIS Open Data Sites

Explore **41,671 Open Datasets**
from **2,879 Organizations** Worldwide.

Find

Near



Global Forest Watch, photo by Kaleb Nims (CC0)

Newest Data



Roads

Road Lines. The dataset contains locations and attributes of Road Centerlines within the boundaries of Polk County.

🕒 March 23, 2016

#road



Parcels

Parcel Polygons. The dataset contains locations and attributes of Parcels, created as part of the Polk County Geographic Information System.

🕒 March 23, 2016

#parcel




WSDOT - Regional Transportation Pl...

Regional Transportation Planning Organizations (RTPO) of Washington State. RTPOs are responsible for transportation planning, growth

🕒 March 23, 2016

#wsdot

[Explore More Datasets](#)

 Noteworthy Data

Exercise 1: Explore ArcGIS Open Data sites



Exercise 1: Explore ArcGIS Open Data sites

- Explore sites
- Follow steps in the “For Consumers” section of the online documentation:
<http://doc.arcgis.com/en/open-data/consumer/find-data.htm>
 - Discover data
 - View details
 - Download data
 - Explore data
 - Chart data
 - Visualize data
 - Sign in
 - Comment on data
 - Use the preview map
- <http://opendata.arcgis.com/>
(also lists featured open data sites)
- <http://dc.esri.com/showcase>
- <http://clt.charlotte.opendata.arcgis.com/>
- <http://data.gfw.opendata.arcgis.com/>
- <http://imap.maryland.opendata.arcgis.com/>
- <http://kygovmaps.kygeonet.opendata.arcgis.com/>
- <http://catalogue.hrm.opendata.arcgis.com/>
- <http://opendata.dc.gov/>
- <http://geo.wa.gov/>
- <http://udot.uplan.opendata.arcgis.com/>
- <https://hifld-dhs-gii.opendata.arcgis.com/>
- <http://talgov.tlcfgis.opendata.arcgis.com/>
- <http://geohub.lacity.org/>

Data preparation and organization workflows

Preparing your data

Make the data easy to understand

- Set attribute aliases
 - Less than ten characters
- Set an appropriate hover field
- Hide attributes that don't add meaning
 - Keep Object ID and Shape fields
- Online Doc has good section on “Improving data quality”




Critical Item Details

Metro School Districts

SAVE CANCEL

Title Metro School Districts

Summary Enter an item summary



Click thumbnail to change image.

Description

The Louisville Municipal School District in collaboration with stakeholders is committed to providing a quality education that prepares students for a successful future.

Access and Use Constraints

None

Properties

URL http://ags2.lojic.org/ArcGIS/rest/services/External/MetroDistricts/MapServer/0

Tags Schools X Metro Districts X Louisville X Add tag(s)

Credits lojic

Delete Protection ☐ Prevent this item from being accidentally deleted.

Extent Left: -85.96 Right: -85.4 Top: 38.38 Bottom: 38 SET EXTENT

SAVE CANCEL



Controlled Hunts - Antelope (2015-2016)



Antelope controlled hunt areas in Idaho.

Feature Layer by fishgame1

Source: [Feature Service](#)

Last Modified: April 9, 2015

★★★★★ (0 ratings, 9 views)

Sign in to rate this item.

[Facebook](#) [Twitter](#)

OPEN ▾

Description

24k version of Idaho Fish and Game's (IDFG) 2015–16 Antelope Controlled Hunt Areas. This file was produced by IDFG from the legal descriptions available in the current, published hunting regulations. For more information about antelope hunting in Idaho [click here](#).

Access and Use Constraints

This dataset is intended for public-use for informational purposes only.

Idaho Fish and Game does not assume liability. No warranty expressed or implied is made by IDFG regarding the utility of this data on any other system, nor shall the act of distribution constitute any such warranty. The data represented in this file is true and accurate to the best of our knowledge but is considered a best representation only. Users must assume responsibility in determining the usability of this data for their purposes.

Layers

[Antelope_Controlled_Hunt_Areas](#) ▾

Properties

| | | | |
|---------|---|----------------|--|
| Tags | Idaho , IDFG , Idaho Fish and Game , controlled hunts , antelope , hunting , wildlife , wildlife management | | |
| Credits | Idaho Fish and Game | | |
| Size | 5 MB | | |
| Extent | Left: -117.22 | Right: -110.86 | |



Hunting

Fishing

Licenses

Wildlife

Education

Media

Science

Enforcement

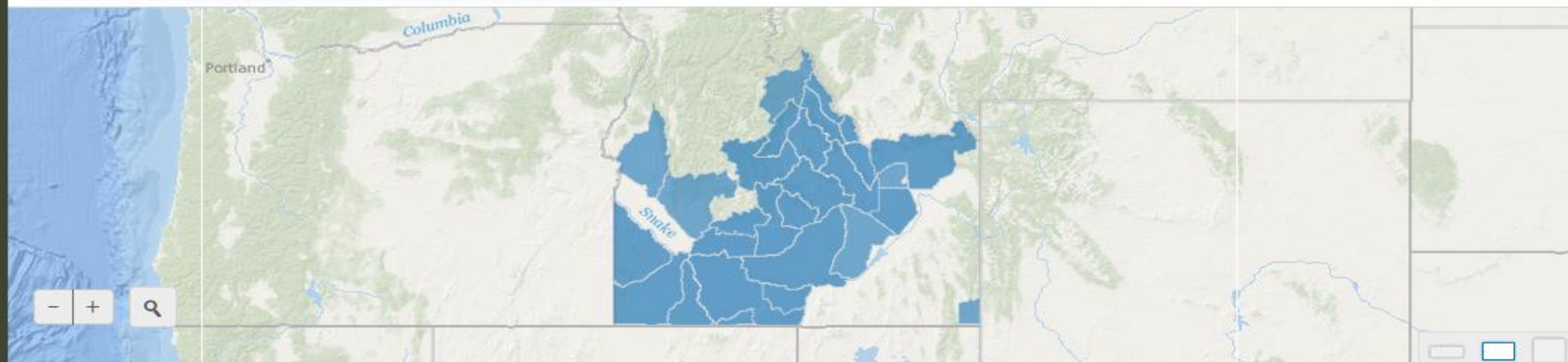
About Us

Geospatial Open Data Portal

Search for open data

☐ SEARCH WITHIN MAP

My Activity



<Controlled Hunts - Antelope (2015-2016)

[OPEN IN ARCGIS](#)[SHARE](#)[SUBSCRIBE](#)[Download Dataset](#)[Details](#)[Table](#)[Charts](#)

DESCRIPTION

24k version of Idaho Fish and Game's (IDFG) 2015-16 Antelope Controlled Hunt Areas. This file was produced by IDFG from the legal descriptions available in the current, published hunting regulations. For more information about antelope hunting in Idaho [click here](#).

DATASET ATTRIBUTES

| | |
|------------------|---|
| ArealD Number | min: 31 max: 1,272 avg: 455.58 count: 38 |
| AreaNote Text | All of Unit 29 except the Poison Creek drainage. (1), All of Unit 30 and that portion of Unit 21A sou... (1) ...(36 more) |
| AreaRank | min: 158 max: 221 avg: 183.03 count: 38 |

ABOUT



IDFG Open Data

By [fishgame1](#) on April 09, 2015
Updated: a month ago

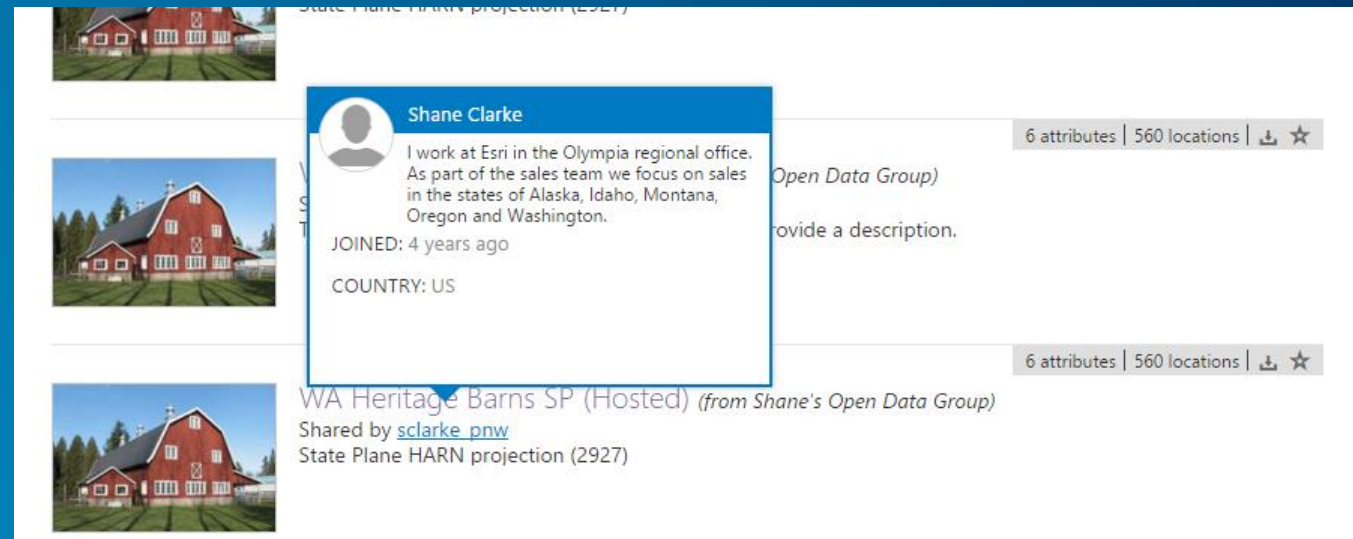
Source <http://services.arcgis.com/FjJI5xHF2dUPVrg>
Metadata [Controlled Hunts - Antelope \(2015-2016\)](#)
Licensing [This dataset is intended for public-use for](#)

TAGS

Idaho | IDFG | Idaho Fish and Game | controlled
hunts | antelope | hunting | wildlife | wildlife
management

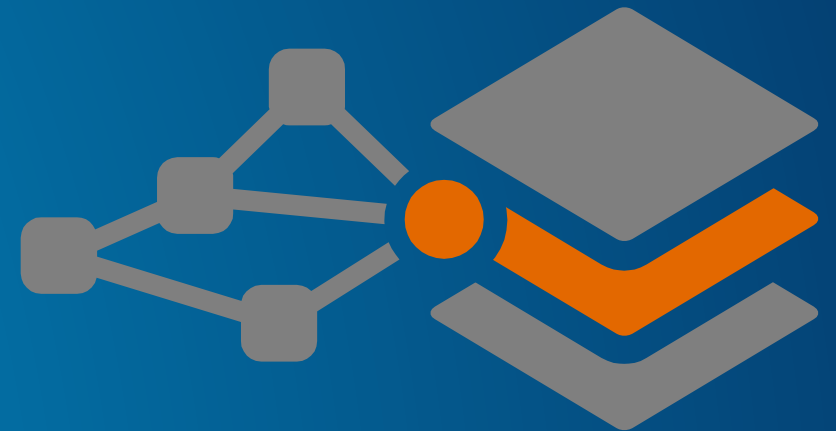
Use an Authoritative ArcGIS Online Profile

- Profile name should convey authoritative source
- Profile description and photo needs to be
 - Professional
 - Informative
 - Authoritative
 - Include contact information



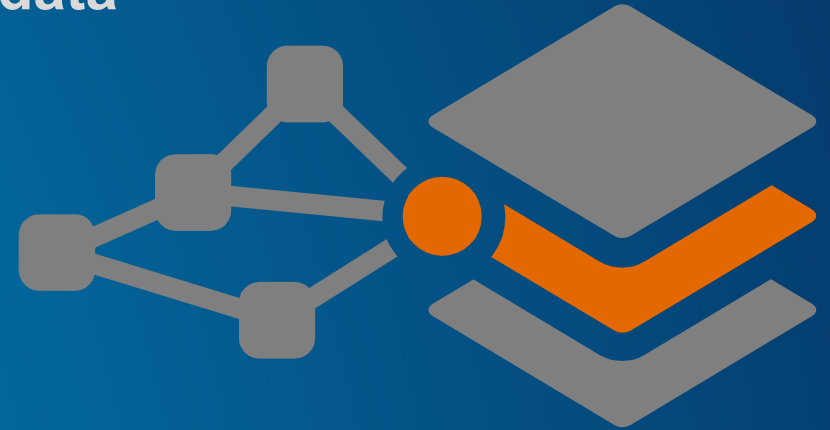
Add items to ArcGIS Online

- Leverage workflows you know
- Catalog all your data in ArcGIS Online
 - Upload local items from the web or ArcMap
 - Register from ArcGIS for Server
- Open Data supports different file types:
 - Map services
 - Feature services
 - Image services
 - CSVs
 - PDFs and Word docs
 - URLs (e.g. for web apps)
 - Web Maps



Registering services to ArcGIS Online

- Registering services with multiple layers
 - Quicker
 - Less control over search results and item's metadata
 - All layers will have same tag, thumbnail
- Registering individual layers
 - More time consuming
 - Better search results and item's metadata
 - Recommended method
 - Sample python script to register service layers individually
 - <https://github.com/sirws/OpenData-MapServiceLayerRegistrar>



Create effective metadata

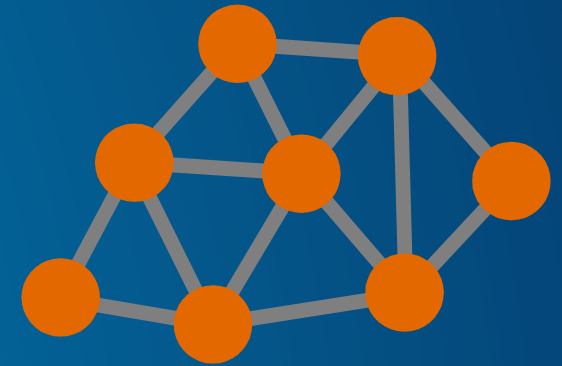
- **Metadata helps make your data more authoritative and provides context**
 - **Titles**
 - **Description**
 - **Licensing**
 - **Tags**
 - **Icons**
- **Add official metadata files to ArcGIS Online item**



<https://doc.arcgis.com/en/arcgis-online/share-maps/metadata.htm>

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

Exercise 2: Create content for ArcGIS Open Data



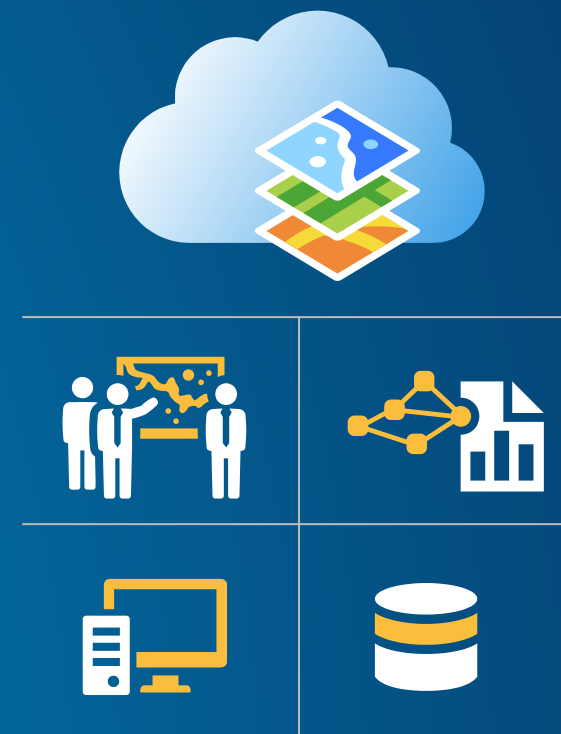
Exercise 2: Create content for ArcGIS Open Data

- If possible, use your own ArcGIS Online org. credentials
- If not possible, use <http://pnw.maps.arcgis.com>
- Find interesting data or ArcGIS Server services
- Publish hosted feature layers (services)
 - Use ArcMap or ArcGIS Online
 - <http://doc.arcgis.com/en/arcgis-online/share-maps/publish-features.htm>
- Reference ArcGIS Server services
 - Find ArcGIS Server REST endpoint (URL)
 - Add items from the web <http://doc.arcgis.com/en/arcgis-online/share-maps/add-items.htm>
- Share items to “MAGIP 2016 Open Data” group

Creating an Open Data site

Creating an Open Data Site

- Enable the Online Organization
- Designate Groups for Open Data
- Create authoritative content
- Prepare spatial and non-spatial data
- Create custom role
- Enable staff in other departments
- Create an Open Data Site



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**
- **Optionally, enable metadata for the organization**
 - In your ArcGIS Online organization settings



Enable Open Data for Organization



SAVE

CANCEL

General

Home Page

Gallery

Map

Item Details

Groups

Utility Services

Roles

Security

Open Data

Open Data

You can enable Open Data capabilities for your organization in order to configure an Open Data web site that makes the data of designated groups in your organization, as well as the items in designated groups of other organizations, freely available to everyone to use and republish as they wish without restrictions from copyright, patents or other mechanisms of control.

Note that you can disable Open Data capabilities associated with your organization at any time.

[Learn more about enabling Open Data for your organization.](#)



ENABLE OPEN DATA

Create Custom Role(s)

SAVE

CANCEL

General

Home Page

Gallery

Map

Item Details

Groups

Utility Services

Roles

Credits


Security

Open Data

Roles ?

Create, edit, and manage roles in your organization. You may create a role based on an existing role or template, allowing or denying privileges associated with the role as you deem necessary.

Note that when creating or editing a role, changes aren't saved until you click Save Role.



CREATE ROLE

ASSIGN ROLES

| Role Name | Members | |
|------------------|---------|--|
| Administrator | 17 | |
| aksmc | 0 | |
| Analyst | 0 | |
| Curator | 0 | |
| Custom Publisher | 1 | |
| No Geocoding | 0 | |
| Open Data Admin | 0 | |

SAVE

CANCEL

General

Home Page

Gallery

Map

Item Details

Groups

Utility Services

Roles

Credits

Security

Open Data

Roles ?

Role Name:

Description:

TOGGLE ALL ON

COLLAPSE ALL

SAVE ROLE

DISCARD CHANGES

General Privileges

[-]

☒ Create, update, and delete

☒ Join organizational groups

☒ Join external groups

[-]

☒ Create, update, and delete

☒ Publish hosted feature layers

☒ Publish hosted tile layers

☐ Publish hosted scene layers

[-]

☒ Share with groups

☒ Share with organization

☒ Share with public

☒ Make groups visible to organization

☒ Make groups visible to public

☐ Make groups available to Open Data

[-]

☒ Geocoding

☒ Network Analysis

☒ Spatial Analysis

☒ GeoEnrichment

☒ Demographics

☒ Elevation Analysis

[-]

☒ Edit

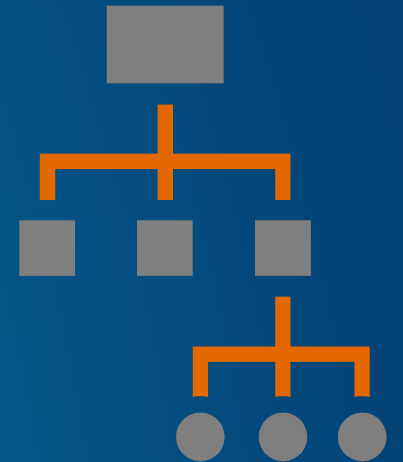
☐ Edit with full control

[-]

☒ Manage Open Data site(s)

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
 - Enables thematic group search
 - e.g. <https://hifld-dhs-gii.opendata.arcgis.com/>
- Set groups to public and designate as Open Data
- Share items to your Open Data groups
- Can add open data groups from other orgs (federation)



Designate Open Data Groups



[Click to change thumbnail](#)

Name:

My Open Data

Summary:

Open data to save the world

Description:



Giving researchers, campaigners, journalists, NGOs, companies, policy-makers, individuals and citizens access to data means fundamentally empowering our societies, and strengthening our democracies. It is not about different sides opposing each other, but all sides winning insight and a better understanding, which can ultimately help to better understand and shape the world around us. A key aim of the Open Movement is to encourage and persuade governments and corporations who control publicly useful data to unlock it.

Tags:

AGOLPM x Test x Add tag(s)

Status:

- ☐ Private (Users cannot find this group and can join by invitation only.)
- ☐ Organization (Users within your organization can search for and find this group.)
- ☒ Public (Users can search for and find this group.)
- ☒ Designate as available for use in Open Data sites
- ☐ Users can apply to join group

Contributors:

- ☒ All members
- ☐ Only group owner

Sorted by:

Title ☐ Ascending

SAVE CANCEL

Create new Open Data site

The screenshot shows the ArcGIS Open Data admin interface. At the top, there's a navigation bar with links for 'ArcGIS Open Data', 'Documentation', 'Support', and 'Forums'. A user profile 'Shane' is visible on the right. Below this is a header banner for 'Pacific Northwest Maps' with tabs for 'Manage Sites' and 'Organization Info'. A green box highlights the '+ Create New Site' button in the top right corner of the banner. Below the banner, the section 'Your Open Data Sites' lists two sites. Each site entry includes a title, a URL, a status indicator ('This site is'), and a set of management buttons. The first site is 'Pacific Northwest Maps (data.pnw.opendata.arcgis.com)' and the second is 'Pacific Northwest Maps (pnwopen.pnw.opendata.arcgis.com)'. Both sites show 1 Group, 12 Items, and 14 Datasets. The status for the first site is 'Public' (green button) and for the second is 'Private' (red button). Management buttons include 'Site Configuration', 'Groups Manager', 'Site Editor', 'Data Manager', and 'Delete Site'.

https://opendata.arcgis.com/admin/#/sites

ArcGIS Open Data Documentation Support Forums

Shane

Pacific Northwest Maps

Manage Sites Organization Info

+ Create New Site

Your Open Data Sites

Pacific Northwest Maps (data.pnw.opendata.arcgis.com)

This site is Private Public

Site Configuration

Groups Manager

Site Editor

1 Groups

12 Items

14 Datasets

Data Manager

Delete Site

Pacific Northwest Maps (pnwopen.pnw.opendata.arcgis.com)

This site is Private Public

Site Configuration

Groups Manager

Site Editor

1 Groups

12 Items

14 Datasets

Data Manager

Delete Site

Configuring your Open Data site

Setting basic information

- Set title
- Site URL
 - [name].[yourorg].opendata.arcgis.com
 - Custom URL
- Map extent
- Public or private

The screenshot shows the 'ArcGIS Open Data' configuration page for a site named 'Pacific Northwest Maps'. The page has a top navigation bar with links for 'Documentation', 'Support', and 'Forums', and a 'Share' button. Below the navigation bar is a header section with the site name 'Pacific Northwest Maps' and a 'Manage Sites' button. The main content area is divided into two columns. The left column, titled 'Basic Information', contains fields for 'Site Name' (filled with 'Pacific Northwest Maps'), 'Browser Icon' (filled with 'http://pnw.opendata.arcgis.com/favicon.ico'), and 'Google Analytics Tracking ID' (filled with 'UA-NNNNNNN-N'). The right column, titled 'Domains', contains a 'Site URL' field (filled with 'data') and a 'Custom Domain' field (filled with 'data.myorg.com'). Below these fields are radio buttons for 'This site is' set to 'Public'. At the bottom, there is a 'Set Extent' section with a map and a 'Draw Extent' button.

ArcGIS Open Data Documentation Support Forums

Pacific Northwest Maps Pacific Northwest Maps Manage Sites

Site Configuration Capabilities Groups Manager Data Manager Site Editor Preview Site

Basic Information

Site Name ⓘ Pacific Northwest Maps

Browser Icon ⓘ http://pnw.opendata.arcgis.com/favicon.ico Optional

Google Analytics Tracking ID ⓘ UA-NNNNNNN-N Optional

This site is Private Public

Domains

Site URL ⓘ data Full URL: data.pnw.opendata.arcgis.com

Custom Domain ⓘ data.myorg.com

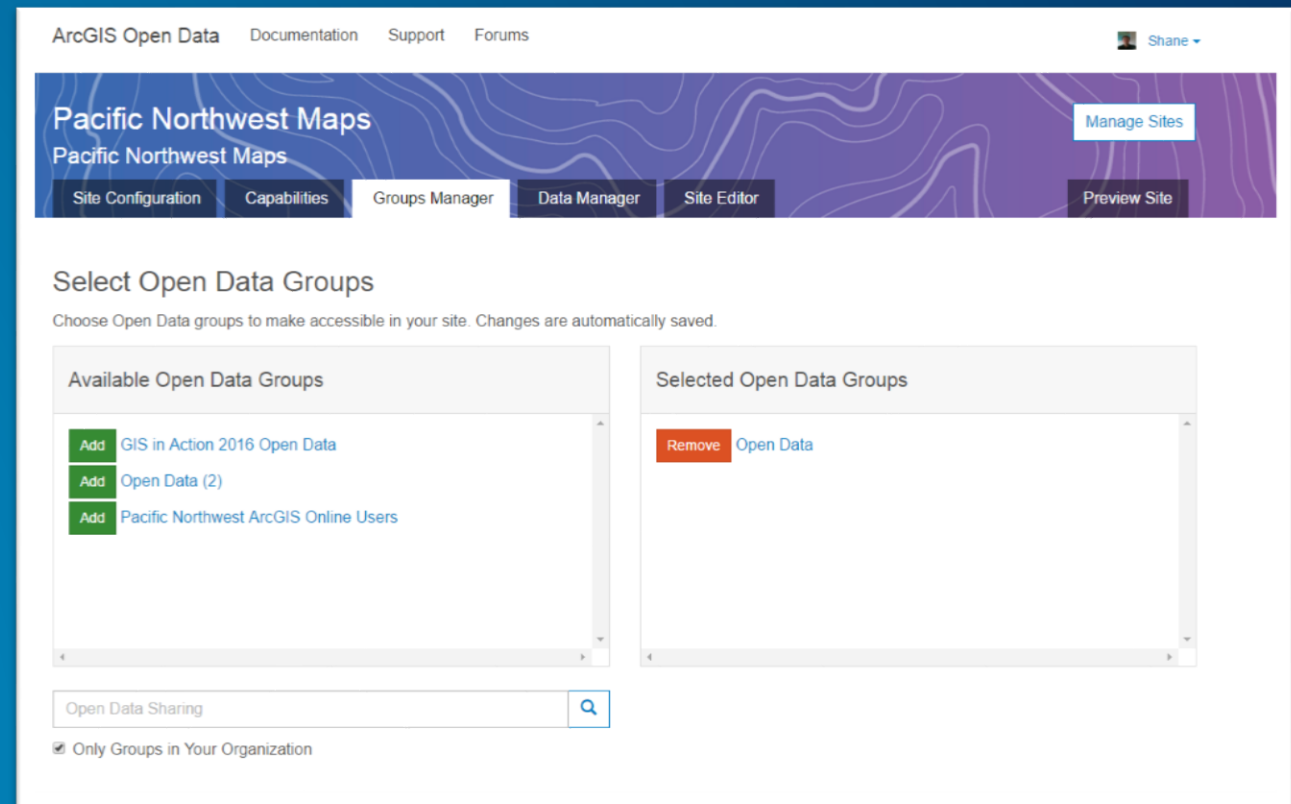
Draw Extent Map Navigation

Set Extent

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


Design layout

- Use the wizard
 - Different widgets
 - Text
 - Image
 - RSS feed
 - 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



ArcGIS Online Service Credits

[www.arcgis.com/features/plans/credits.html](#)☆🔍👤

[ArcGIS](#) [Features](#) [Plans](#) [Gallery](#) [Map](#) [Scene](#) [Help](#) [Search](#) [Sign In](#) 

Plans

[Plans](#) [Service Credits](#)

Service Credits Overview

ArcGIS Online is based on an annual subscription with flexible plans to choose from. Each plan includes access for a number of users and service credits. Service credits are used in exchange for premium hosted services.

What Uses Service Credits?

- Storage
- Analytics
- Demographic & Lifestyle Maps

What Doesn't Use Service Credits?

- Using mapping, business, and configurable apps to access the data you store in ArcGIS Online.
- Use of ArcGIS Online foundation maps and data (e.g., basemaps, Landsat imagery, landscape layers, live traffic and other live feeds).
- Exporting data stored in ArcGIS Online.
- Single address or place search.
- Leveraging your own ArcGIS for Server capabilities to host and publish map services.

Service Credits by Capability

| Capability | Service Credits Used |
|--------------------------|--|
| Storage | |
| Feature Services Storage | 2.4 credits per 10 MB stored per month |
| Tile and Data Storage | 1.2 credits per 1 GB stored per month |



Demonstration

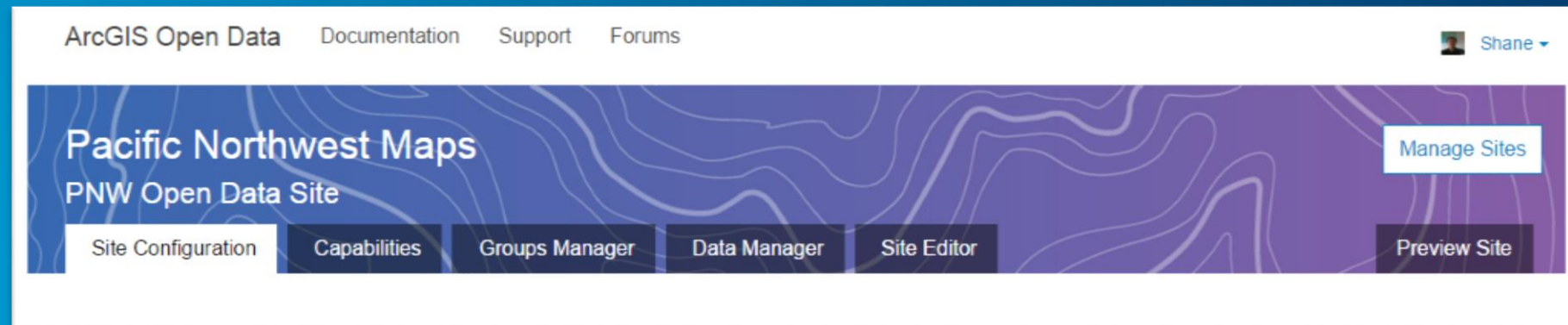
Creating an ArcGIS Open Data Site

Exercise 3: Create an ArcGIS Open Data site



Exercise 3: Create an ArcGIS Open Data site

- If possible, use your own ArcGIS Online org. credentials
- If not possible, use <http://pnw.opendata.arcgis.com/sites>
- Create and configure an Open Data Site
 - <http://doc.arcgis.com/en/open-data/provider/create-an-open-data-site.htm>
- Manage Site Capabilities
- Explore
 - Groups Manager
 - Data Manager
 - Site Editor



Customizing the Open Data site

Welcome to
Brookline OpenData

Brookline

Search for open data

SEARCH WITHIN MAP

My Activity

Data Categories

Checkbook

Education

Permits & Licenses

Parks & Open Space

Administrative and Regulatory Info

Real Estate Parcels

Brookline Citizen Requests

Demographics

DC.gov

District of Columbia Open Data

Website

OPEN DC

DATA CATALOG

HELP

Search for open data

SEARCH WITHIN MAP

My Activity

DATA

Administrative and Other Boundaries
Business and Economic Development
Cultural and Society
Demographic
Education
Elevation
Environment
Facility and Structure
Financials & Procurement
Health and Human Services
Historic
Location
Performance Metrics
Planning Landuse and Zoning
Property and Land
Public Safety

Search. Discover. Use.

We want to ensure the District's data is as open, discoverable and usable as possible in hopes of fostering greater participation and collaboration. Search the site's datasets by topic, or explore featured datasets or review the full list of DC Data sets.

A Growing Site

This new site is a work in progress. We are working diligently to add new data sets, improve usability and bring forward some of the legacy datasets that did not make the initial move. If you don't see a set you have used before, you can view and download all previous data sets at our legacy site. We plan to retire the legacy site only after everything has been moved and optimized.

Feedback

If you have questions, suggestions, requests or any other feedback, please contact the Chief Data Officer or shoot us a tweet

Welcome to VicRoads Open Data Site

VicRoads believes that government data should be easy to find, access, use and share.

In line with the Victorian government's DataVic Access Policy, and in conjunction with data.vic.gov.au, VicRoads is committed to providing free and open data for public use.

This site provides an easy way to find and access a wealth of road and transport related data. We want you to explore and download the data, and use it to build cool apps and tools that make travel easier and safer for all Victorians.

Explore the categories listed below, or use the search bar to find data that you're interested in. You can play with the data right here, or download it in a format that suits your needs.

Can't find what you're looking for? Contact us to suggest a dataset that you'd like to see.

Environment

Biodiversity, cultural heritage, wetlands, air, soil and noise data

Planning & Property

Planning zones and overlays, permits, property services, road declaration and surveying data

Projects

Road, freight, safety and network improvement project data

Public Transport

Train, tram and bus infrastructure, public transport networks and transit data

Registration & Licensing

Customer service centres, licensed vehicle testers and other registration & licensing data

Road Assets

Roads, structures and electrical asset inventory and condition data

Road closures & alerts

Emergency road closures, traffic alerts, planned road works, and on-road events data

Road Networks

Road classification, route numbering, road use, research, freight and model transport network data

Road Safety

Crashes, blackspots, road safety education, infrastructure and project data

Services & Administration

Administrative boundaries and corporate services data

Stakeholders

Community consultation and public enquiries data

Traffic

Traffic volume, travel speed and congestion data

HOME

DATA

APPLICATIONS

CONTACT

HELP

PINELLAS COUNTY OPEN DATA PORTAL

Search Open Data

Official Government Website

This site provides access to Pinellas County's publicly available GIS data. Use the search bar at the top or the data category buttons to browse the data collection. Data can be previewed in the map and downloaded as a spreadsheet, shapefile, KML or linked via API.

Click here to browse the complete data collection or browse below by data category

Boundaries

Demographic

Economic Development

Education

Elections

Emergency Management

Environment

Hydrology

Washington's GIS Open Data Site

Washington State Open Data Bridge

Search for open data

SEARCH WITHIN MAP

My Activity

"We will provide efficiency, effectiveness and transparency."

Governor Jay Inslee, Inaugural Address, January 16th, 2013

Browse Topics

Biodiversity

Boundaries

Climate

Economy

Elevation

Environment

Farming

Geosciences

Health

Imagery and Maps

Intelligence & Military

Inland Waters

GLOBAL FOREST WATCH

HOME

RESOURCES

Search for open data

Search Within Map

FEATURED DATA SETS

BROWSE ALL DATA

What type of data are available on Global Forest Watch?

FOREST CHANGE DATA

These data indicate change within forests at different resolutions, frequencies, and geographic extents. The Global Forest Watch team uses a variety of data to monitor forest cover loss and gain data, near real time forest alerts, and other data to help you find the data you need.

EXPLORE

FOREST COVER DATA

These data represent forest cover at different resolutions and frequencies. Forest cover data is used to monitor forest cover loss and gain data, near real time forest alerts, and other data to help you find the data you need.

EXPLORE

FOREST USE DATA

These data represent forest use patterns over time, such as logging, agriculture, and other land use changes.

EXPLORE

CONSERVATION DATA

These data represent forest conservation and management efforts, as well as protected areas, biodiversity, and natural resources.

EXPLORE

PEOPLE DATA

These data represent forest use patterns over time, such as logging, agriculture, and other land use changes.

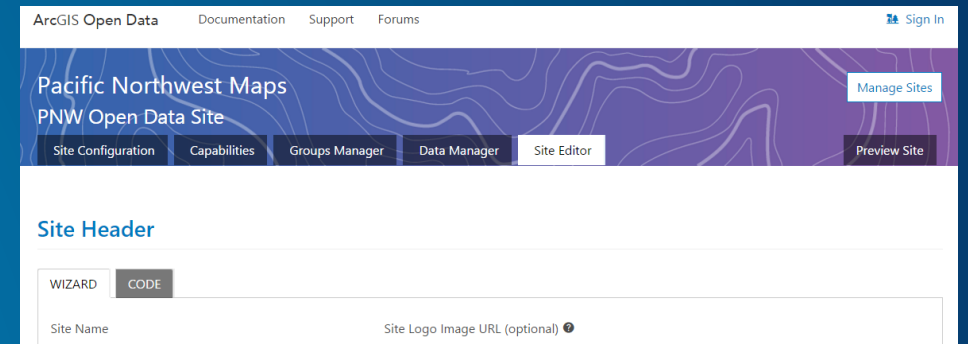
EXPLORE

VIEW COUNTRY DATA

Choose a country

Customizing the Site Layout

- Site Editor tab
- Use provided editor or custom HTML and CSS to configure
 - Site Header – HTML and CSS
 - Body Content – Layout HTML
 - Site Footer – HTML
- Widgets
 - Add or remove
 - Configure with Widget Editor and Markdown
 - Widget types: text, image, RSS feed, data listing



Using Markdown

- Markdown is used in the Widget Editor
- Markdown Basics
 - <http://daringfireball.net/projects/markdown/basics>

| Attribute | Syntax | Result |
|-------------------------------|--|--|
| Header | # Text here for a header 1 ## Text here for a header 2 ##### Text here for a header 6 | Text here for a header 1 Text here for a header 2 Text here for a header 6 |
| Italics | *Text here* or _Text here_ | <i>Text here</i> |
| Bold | **Text here** or __Text here__ | Text here |
| Combining Italics and Bold | *Combine italics **and** bold* | Combine italics <i>and</i> bold |
| Links with link address shown | http://www.esri.com | http://www.esri.com |
| Links without link address | [esri] (http://www.esri.com) | esri |
| Bullets | * This * That * The other | <ul style="list-style-type: none">• This• That• The other |
| Ordered list | 1. This 1. That 1. The other | <ol style="list-style-type: none">1. This2. That3. The other |
| Insert Images | ("image source" should be the URL to the image) | Image from "image source" will be visible |
| Insert Image with hyperlink | ("link is the url you want to hyperlink to and "image source" should be the URL to the image) | Image from "image source" will be visible and will link to the url provided |

Grouping Data

- Thematic tags to direct users to specific datasets
- Add search options to the site URL
 - Full Search: <http://talgov.tlcgis.opendata.arcgis.com/datasets?q=business>
 - Tag Search: <http://opendata.dc.gov/datasets?keyword=education>
 - Group Search: https://hifld-dhs-gii.opendata.arcgis.com/datasets?group_id=c9584c01b4564b188b98d3ef9cf3e57c
- Attach link to text, (text widget) using markdown
 - [Education](<http://opendata.dc.gov/datasets?keyword=education>)
 - e.g. <http://opendata.dc.gov>
- Attach link to image, (image widget) using markdown
 - Specify Image Source URL and Image Link
 - e.g. <http://vicroadsopendata.vicroadsmaps.opendata.arcgis.com/>

Sample HTML / CSS code

Brookline (<http://data.brooklinema.gov/>)

- Header Button: <http://esriurl.com/BrooklineButton>
- Grid: <http://esriurl.com/BrooklineGrid>

Charlotte (<http://clt.charlotte.opendata.arcgis.com/>)

- CSS: <http://esriurl.com/CharlotteCSS>

California Dept. of Public Health

- CSS: <http://esriurl.com/CDPHcss>
- Body: <http://esriurl.com/CDPHbody>
- Footer: <http://esriurl.com/CDPHfooter>

Detroit (<https://data.detroitmi.gov/>)

- Footer/Header/CSS: <http://esriurl.com/Detroitcode>

Sample HTML / CSS code

Police Foundation

- Body Layout: <http://esriurl.com/PoliceBody>
- Extra CSS: <http://esriurl.com/PoliceCSS>

San Francisco

- <http://esriurl.com/SFcode>

Extra - changing placeholder text in Webkit browsers:

- <http://esriurl.com/WebKitPlaceholder>



Demonstration

Customizing the ArcGIS Open Data Site

Exercise 4: Customize your ArcGIS Open data site



Exercise 4: Customize your ArcGIS Open data site

- If possible, use your own ArcGIS Online org. credentials
- If not possible, use <http://pnw.opendata.arcgis.com/sites>
- Open Site Editor tab
- Design the layout of your Open Data site
 - <http://doc.arcgis.com/en/open-data/provider/design-the-layout-of-your-open-data-site.htm>
- Add widgets to Site Header, Body Content, and Site Footer
- Add widget to group your data
- Try sample HTML / CSS code

Promoting your Open Data site


Engaging your community

- Make your Open Data site public
- Keep your Open Data site fresh (new datasets, highlighted datasets, design)
- Use a custom URL
- Link to open data from apps
- 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
 - Contests
- Showcase how people are using your data



Advanced Topics

Open Data Site Administration

[ArcGIS Open Data](#) [Documentation](#) [Support](#) [Forums](#)  [Shane](#)

Pacific Northwest Maps

Pacific Northwest Maps

[Manage Sites](#)

[Site Configuration](#) [Capabilities](#) [Groups Manager](#) [Data Manager](#) [Site Editor](#) [Preview Site](#)

[Datasets](#) [Items](#)

[Update Index](#)

Filter List

☐ Has Errors ☐ Has Warnings ☒ Belongs to My Organization

| Name | Download Cache ? | Actions |
|---|---|---|
| wolf1234 Feature Layer Updated at 10:58:22 AM Thursday, March 24, 2016 | <div>Manual Automatic</div> Why can't I set this? | <div>Refresh Edit</div> |
| Warning: This item does not have a license. Please assign a license . | | |
| REF US Watersheds HUC12 Feature Layer Updated at 12:50:10 PM Friday, March 18, 2016 | <div>Manual Automatic</div> | <div>Refresh Edit</div> |
| Warning: This item does not have a license. Please assign a license . Warning: IDs Only query failed. Server responded with [AJAX: Exceeded timeout of 90000ms on GET to http://maps.natureserve.org/landscape2/rest/services/US/REF_US_Watersheds_HUC12/MapServer/0/query?where=1%3D1&returnIdsOnly=true&f=json]. Warning: Query performance on layer is suboptimal and will impact user experience. | | |

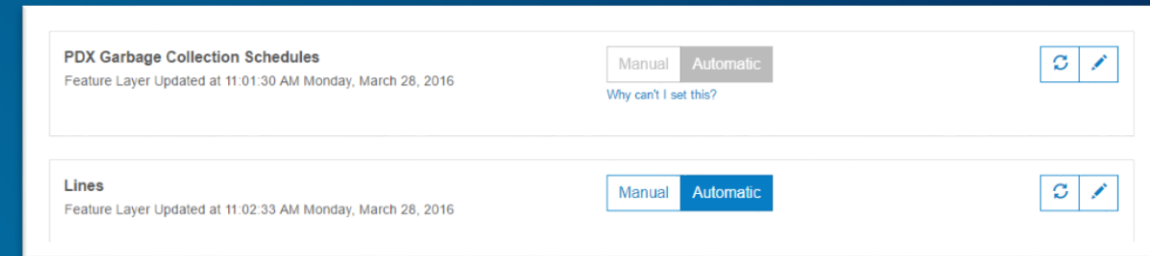
Data Manager

- **Identify issues, manage caching, resync data**
- **Warnings**
 - Successfully indexed, but with issues
 - Missing license - “Access and Use Constraints” in the item details is empty
 - Solution – fix item detail, or register individual service layers
- **Errors**
 - Failed to index
 - ArcGIS Open Data cannot access dataset (firewall, server down, item not supported)
 - Solution – remove item from Open Data group
- **Manual reset**
 - Refreshes the download cache

<http://doc.arcgis.com/en/open-data/provider/data-manager.htm>

Caching

- Set in Data Manager
- Caching
 - Dynamic copy of the data in the cloud
 - Improves download times, takes load off local servers
 - PDFs, docs, URLs, and web maps not cached
- Manual or Automatic cache updates
- Automatic cache updates
 - Setting for all hosted services
 - Cache dropped every 24 hours and regenerated with next download request
 - Recommended for data sets with frequent updates (e.g. crime)
- Manual cache update
 - Only updated when administrator manually resets data
 - Recommended for large data sets with infrequent updates (e.g. parcels)



Projections

- By default, all services will download in WGS84
- Option to Enable Local Projections (in Site Capabilities)
 - All services in ArcGIS for Server downloaded in original projection
 - All feature services hosted in ArcGIS Online downloaded in original projection
- Creating services from shapefiles and CSV files
 - Hosted services created in ArcGIS Online created in WGS84 projection
 - Use ArcGIS for Desktop to create hosted service in non-WGS84 projection

Local Projections

DisabledEnabled

Enable downloads in the native projection of the service instead of WGS84.

Server Configuration Details – Service Properties

- ArcGIS Open Data supports services on ArcGIS Server 10.0 or higher
- Max record count
 - Max record count is the maximum number of records per single request
 - Should be less than 5,000
 - Default is 1,000 for optimal performance
 - Only increase max record count if between 2,000 and 4,000 records in dataset
 - Services with max record count > 5,000 will receive warning in Data Manager
 - Services with max record count > 10,000 will not be indexed, error reported
 - Max record count does not impact downloads – all records downloaded
- OCG links (in API section) come from ArcGIS Server, if enabled
- Feature access not necessary (best to not enable)
- Scale dependencies do not matter

<http://doc.arcgis.com/en/open-data/provider/server-configuration-details.htm>

Server Configuration Details – Organizing Services

- **Large services will time out**
 - Organize data in multiple services, with less 20 layers per service
- **Services need to be publicly accessible**
- **Extend your infrastructure to the cloud / ArcGIS Online**
 - Reduces load on local servers
 - 99.9% uptime for ArcGIS Online
- **Enable persistent layer ordering in service (ArcGIS Server 10.3 or higher)**
 - Desktop Data Frame Properties > General > Allow assignment of unique IDs for map service publishing
- **Raster data is supported as Image Services**
 - Download in supported formats: JPEG, PNG, georeferenced TIFF
- **Use SSL for services, if possible**

<http://doc.arcgis.com/en/open-data/provider/server-configuration-details.htm>

Server Configuration Details – Managing the data

- **Change field names with aliases**
- **Turn off unimportant fields**
- **Geodatabase behaviors are not supported**
 - Topologies, relationships, related tables – not supported
- **Coded value domains are supported**
- **Data must support statistics**
 - Requires ArcGIS Server 10.03 or higher
 - ArcGIS Open Data only builds statistics for first 20 columns in a dataset
- **CSV files under 5MB are dynamic**
 - Use Publish as a Service for CSV files larger than 5MB
- **Enable editor tracking for accurate last updated date**

Server Configuration Details – Item configuration

- **ArcGIS Online Item title is the dataset name**
- **Access and Use Constraints is the data license**
 - The license is important for data consumers
 - License can be a URL for existing data policies
 - License can be HTML code from Creative Commons License Picker
 - <https://creativecommons.org/choose/>
- **Search for data is based on the ArcGIS Online item extent (can be changed)**

Integrating ArcGIS Open Data with other Open Data Platforms

- Provide ArcGIS Open Data catalog to other Open Data platforms
 - DCAT format (JSON)
 - Append /data.json to Open Data site home page URL
- One URL = hundreds of datasets
- Used by <http://www.data.gov/>

```
{
  "1": {
    "title": "UFA Arborist Assignment Zone",
    "description": "Work zone assignment for UFA Arborists via DDOT's Transportation Online Permitting System.",
    "keyword": [
      "DDOT",
      "UFA",
      "DC",
      "Arborists",
      "Assignment Zones"
    ],
    "issued": "2014-12-11T07:19:54.056Z",
    "modified": "2015-02-09T02:42:24.027Z",
    "publisher": "none",
    "contactPoint": "DCGISgroup",
    "mbox": "DCGISgroup",
    "identifier": "a7fa884889514c77afe50423cdf07664_6",
    "accessLevel": "public",
    "distribution": [
      {
        "title": "CSV",
        "format": "CSV",
        "accessURL": "http://opendata.dc.gov/datasets/a7fa884889514c77afe50423cdf07664_6.csv"
      },
      {
        "title": "KML",
        "format": "KML",
        "accessURL": "http://opendata.dc.gov/datasets/a7fa884889514c77afe50423cdf07664_6.kml"
      },
      {
        "title": "GeoJSON",
        "format": "GeoJSON",
        "accessURL": "http://opendata.dc.gov/datasets/a7fa884889514c77afe50423cdf07664_6.geojson"
      }
    ]
  }
}
```

Federating with CKAN

- CKAN – open source data portal platform
- Configure CKAN
 - Install the CKAN Harvesting extension
 - Install the CKAN DCAT extension
 - The Harvester Gather_Consumer and Fetch_Consumer services must be running as background services
- Harvest the ArcGIS Open Data catalog
 - Add your DCAT (<http://yourOpenDataSite/data.json>) as a harvest source

How to get metadata from ArcGIS for Desktop into ArcGIS Online

- Not all metadata is included when publishing items – need to add metadata
- The ArcGIS Online web-based metadata editor uses the ArcGIS metadata format
- Fields available for editing determined by style configured for the organization
- Use the ArcGIS for Desktop geoprocessing XSLT Transformation tool to convert other metadata formats to the ArcGIS metadata format.
- Use the ArcGIS for Desktop geoprocessing Upgrade Metadata tool to convert to the ArcGIS metadata format (e.g. FGDC_TO_ARCGIS)

<https://doc.arcgis.com/en/arcgis-online/share-maps/metadata.htm>

<http://desktop.arcgis.com/en/arcmap/latest/tools/conversion-toolbox/xslt-transformation.htm>

Resources

- **ArcGIS Open Data website and help documentation**
 - opendata.arcgis.com
- **ArcGIS Open Data showcase**
 - dc.esri.com/showcase
- **Live Training Seminar: bit.ly/OpenDataLTS**
- **ArcGIS Blog**
- **GeoNet**
 - Share ideas, questions, experiences with the community



Understanding our world.