Exercise 5 Narrative: Data Basin Overview (30 minutes)

Goals:
- Tour Data Basin and gain an understanding of some of its features, including how to import, discover, organize and interact with data.
- Understand the difference between public and private groups, maps and data and how to create each.
- Understand how to import services from ScienceBase for use in Data Basin
- Perform hands on exercises where you will create groups and galleries, import, search and organize data, and create a map.
- Tour Region 8’s gateway hosted by Data Basin

Navigating Data Basin

Data Basin is a science-based mapping and analysis platform that provides access to spatial data, mapping and analysis tools, and the ability to collaborate with others. You can access Data Basin from www.databasin.org.

Creating a Data Basin account with the USGS sign up option and always signing in with the USGS option using your Active Directory credentials, will enable you to access proprietary or sensitive data hosted in ScienceBase (see Exercise 1). Accounts are free to set up and allows you to use Data Basin tools for organizing, mapping, analyzing, and collaborating with spatial data.
- 1 GB of data storage
- Automatically granted right to upload data (DOI employees only)
- Download datasets
- Create maps, galleries, groups, etc. and interact with other Data Basin members
- Automatic access to subscription analysis tools for FWS employees

Getting Started – take tours, view videos or webinars, access help or a glossary, perform searches, etc.
Explore – where you can explore Datasets, Maps, Galleries, or Guides & Case Studies

- **Datasets** - Datasets are member-uploaded spatial information, typically created using a Geographic Information System (GIS). They can be visualized and analyzed using mapping tools in Data Basin, and downloaded for use in desktop GIS software. Datasets include shapefiles, ArcGRID files, ESRI File Geodatabases, and NetCDF files. Most datasets can be overlayed, styled, analyzed, and downloaded.

- **Maps** - Maps are member-created dynamic web maps of spatial information, including datasets, drawings, and basemaps. They can be used to easily combine information and tell a story about a place or topic. Maps can be exported to a variety of formats.

- **Galleries** - Galleries are created by members to easily showcase and share spatial information as a cohesive collection. They are very useful for creating a digital atlas, for organizing a set of related datasets and maps, or providing a diverse collection of resources on a particular topic.

- **Guides & Case Studies** - Data Basin Guides & Case Studies are summaries and interpretations of research methods, models, and scientific results. Guides & Case Studies are written by Conservation Biology Institute staff, invited guests, and engaged Data Basin members. Guides and Case Studies are intended to provide example of how key conservation datasets, maps, galleries, and supporting information are being put to use to improve well-being for people, wildlife, and landscapes.

- **Showcase** – recommended Data Basin items

Search – Every Data Basin page has a search field in the upper right corner, or you can select Search Geographies or Keyword under Getting Started.
- 2 Main ways to search
  - Keyword
  - Geography
- Filter
Community - a place to find other members of Data Basin, or groups that you want to join (or create one for your use)

My Workspace – where you can manage your bookmarks, groups, galleries, maps, datasets, documents, and where you can send and receive messages from other Data Basin users.

Create - where you can import a dataset, or create a group, gallery, or map
Create a group – groups help facilitate collaboration on specific topics, geographic areas, or projects by making it easier to share or organize spatial data, maps and supporting information. This is especially useful for project teams that span different agencies, organizations or locations. Groups also help to control access to private items, such as sensitive or proprietary data, or data and maps that are under review. If you are hosting secure data in ScienceBase and you want to make it available to a particular group, follow this workflow (See Exercise 6):

- Create a group in ScienceBase and assign members.
- Give your group READ access to your secure data, and give the Data Basin admin account WRITE access.
- Request that the same group be created in DataBasin. Once created, membership between the 2 groups is automatically synchronized.
- Once you import your secure data to Data Basin it will only be accessible to members of that group who have signed in to Data Basin using the USGS sign in option and their Active Directory credentials.

NOTE: Groups (or “realms” as they are called in ScienceBase) for Fish and Wildlife Service (USFWS) and National Park Service (USNPS) have already been created and are available for your use in both ScienceBase and Data Basin. Depending on which organization you belong to (FWS or NPS) you automatically become a member of that group the first time you sign in to ScienceBase. Follow this workflow for using these groups to limit access to your secure data:

1. In ScienceBase, give one of the groups listed above READ access to your secure data, and give the Data Basin admin account WRITE access.
2. Import your secure data into Data Basin (see below).
3. Whenever any member of that group signs in to Data Basin using the USGS sign in option and their Active Directory credentials, then that data will be accessible to them.
• **Import a dataset** – Data Basin is not a Federal repository and shouldn’t be used to host your data. However, you can host your data (including secure or sensitive data) on ScienceBase and import it for use in Data Basin. Note: All DOI users are automatically granted import privileges to Data Basin. However, you must create your Data Basin account with the USGS sign up option (on the Sign Up page), using your Active Directory username and password. In addition, each time you login to Data Basin, you must sign in using the USGS sign in option using your Active Directory username and password.

  o **ArcGIS Map Services Hosted on ScienceBase** – Use the url from the ScienceBase item that you want to import.

  Then, on the **Import a Dataset** page, import using the **Import from Another Catalog** option.
Secure ArcGIS Map Services Hosted on ScienceBase (See Exercise 6)

- Publish an ArcGIS Service Definition to ScienceBase but DO NOT make it publicly accessible. ScienceBase will not automatically create an ArcGIS Map Service in this case.
- Assign WRITE and READ access to either individuals or groups in ScienceBase.
- Give the Data Basin service account WRITE access to the item in ScienceBase. This allows the Data Basin server to periodically check the item for updates as well as to synchronize members between groups.
- Request that your item be published as a secure map service from ScienceBase staff.
- Once notified that your service has been published use the url from that ScienceBase item to import it using the Import from Another Catalog option into Data Basin.
• **Create a gallery** – galleries help to showcase, organize and share spatial information as a cohesive collection and to organize or publish a set of related datasets and maps.
  - Title
  - Public or Private
  - Description
  - Tags
  - External Resources
  - Thumbnail
  - Credits

- **Create a map** – dynamic web maps of spatial information, including datasets, drawings, and basemaps. They can be used to easily combine information and tell a story about a place or topic. Maps can be exported to a variety of formats.
  - Save or Export your map
  - Zoom, navigate, locate
  - Identify, measure, swipe and select
- Analysis tools - by subscription only. FWS employees get automatic access to these tools.

### Site Assessment Report

Created by: Emilie Luciani on February 16, 2016

**Results:**

<table>
<thead>
<tr>
<th>Analysis Area</th>
<th>Feature Count</th>
<th>Area (ac)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Greater Sage-Grouse Management Zones</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Name (unique values)</td>
<td></td>
<td></td>
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<tr>
<td>Wyoming Basins Management Zones</td>
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<td>3,345,100 ac</td>
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<td>Snake River Plain Management Zone</td>
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<td>1,668,319 ac</td>
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<td>Great Plains Management Zone</td>
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<tr>
<td><strong>Greater Sage-Grouse Priority Areas for Conservation</strong></td>
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<td>ID (unique values)</td>
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<tr>
<td>128-Wyoming Basin-MZ2</td>
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<td>168-Yellowstone Watershed-MZ1</td>
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<tr>
<td>128-Wyoming Basin-MZ2</td>
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<tr>
<td>127-Wyoming Basin-MZ2</td>
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<td><strong>Greater Sage-Grouse Populations</strong></td>
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<td>Yellowstone Watershed</td>
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</tbody>
</table>

- Legend, overview map and scale bar
- Add datasets, drawings or change basemaps
- Adjust transparency, style and filter
- Add drawings or comments
- Designed to showcase spatial information for particular geographies, topics, projects and administrative offices and provide a framework that supports integration across various activities within FWS.
- Ability to search, discover, use or share existing maps or create your own custom maps. Additionally, analytical tools, including buffering and site assessments are available for internal use by FWS staff for completing geographic analyses.
- Data Stewards in FWS can use the Data Basin application along with USGS ScienceBase to catalogue and steward their data, then provide transparent access and use of geographic information that meets federal standards.
- Most of the FWS data being discovered and used in the Data Basin portal is hosted and accessed directly from the federal USGS ScienceBase repository.
- A data “bridge” has been developed to facilitate sensitive or draft data access between Data Basin and the federal ScienceBase data repository.