



ScienceBase as a Platform for Data Release



This video tutorial provides information about using ScienceBase as a platform for data release. We will describe the data release workflow and demonstrate, step-by-step, how to complete a data release in ScienceBase.

Course Navigation 101

The image shows a presentation slide titled "Learning Objectives" with a list of four bullet points. The slide is part of a course titled "Metadata 101 Module_v7" by Viv Hutchison and Madison Langseth. The interface includes a Presenter Window, Instructor's Contact Info, Outline Tab, Search Tab, Notes Tab, and a Navigation Side Bar. The bottom of the slide features a control bar with Play, Backward, Forward, Slide Number, Volume Control, and Compress Nav. Bar buttons. The slide content is as follows:

Learning Objectives

- By the end of this course you should know:
 - The purpose of high-quality metadata
 - Federal requirements for metadata
 - Approved metadata standards and tools
 - The basics of a good metadata record

Metadata 101 Module_v7
Viv Hutchison and Madison Langseth
Science Data Managers
Phone | E-Mail

Outline **Notes** **Search**

Slide Notes
By the end of this course, you should know the purpose of high-quality metadata; federal requirements for metadata; approved metadata standards and tools; and the basics of a good metadata record.

Navigation Side Bar

Presenter Window
Instructor's Contact Info
Outline Tab
Search Tab
Notes Tab

Play **Backward** **Forward** **Slide Number** **Volume Control** **Compress Nav. Bar**

Slide 3 / 37 | Stopped
00:05 / 00:05
2 Minutes 49 Seconds Remaining

Course Navigation 101

Each lesson starts with a title screen followed by lecture slides. The screen consists of a presentation window, navigation side-bar, and navigation base bar. The **presentation window** is used to view the slides that summarize the lecture material. The **gray navigation sidebar** is to the right of the presentation window. **At the top** you will find contact information for the course coordinators. The rest of **the sidebar is divided into three panes**:

- The **Outline** pane lists the slides in the lesson. You can use this pane to go to any slide within the lesson.
- The **Notes** pane shows the **lecture material** for each slide. **The principal content of each lesson is contained in the lecture material and should not be skipped.** However, we recommend reading the lecture material from a *downloaded file* because the scientific formatting in the downloaded version may be more accurate than in the version shown in the notes pane.
- The **Search** pane allows you to search for any word in the lesson and will show all slides containing that word.
- The **gray navigation bar** below the presentation window contains:
 - “Forward” and “Backward” buttons to advance and return to previously viewed slides.
 - The “Fast Forward” button.
 - The status bar displaying the current slide number.
 - Controls for sound and volume.
 - A toggle button (lower right) changes the view of the Navigation Side Bar to full screen or to a compressed icon.

What you will need:

- **Data** (preferably in common, open formats)
- **Metadata** for each dataset to be released in XML format. (FGDC CSDGM* or ISO**).
- Data and metadata must be **reviewed and approved for release** through the Information Product Data System (IPDS).
 - (refer to: <http://www.usgs.gov/usgs-manual/im/IM-OSQI-2015-03.html>)

Resources

Data Management Website: <http://www.usgs.gov/datamanagement>

Guidance for Checking Metadata with Data:

<http://www.usgs.gov/datamanagement/documents/CheckingMetadataWithData.pdf>



*Federal Geographic Data Committee Content
Standard for Digital Geospatial Metadata

**International Organization for Standardization

To complete a USGS data release, you will need to have both data and metadata.

A best practice is to share data in a file format that is common, non-proprietary, and facilitates easy access and integration with other workflows and applications. For example, if you are releasing tabular data, it is better to use a CSV file format instead of Microsoft Excel. Some features in Excel, such as nested worksheets in Excel workbooks, certain formulas, and column formatting, can make working with Excel tables more challenging for downstream users within certain applications.

Data must be accompanied by at least one metadata record. Metadata is descriptive information about data. Metadata records must be in XML format (so that they will be machine-readable) and must conform to a standard approved for use in the USGS open data policies (FGDC-CSDGM or ISO). There are USGS tools that you can use to create and validate metadata. For more information about metadata and the metadata tools, see the USGS data management website at www.usgs.gov/datamanagement.

Both data and metadata need to be reviewed and approved through the USGS Information Product Data System (IPDS) a tracking system for managing the development steps of USGS information products. For more information about how to review metadata, see the Guidance for Checking Metadata with Data link provided on the bottom of the screen.

Preparing for a Data Release

Organize data and choose file formats

- Which organizational presentation makes the most sense? Try to anticipate downstream use, or common needs of possible users.
- Each individual dataset or structured collection of data files within a data release should have a unique metadata record.
- A metadata record that describes the entire data release is also recommended in most cases.

Here are a few things to consider before starting the data release process.

Think about how you would like to organize components of the data release and which file formats to use. When weighing the options, try to anticipate downstream uses for the data and think about what would be most helpful and intuitive for users based on common scientific workflows.

Data releases often contain multiple datasets. A best practice is to create individual metadata records for each dataset. This doesn't have to be overly time consuming – if you create one metadata record you can often use this as a template and edit it easily using tools such as the USGS Online Metadata Editor to customize it for each individual dataset. Another best practice is to have a metadata record for the entire data release.

The ScienceBase Team is Here to Help

The ScienceBase Team can:

- Assist in creating a data release landing page and obtain a resolvable DOI to the URL
- Provide recommendations for how to work through the steps in the process
- Ensure the data release meets the requirements within ScienceBase
- Arrange to send metadata to the USGS Science Data Catalog, if desired

If you decide to use ScienceBase as your data release platform, you will work with the ScienceBase team throughout the process. This workflow may change in the future to be more self-guided, but for now the process is moderated by staff to help ensure standardization across these formal data products in the ScienceBase system.

The ScienceBase team can help create a landing page for your data release in the ScienceBase system and assign a DOI or Digital Object Identifier. The team can provide recommendations for how to structure and share your data, and how to work through the steps of the data release process. At the end of the process the team will work to ensure that all the necessary components have been completed for the data release product and it will be recognized and discoverable in the ScienceBase system as a data release product.

Step 1: Prepare Data

- Review the ScienceBase instructions page - <https://www.sciencebase.gov/about/content/data-release>
- Complete the ScienceBase Data Release Submission Form - <https://www.sciencebase.gov/datarelease>
- Be prepared to provide:
 - Title, Authors (including initials and author order), Abstract
 - IPDS IP number for the data release
 - Type of data, file size, number of datasets
- The team helps create a landing page and issue a DOI.
 - Page will have controlled permission settings and won't be public while the data release is in progress

Release process, first, please review the ScienceBase Data Release instructions page at <https://www.sciencebase.gov/about/content/data-release>

To start the data release process, complete the ScienceBase Data Release Submission Form at: <https://www.sciencebase.gov/datarelease>

The form will ask for the following information:

- the title, authors, and abstract for your data release
- the IPDS IP number for your data release
(The ScienceBase team will use this IP number to verify that your data release meets the FSP review and approval requirement before making your data release in ScienceBase public)
- And the type of data, file sizes, and number of datasets in your data release (this information helps the team provide recommendations for structuring and sharing your data)

Once the team has this information, they can help create a landing page and obtain a Digital Object Identifier (DOI) for your data release. This landing page will have private view and edit permissions, so you can work on your data release in ScienceBase before you are ready to make it public.

Step 2: ScienceBase

- Determine the best structure for your data

Single Dataset One ScienceBase Page

This screenshot shows a single ScienceBase page for the dataset 'Historical methyl mercury in San Francisco Bay'. The page layout includes a header with 'Go to' and 'View' buttons, followed by a 'Map' button and a map of San Francisco Bay. The main content area is divided into sections: 'Dates' (Publication Date: 2015, Start Date: 1850, End Date: 2007), 'Citation' (Schwartzbach, S.E., Aikman, J.T., Eagles-Smith, C.A., Cassada, M.L., Yee, J.L., Heyesent, A.C., Knibbenhoft, D.P., Bu, T.D., and Takahara, J.V., 2015. Historical methyl mercury in San Francisco Bay. U.S. Geological Survey Data Release. <http://dx.doi.org/10.5066/78P5X0P>), 'Summary' (San Francisco Bay, California is considered a mercury-impaired watershed...), 'Contacts' (Originator: Steven E. Schwartzbach, Co-Investigator: Joshua T. Aikman, et al.), 'Attached Files' (Click on title to download individual files...), and 'Permissions'.

Multiple Datasets One Top Level Page and Multiple Child Items

This screenshot shows a ScienceBase page for the dataset '2013 Raw Ground Penetrating Radar Data on Alaska's Glaciers'. The page layout includes a header with 'Go to' and 'View' buttons, followed by a 'Map' button and a map of Alaska. The main content area is divided into sections: 'Dates' (Publication Date: 2015-07, Start Date: 2013-03-15, End Date: 2013-06-24), 'Citation' (Candee, S.G., McGrath, D., Sase, L., O'Hara, S., Walker, G.J., Mihal, C.J., and Lutz, M.G., 2015. 2013 Raw Ground Penetrating Radar Data on Alaska's Glaciers. U.S. Geological Survey Data Release. <http://dx.doi.org/10.5066/78P5X0P>), 'Summary' (Common-Offset GPR surveys were conducted with a Sensors and Software 500-MHz Pulse Eiko Pro system...), 'Child Items' (A list of 7 child items, each representing a different glacier: Eklutna, Eureka, Gulkana, Scott, Taku, Valdez, and Wolverine), 'Contacts' (Point of Contact: USGS Alaska Science Center, Distributor: USGS Alaska Science Center, Metadata Contact: Salvatore G. Candee, et al.), 'Attached Files' (Click on title to download individual files...), and 'Permissions'.

Diagram illustrating the structure of multiple datasets on a single top-level page:

- 2013 Raw Ground Penetrating Radar Data, Eklutna Glacier, Alaska, 2013
- 2013 Raw Ground Penetrating Radar Data, Eureka Glacier, Alaska, 2013
- 2013 Raw Ground Penetrating Radar Data, Gulkana Glacier, Alaska, 2013
- 2013 Raw Ground Penetrating Radar Data, Scott Glacier, Alaska, 2013
- 2013 Raw Ground Penetrating Radar Data, Taku Glacier, Alaska, 2013
- 2013 Raw Ground Penetrating Radar Data, Valdez Glacier, Alaska, 2013
- 2013 Raw Ground Penetrating Radar Data, Wolverine Glacier, Alaska, 2013

Before you begin uploading your metadata and data to ScienceBase, it is important to think about the best structure for your data. If you have just one dataset in your data release, it will make sense to have a single ScienceBase item or landing page to represent your data release, as shown on the left. If you have multiple datasets in your data release, the ScienceBase team recommends that you have a top level landing page that describes the overall data release and then individual child items nested one level beneath that landing page, which will house and describe each data resource, as shown on the right. This structure enables each dataset to be described in more detail and discovered separately from the whole data release package. It also enables ScienceBase to create Web services for geospatial data.

Users should also note that ScienceBase supports programmatic access via an Application Program Interface (API) which can be a valuable feature for uploading large collections of content. The best approach for your data could vary, so if you are unsure how your data should be structured, please reach out to the ScienceBase team.

Step 2: ScienceBase

- Upload your metadata to ScienceBase to populate the necessary information for your item(s).
- If there are multiple datasets:
 - One metadata record describing the entire data release, to be uploaded to the top-level landing page
 - Metadata records for all individual datasets, to be uploaded to separate child items

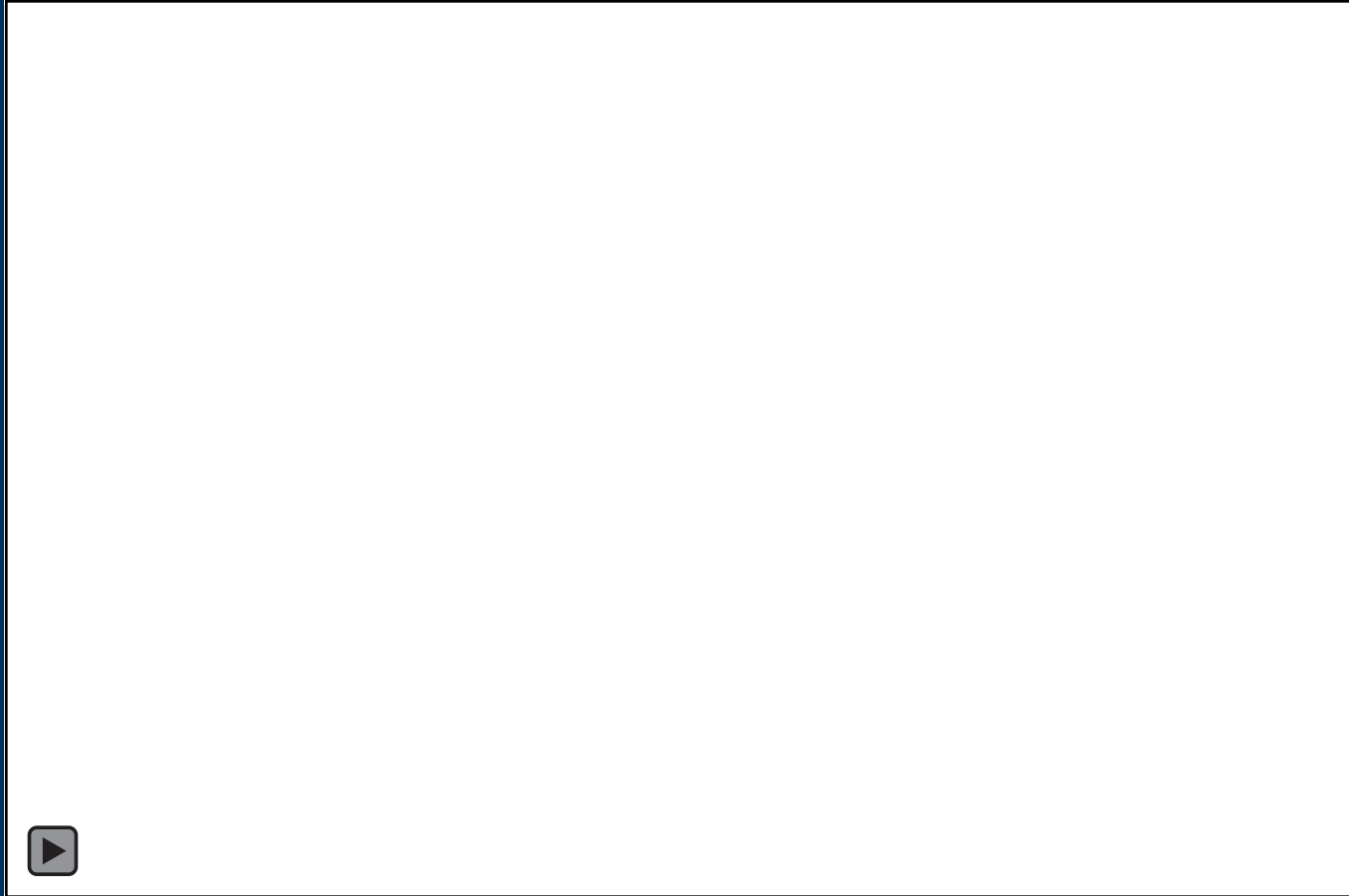


Once your data and metadata have been finalized and approved through the IPDS review process, you can begin uploading them to ScienceBase. You will begin by uploading a metadata record to the ScienceBase landing page. This will populate much of the information that you need on the landing page “automatically”, as ScienceBase can copy some key elements directly from your metadata file during the upload. Keep in mind that the ScienceBase item functions as a container and a Web-accessible location for your original data and metadata files. While metadata content can be pulled from your XML files into the item description on the page, any additional edits or information an author adds to the landing page or the child item pages in ScienceBase are not saved back to the original XML metadata files.

If you have multiple datasets in your release, you will usually benefit from a metadata record for your top-level landing page, which includes basic information about the data release as a whole (such as title, authors, dates, abstract, and purpose).

The metadata records for each of your individual datasets will most likely share much of this information, but should be specific to the individual datasets, with unique titles and specific information about the different resources. Let's take a look at how to upload metadata and data to ScienceBase.

Create a Landing Page for a Single Table, with Metadata



In this demo, I will show you how to create a landing page for a single data table with an FGDC-CSDGM metadata record. I will also show you how to include a JPEG to make your landing page more attractive.

From your ScienceBase Landing page, click the 'Manage' button in the upper right corner of the screen. Then, select 'Edit.' This will bring up the edit form for your item. Click on the 'Files' tab and then, click 'Add file...' Navigate to and open your XML metadata record and your data file. Before uploading your metadata and data, it is important that you give them descriptive and meaningful, yet concise, file names. We recommend you provide the same file name for the data and the metadata that describe them. Files retain their original names in ScienceBase, so this practice is extremely helpful to downstream users who will be downloading the files. If you choose, you can also select a picture that represents your project to include on the landing page for visual appeal. Once you click 'open,' a window should appear notifying you that ScienceBase recognizes that one of the files uploaded is an XML metadata record. In this example, we had an associated FGDC-CSDGM record. ScienceBase will also recognize XML metadata records in the ISO 19115 standard. To populate the information fields on your landing page using your metadata record, select 'Load Item from FGDC Metadata – Replacing Existing Values.' This will overwrite any content currently on the ScienceBase Landing Page, such as the placeholder title. If you select, 'Update Missing Item Data from FGDC metadata,' then only fields that are blank or are repeatable will be populated. If you select 'Cancel,' the XML file will be attached to your ScienceBase item, but no information from the metadata record will be used to populate any fields on the item. When you are first uploading your metadata record, we recommend selecting 'Load Item from FGDC Metadata.' The information will be pulled into the edit form that is open. Click through each tab and examine how ScienceBase has parsed your metadata record. Feel free to make any revisions to the content or the formatting of the information. You may also add a title in the text box to the right of the uploaded file. This title will appear below the file name on the Web page. Then click 'Save.'

You will notice that your landing page now displays your picture and many of the fields from your metadata record. You will also see your metadata record and data file under the attached files section of the landing page. Click on 'View' to see your original metadata in a easy to read format.

Create Child Items & Upload Geospatial Data



We just learned how to upload metadata and data when you have a data release with a single dataset. Now let's take a look at how to upload multiple datasets nested under the parent landing page. For this example, I will show you how to create child items, and upload a top-level metadata record, a shapefile, and a raster file.

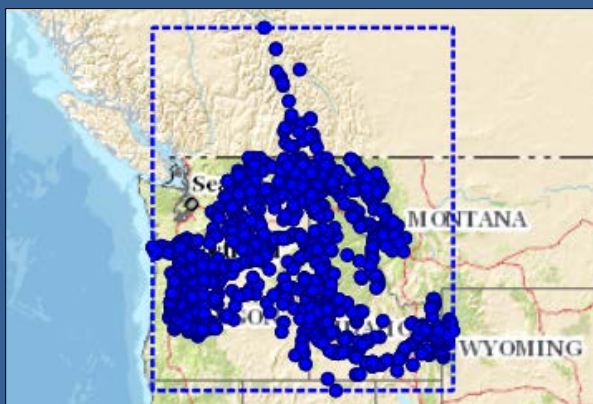
First, let's upload a top-level metadata record for your landing page. This is the same process that we just went through, except this time we will only upload an XML metadata record. Again, ScienceBase will notify you that it has found a metadata record. Select 'Load Item from FGDC Metadata.' Click save and you will see your populated landing page.

To create a child page or a child item in ScienceBase, click the 'Add Item' button along the top menu of your data release landing page. When the 'New Item' screen appears, click 'Create New Record' and upload your metadata and dataset as described previously. Go to the 'Files' tab, click 'Add files,' and navigate to your metadata and data files. For a shapefile or GeoTIFF, you will need to select all of the files that collectively make up that GIS dataset. Let's start by uploading a shapefile. ScienceBase will notify you that it has found an FGDC metadata record within the shapefile. Select "Load Item from FGDC Metadata." Then, ScienceBase will notify you that it identified a couple of extensions in the files that you uploaded. Click 'Create Extensions.' This will create geospatial Web services for your data. Your data files will now show up under the 'Extensions' tab. Click save and you will see your populated child item. If you go back to the parent landing page using the breadcrumbs, you will see how your new page is a child item of the parent landing page.

Now, let's create one more child item for a raster dataset. Click 'Add Item,' then 'Create New Record.' Again we will upload the metadata and dataset as described previously. Go to the 'Files' tab, click 'Add files,' and navigate to your metadata and data files. Remember to select all of the files associated with your GeoTiff including the metadata file. Again 'Load Item from FGDC Metadata' and 'Create Extensions.' Your data files are now under the 'Extensions' tab. Click save and you will see your second child item's landing page. Let's go back to the parent landing page to see both child items nested under the top-level landing page.

ScienceBase Geospatial Web Services

Shapefile



ScienceBase generates:
Web Map Service (WMS)
Web Feature Service (WFS)

GeoTIFF



ScienceBase generates:
Web Map Service (WMS)
Web Coverage Service (WCS)

<https://www.sciencebase.gov/about/content/sciencebase-geospatial-services>

ScienceBase also supports some powerful features for certain geospatial file types.

If you upload vector data in the form of a stand-alone shapefile, ScienceBase will create a Web Map Service and a Web Feature Service. A Web Map Service, or WMS, allows data to be viewed on the Web. A Web Feature Service, or WFS, is a web accessible service endpoint for vector data. Downstream users can use a Web Feature Service to gain direct access to the data through GIS applications, without needing to download the data.

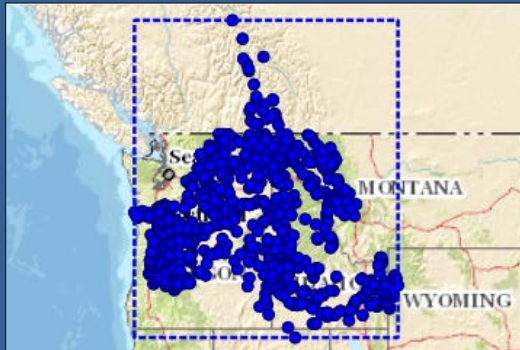
Updates to content in ScienceBase will be reflected in any external applications or Web sites that reference or use these Web services.

If you upload raster data in the form of a GeoTIFF file (.TIF), ScienceBase will create a Web Map Service. A Web Coverage Service, or WCS, can also be created for the GeoTIFF. A Web Coverage Service is the same as a Web Feature Service, but for raster data.

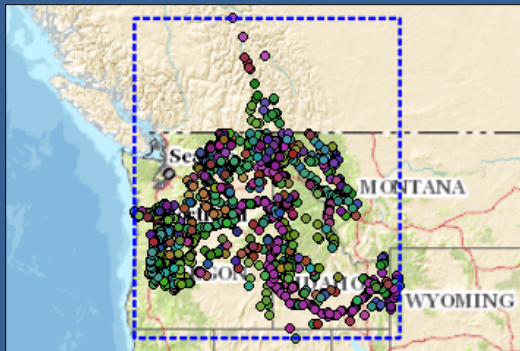
ScienceBase can display the footprint of uploaded shapefiles and GeoTIFF files in the preview map on the item page.

ScienceBase Geospatial Web Services

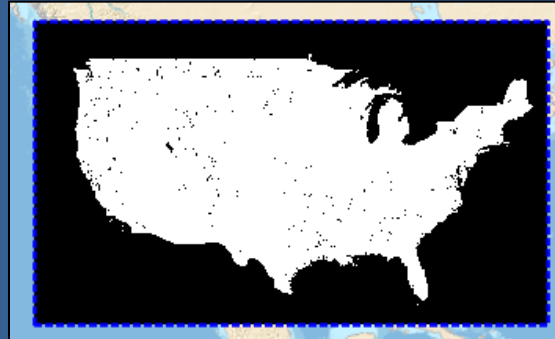
Shapefile



Service Definition (SD)



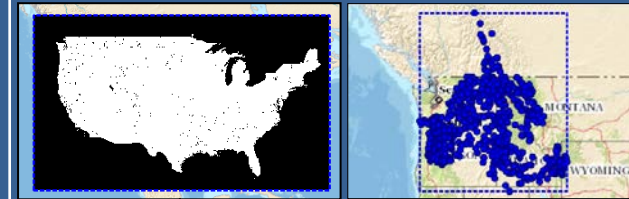
GeoTIFF



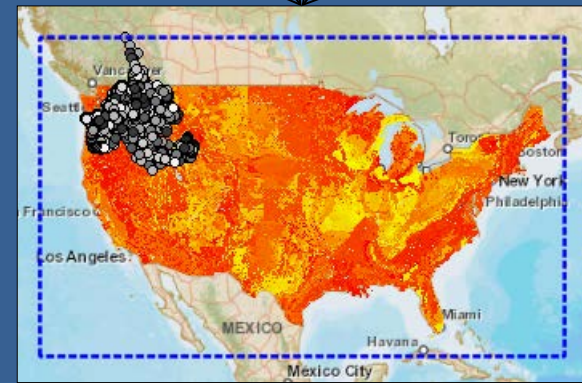
SD



Shapefile & GeoTIFF



SD



<https://www.sciencebase.gov/about/content/sciencebase-geospatial-services>

If you would like to display thematically organized and symbolized GIS data, you can also upload a saved map as an ESRI Service Definition, or .SD, file. When you upload an .SD file, ScienceBase will generate an ArcGIS REST service which allows your data to be accessible over the Web via a service endpoint.

.SD files can also be useful to present multiple GIS datasets as a single, bundled file. This can be useful if you decide that multiple data layers would be best discovered and used as a single resource or ScienceBase item.

This slide shows the difference between uploading stand-alone GeoTIFFs and Shapefiles and uploading a Service Definition file. As you can see, the shapefile and GeoTiff display as footprints without symbology in the preview map. The same data, saved as a service definition, will display the symbology that was saved with the map. If a user wishes to display stand-alone vector or raster data with a particular symbology, a 'Styled Layer Descriptor' or SLD file can be included during the upload process.

A full discussion of geospatial services is beyond the scope of this presentation but for more information about ScienceBase web services, please visit the link shown on the bottom of the screen.

<https://www.sciencebase.gov/about/content/sciencebase-geospatial-services>

ScienceBase Geospatial Web Services

Digital Representation of Oil and Natural Gas Pad Scars in Southwest Wyoming-2012 Update

Go to ▾

View ▾

Dates

Publication Date : 2015

Time Period : 2012

Summary

The recent proliferation of oil and natural gas energy development in the Greater Green River Basin of southwest Wyoming has accentuated the need to understand wildlife responses to this development. The location and extent of surface disturbance that is created by oil and natural gas well pad scars are key pieces of information used to assess the effects of energy infrastructure on wildlife populations and habitat. A digital database of oil and natural gas pad scars had previously been generated from 1-meter (m) National Agriculture Imagery Program imagery (NAIP) acquired in 2009 for a 7.7-million hectare (ha) (19,026,700 acres) region of southwest Wyoming (Garman and McBeth, 2014). Scars included the pad area where wellheads, pumps, and storage facilities reside and the surrounding area that was scraped and denuded of vegetation during the establishment of the pad. Scars containing tanks, compressors, the storage of oil and gas related equipment, and produced-water ponds were also collected on occasion.

This map displays data from U.S. Geological Survey Data Series report 934 (available at <http://dx.doi.org/10.3133/ds934>). This Data Series report updates the digital database for the five counties of southwest Wyoming (Carbon, Lincoln, Sublette, Sweetwater and Uinta Counties) and for a limited portion of Fremont County within the Wyoming Landscape Conservation Initiative (WLCI) study area using 2012 1-m NAIP imagery and

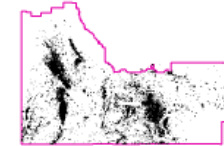
... show more ...

Contacts

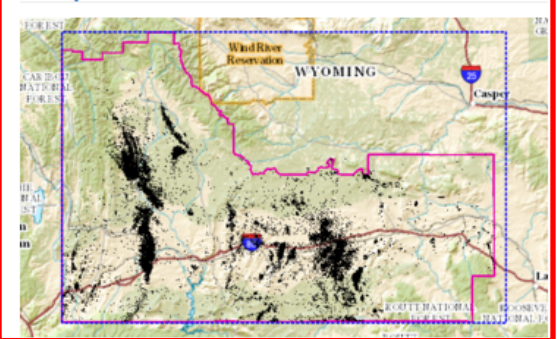
Point of Contact : U.S. Geological Survey

Distributor : U.S. Geological Survey

Metadata Contact : Steven L Garman



Map »



Spatial Services

ArcGIS REST Service :

<https://www.sciencebase.gov/arcg>



ArcGIS WMS Service :

<https://www.sciencebase.gov/arcg>



ArcGIS WFS Service :

<https://www.sciencebase.gov/arcg>



Let's review a quick example of how some of these Web services work. Here is an example of a ScienceBase item with an SD file uploaded. (*Animation 1: Red Box around the three Web Services*) Notice that three ArcGIS Web services have been created: an ArcGIS REST service, WMS, and WFS. (*Animation 2: Red Box around the Map*) The map image shown on the ScienceBase landing page uses the WMS, or Web Map Service to display the data.

ScienceBase Geospatial Web Services

ArcGIS REST Service Example

Wyoming Landscape Conservation Initiative

Conserving world-class wildlife resources. Facilitating responsible development.

WLCI Home Interactive Maps Home Calendar Projects Tools & Resources Reports & Documents Meetings About Us

Digital Representation of Oil and Natural Gas Pad Scars in Southwest Wyoming-2012 Update

This map displays data from U.S. Geological Survey Data Series 934 (Garman and McBeth, 2015). A digital database of oil and natural gas pad scars has previously been generated for a 7.7-million hectare (19,026,700 acres) region of southwest Wyoming (Garman and McBeth, 2014). Data Series 934 updates the digital database for the five counties of southwest Wyoming (Carbon, Lincoln, Sublette, Sweetwater and Uinta Counties) and for a limited portion of Fremont County within the WLCI study area using 2012 1-m NAIP imagery and 2012 oil and natural gas well permit information (Blewick and Wilson, 2014). Data Series 934 adds pad scars created since 2009, and updates attributes of all pad scars using the 2012 well permit information. The new database contains 17,404 pad scars of which 15,532 are attributed as oil and natural gas well pads.

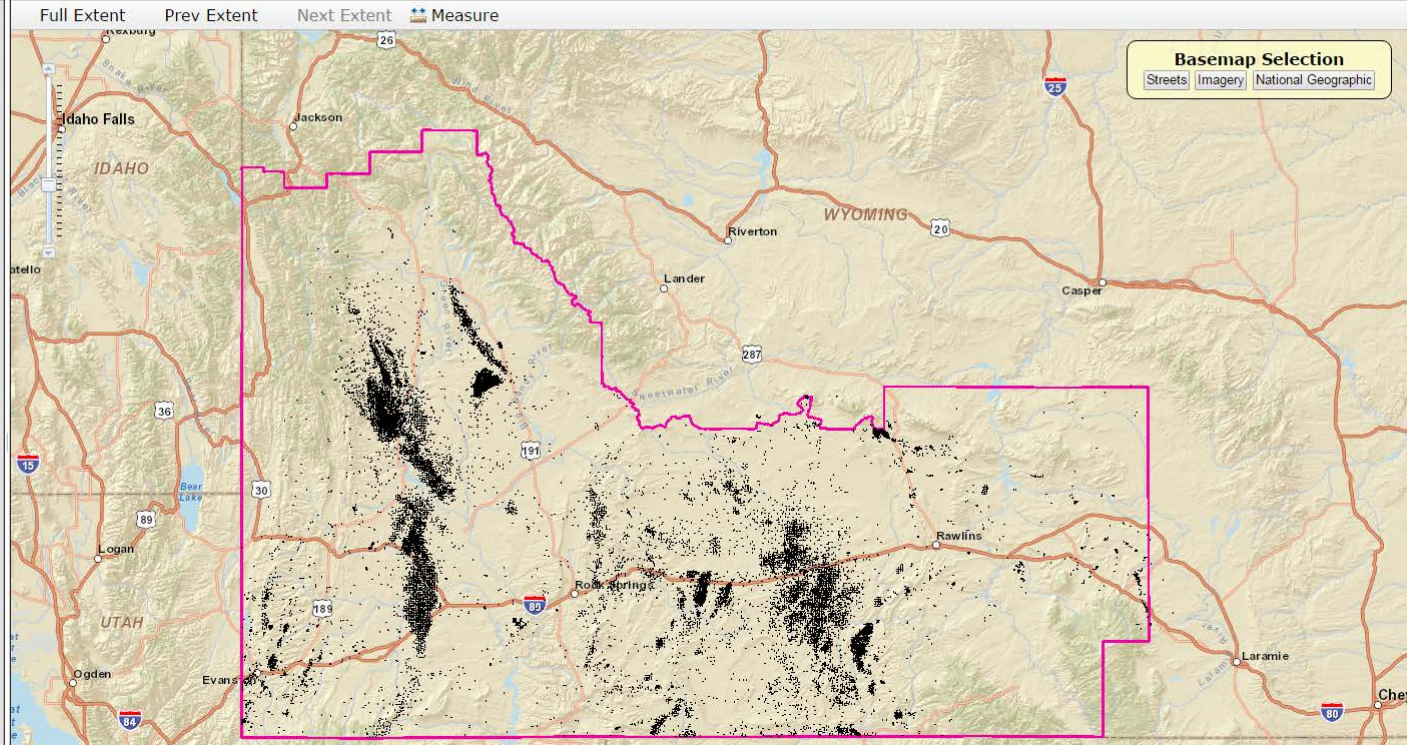
Blewick, L.R.H., and Wilson, A.B., 2014, Energy map of southwestern Wyoming, Part B—Oil and gas, oil shale, uranium, and solar: U.S. Geological Survey Data Series 843, 20 p., 4 pls., <http://dx.doi.org/10.3133/ds843>.

Garman, S.L., and McBeth, J.L., 2015, Digital representation of oil and natural gas well pad scars in southwest Wyoming—2012 update [abs.]: U.S. Geological Survey Data Series 934, <http://dx.doi.org/10.3133/ds934>.

Garman, S.L., and McBeth, J.L., 2014, Digital representation of oil and natural gas well pad scars in southwest Wyoming: U.S. Geological Survey Data Series 800, 7 p., <http://dx.doi.org/10.3133/ds800>.

FGDC Metadata (Pad Scars) Sciencebase Item Entry

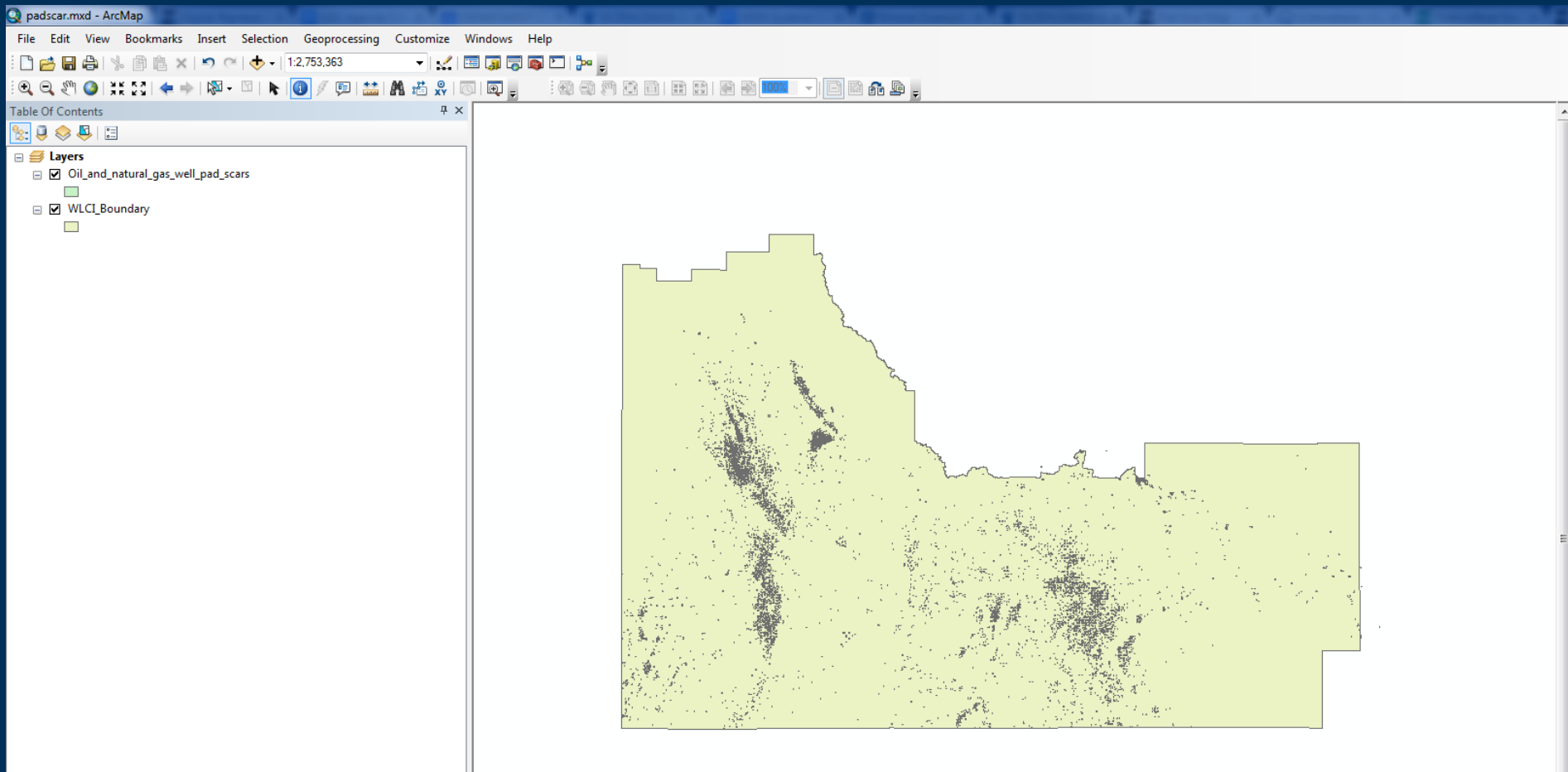
- ☒ Oil and natural gas well pad scars
- ☐ Oil and gas well pads
- ☐ Possible oil and gas well pads (lack documented well points in the vicinity)
- ☐ Produced water ponds from oil and gas extraction
- ☐ Storage tanks, compressors and storage of oil and gas-related equipment
- ☒ WLCI Boundary



In this example, the ArcGIS REST service from ScienceBase is being used by a MapViewer that was developed outside of ScienceBase to allow people to view the data in an external website.

ScienceBase Geospatial Web Services

Web Feature Service Example



If someone wants to actually use and manipulate the data, they need to use the WFS, or Web Feature Service. The WFS endpoint can be called from a GIS where the data can be queried, inspected, and used as input in geoprocessing tools. The screenshot displayed on the screen depicts the WFS endpoint being called from the Esri ArcMap desktop program.

You can learn how to connect to a WFS at the link shown on the bottom of the screen.

<https://www.sciencebase.gov/about/content/access-data-using-sciencebase-web-feature-services-wfs>

Step 3: Review



USGS Home
Contact USGS
Search USGS

ScienceBase

[Home](#)[Using ScienceBase](#)[The ScienceBase Catalog](#)[About](#)[Updates](#)[Contact Us](#)

Data Release Checklist

The ScienceBase Team will check that:

- Metadata records pass validation by the [metadata parser tool](#).
- In the metadata:
 - The DOI is in the online link field (citation section of the metadata) and the network resource field (distribution section of the metadata). DOI is entered as the full URL (i.e., <https://doi.org/10.5066/xxxxxxx>)
 - ScienceBase is listed as the distributor (see [FAQs](#) for content)
 - The distribution section includes the distribution liability statement (see [FAQs](#) for content)
- The citation format is correct (see [FAQs](#) for format and examples), and citations on all child items match.
- You have provided the ScienceBase team with the IPDS number (it will be entered into the landing page in the "Additional Information" section).
- Data are in common, non-proprietary formats (exceptions may apply).
- All datasets have corresponding metadata records. Metadata records should be uploaded as separate files (not zipped with the data) so that users can view the metadata (the clickable "View" option shows up on the right side of uploaded metadata files).
- Structure: data and corresponding metadata files are uploaded to child items nested one level below the landing page (no empty container folders). If there is only one dataset component in the data release (e.g. a single CSV table), this can be uploaded directly to the landing page. Each child item should have only one metadata record, because the Science Data Catalog can harvest only one metadata record from an item.
- Uploaded files have meaningful filenames and titles. If there are links in the "Related External Resources" section, the links also have meaningful titles.
- Names in the contact section have a format of first name, middle initial, last name. If a name doesn't have the correct format, you can edit it in the edit form. The edit form has an autocomplete feature that suggests names from the ScienceBase directory.
- If there are in-text citations (e.g. Jones, 2015) in the summary section, there are corresponding full citations at the end of the summary.
- If you would like to reference and link to an associated publication, add the publication's DOI as a link in the "Related External Resources" section. This section can be edited in the last tab of the edit form (select type "Publication that references this resource" and add the full citation in the title field). It may also be helpful to add the citation to the summary section of the landing page and to explain how the publication is related.

[https://www.sciencebase.gov/about/
content/data-release-checklist](https://www.sciencebase.gov/about/content/data-release-checklist)



Before making a data release public, the data and metadata should have official approval, which must be documented in the IPDS system. It is your responsibility to contact the ScienceBase team once you have received approval to release your data. The ScienceBase team will review the page to make sure all of the necessary data release elements are present and that everything is formatted properly.

Once approved by the ScienceBase team, the data release will be made public and future edits to the item will be restricted to help ensure that the citation for the resource references static content. If ScienceBase handled the creation of the DOI for the data release, the DOI will be switched from a 'reserved' status to a 'published' status, and will then resolve to the ScienceBase landing page when structured in the "https://doi.org" format.

Visit the ScienceBase Data Release Checklist page linked at the bottom of the screen, to view a checklist of things that the ScienceBase Team will review. Please note that the ScienceBase workflow for data release is currently driven by the guidance outlined in the USGS Instructional Memos (IMs) for open data. This workflow and documentation may be updated in the future, on an as needed basis, to stay current with USGS policy and guidance.

<https://www.sciencebase.gov/about/content/data-release-checklist>

Completing your Data Release

- You can now:
 - Cite your data in your publication
 - Cite your publication in your ScienceBase data release
 - Send your metadata record for inclusion in the USGS Science Data Catalog



Summary

Spatial reconnaissance of fluvial microcystins (MC) concentrations and select water-quality parameters, including nutrients and periphyton biomass, in 75 Wadeable streams in the Piedmont region of the southeastern USA during 2014. Data set includes only those data specifically discussed in the associated journal article:

Loftin, K.A., Clark, J.M., Journey, C.A., Kolpin, D.W., Van Metre, P.C., and Bradley, P.M., 2016, Spatial and temporal variation in microcystins occurrence in Wadeable streams in the southeastern USA: Environmental Toxicology & Chemistry, <http://dx.doi.org/10.1002/etc.3391>.



<http://data.usgs.gov/datacatalog/>

Email:
sciencedatacatalog@usgs.gov



Your data are now public! Make sure you cite your data in any publication that references them using the Digital Object Identifier as part of the citation and encourage your colleagues to do the same.

Once you get the citation for your publication, you can add it to the summary section of your ScienceBase Data Release. That way readers can easily navigate between your data and the publication. Contact the ScienceBase team to make this addition.

Finally, make sure to catalog your data release by submitting the metadata files associated with the release to the USGS Science Data Catalog or SDC. It is USGS policy that all metadata for approved data be submitted to the SDC. The SDC will help improve the discoverability and accessibility of your data! Metadata records can be submitted in various ways. For more information, see the help page of the SDC website:

<http://data.usgs.gov/datacatalog/> or email sciencedatacatalog@usgs.gov.

It is possible to submit metadata records directly from ScienceBase. If you would like to set up a connection, please contact the ScienceBase team at sciencebase@usgs.gov.

Additional Considerations

- Granting access to private ScienceBase items
- Conducting anonymous, external journal reviews using ScienceBase

Permissions

Readable By: (INHERITED)

- *USER:mlangseth@usgs.gov*

Writable By: (INHERITED)

- *USER:mlangseth@usgs.gov*

Item Actions

Manage Item
Lock
Edit
View Audit History
View Metrics
Manage Permissions
Manage Anonymous Access Links

There are a couple of additional considerations for working with ScienceBase.

A data release is often a team effort. If you have team members who need access to your ScienceBase item while your data release is in preparation, you can grant read and/or write permissions to the item using each person's email address. To manage permissions, select the "Manage" drop-down menu and then "Manage Permissions". In order to be granted permission to the item, the person will need to have a myUSGS account. All USGS collaborators are eligible for myUSGS accounts. Email myusgs@usgs.gov for more information on creating new accounts.

Some external journals require anonymous access to data while reviewing publications. ScienceBase has an option now to generate an anonymous access link to your private data in Sciencebase. At the bottom of the ScienceBase Item, under Item Actions, you will find the "Manage Anonymous Access Links" button for creating and managing the links. Please contact the ScienceBase team if you have any questions about managing permissions or anonymous access links.

Thank You

Please email the ScienceBase Data Release Team with questions or comments

- sciencebase@usgs.gov

ScienceBase is continuously evolving to meet USGS data release requirements and promote data reuse. If you have any questions or comments on the process, please email the ScienceBase team at sciencebase@usgs.gov.