

U.S. Fish and Wildlife Service

Natural Resource Program Center

National Wildlife Refuge System

Fish & Wildlife Service Catalog (ServCat) Help Manual

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1 Welcome and Introduction

Welcome. The Service Catalog, or ServCat, is an online application designed to centralize and preserve information about the Service or used by the Service. Historically important and management relevant documents- such as reports, management plans, geospatial data, and survey protocols- are now easily accessible. ServCat enables employees to discover information between programs, regions, and refuges, which promotes collaboration and minimizes redundancy across the Service. Information can include, although is certainly not limited to:

- Published and unpublished reports
- Plans
- Geospatial and tabular datasets
- Field manuals and other general resource materials
- Photographs, maps, letters, etc.
- Surveys

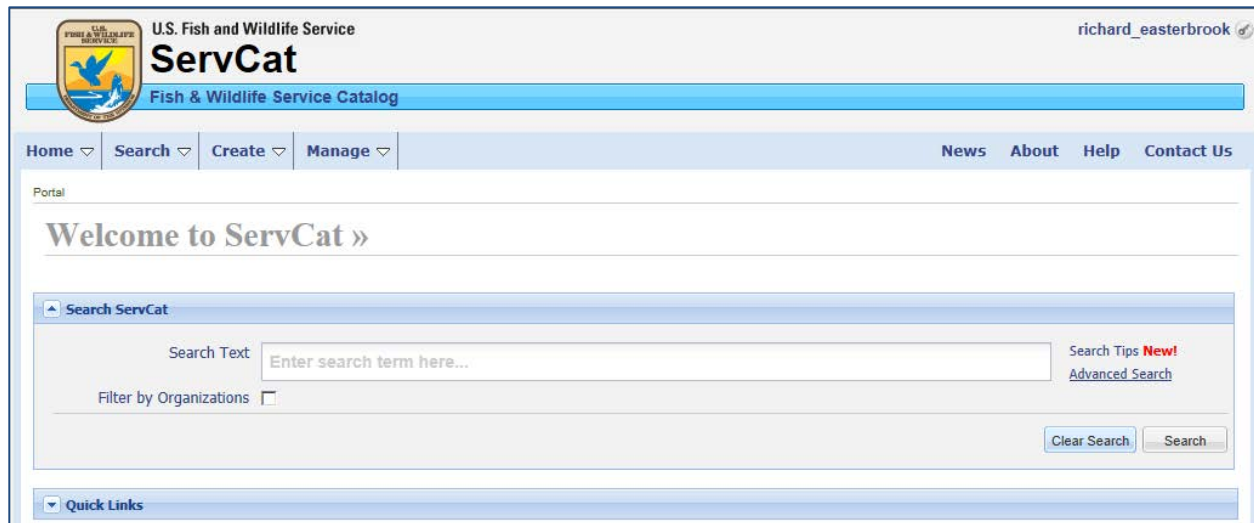
The Service Catalog is open to all FWS staff to both search for and create new information. Access to the system is integrated with U.S. Fish and Wildlife Service network credentials.

The ECOS Development Team provides the central point of access and hosting support for ServCat.

This document is the comprehensive guide to all of the functionality for the Service Catalog. It will be regularly updated as new functionality is added.

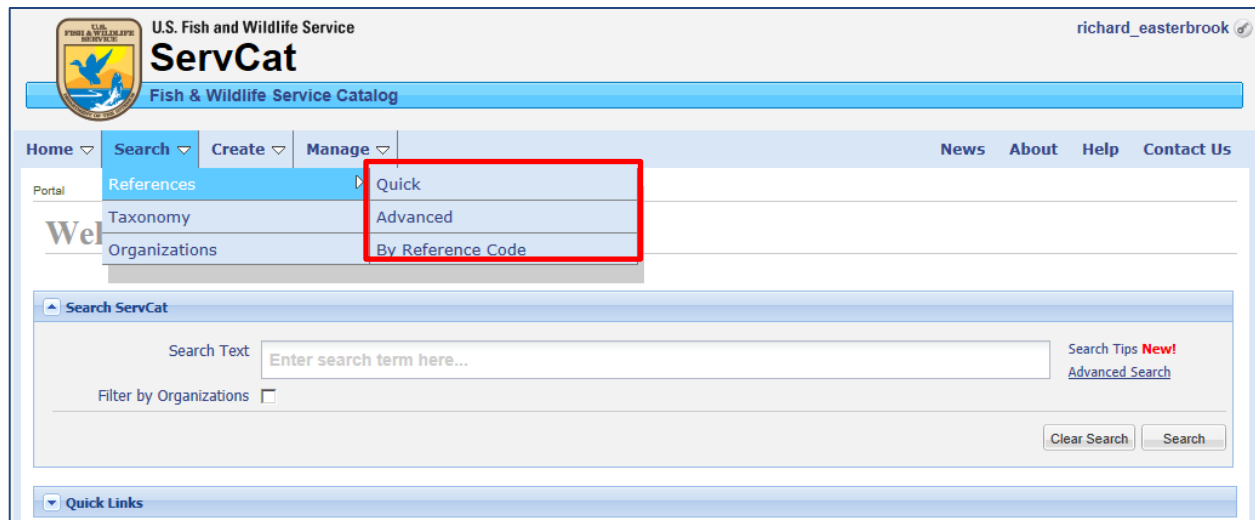
2 Search Interface

There are a few of search options for finding information within the Service Catalog. These options include the ServCat home page search, which is essentially the Quick Search



The screenshot shows the ServCat home page. At the top is the U.S. Fish and Wildlife Service logo and the text "U.S. Fish and Wildlife Service ServCat Fish & Wildlife Service Catalog". A navigation bar includes "Home", "Search", "Create", and "Manage" dropdown menus, along with "News", "About", "Help", and "Contact Us" links. The main content area has a "Portal" section with a "Welcome to ServCat »" message. Below this is a "Search ServCat" section with a "Search Text" input field containing the placeholder "Enter search term here...", a "Filter by Organizations" checkbox, and "Clear Search" and "Search" buttons. To the right of the search field are links for "Search Tips New!" and "Advanced Search". At the bottom is a "Quick Links" section.

as well as three other options specific to the Service Catalog: Quick, Advanced and By Reference Code.



This screenshot shows the same ServCat home page, but with the "Search" dropdown menu open. The menu lists four options: "References", "Taxonomy", "Organizations", and a sub-menu. The sub-menu is highlighted with a red box and contains three options: "Quick", "Advanced", and "By Reference Code". The rest of the page layout is identical to the previous screenshot.

2.1 Searching Within the Service Catalog

Within the Service Catalog there are three options for searching:

- **Quick Search**— Conduct a simple broad search by information groups (e.g., documents, datasets, etc.), word phrase (e.g., "moose"), and/or FWS Organization (e.g., St. Vincent NWR).
- **Advanced Search** – Develop a detailed and customized query to find exactly what you need.
- **Reference Code**— Search by an existing Reference Code.

2.1.1 Search Type: Quick

This search is geared for someone wishing to quickly conduct a general search for all types of information, most often specific to an organization.

The screenshot shows the ServCat Search interface. At the top, there's a header with the U.S. Fish and Wildlife Service logo and the text 'ServCat Fish & Wildlife Service Catalog'. Below this is a navigation bar with links: Home, Search, Create, Manage, News, About, Help, and Contact Us. The main content area is titled 'ServCat Search' and contains a 'Search Definition' section. In this section, the 'Search Type' is set to 'Quick', the 'Search Text' is 'whooping crane', and 'Filter by Organizations' is checked. Below these, there are dropdowns for 'Region' (Southwest Region, Region 2) and 'Organization Types Displayed' (Refuges). A search results list on the left shows various wildlife refuges, with 'Aransas/Matagorda Island National Wildlife Refuge Complex' selected. On the right, a table shows the selected organizations with their names and codes. The table has two columns: 'Name' and 'Code'. The selected organizations are: Aransas/Matagorda Island National Wildlife Refuge... (FF02RTA...), Matagorda Island National Wildlife Refuge (FF02RT...), and Aransas National Wildlife Refuge (FF02RTA...). At the bottom right, there are 'Clear Search' and 'Search' buttons.

To streamline this search, some search criteria are pre-defined:

- Fields - Fields that are automatically searched include the Display Citation, Keywords, Content Description, Author Last Name, Corporate Name, and Abstract. Searching these fields, will automatically capture most of the important fields that will likely produce the most robust results. Title and Reference Code are not included in this search since they are already handled by searching the Display Citation.
- Reference Visibility—Only Public and Internal References are returned with a Quick Search (i.e., References that are Active, Legacy and InReview).
- Only the most current version of a Reference is included.

See Also

Holding Location Types and Attributes (Section 7.2)
 Reference-Organization Links (Section 8)
 Information Resource Evaluation (Section 6.2)
 Reference Lifecycle States (Section 6.1)

Search Text

This helps narrow the search by a word or phrase. There is full flexibility for using 'And', 'Or', 'Not' and parentheses. For example, search for "elk or moose."

The screenshot shows the ServCat Search interface with the 'Search Definition' section. The 'Search Type' is set to 'Quick' and the 'Search Text' is 'elk or moose'. The 'Filter by Organizations' checkbox is not checked. The 'Region' dropdown is set to 'Southwest Region, Region 2' and the 'Organization Types Displayed' dropdown is set to 'Refuges'. The search results list on the left is empty. On the right, the table showing selected organizations is also empty. At the bottom right, there are 'Clear Search' and 'Search' buttons.

See Section 17.1 for more detailed information on Quick Search logic.

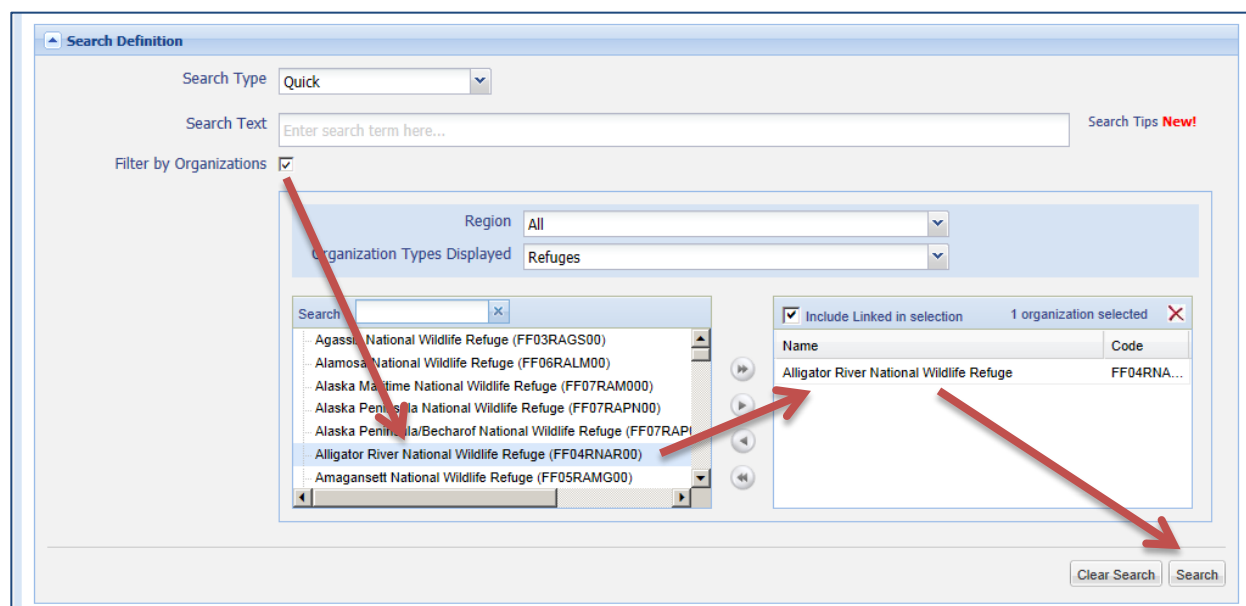
Organization(s)

Searching by Organization will return all References linked to the Organization. Currently, all References will be returned that have an Approved Organization link; those that have a Pending or Denied Reference-Organization link will not be returned on a search.

Two organization filters can be applied to the organizational pick list (left panel):

- Region – Only those organizations within the selected region will be displayed.
 1. Pacific Region, Region 1
 2. Southwest Region, Region 2
 3. Great Lakes - Big Rivers Region, Region 3
 4. Southeast Region, Region 4
 5. Northeast Region, Region 5
 6. Mountain - Prairie Region, Region 6
 7. Alaska Region, Region 7
 8. Pacific Southwest Region, Region 8
 9. Washington Office, Region 9
- Organization Type – Only those organizations within the selected type will be displayed.
 1. Administration
 2. Ecological Services
 3. Fisheries
 4. Landscape Conservation Cooperatives
 5. Law Enforcement
 6. Migratory Birds
 7. Other
 8. Private Lands Office
 9. Refuges (default)

Drag the Organization you wish to search for over to the right panel or use the button controls. Note that only those Organizations listed in the right panel will be included in the search.



If the 'Include Linked in Selection' option is checked, the organization selection plus any linked/related organizations will be display in the right panel. For example, selecting San Diego National Wildlife Complex will also select Tijuana Slough, San Diego Bay, Seal Beach and San Diego National Wildlife Refuges.

When more than one organization is specified, all References linked to at least one of the Organizations (aka Union) are returned.

See Also

Reference Organization Links (Section 8)

2.1.2 Search Type: Advanced

The advanced search provides incredible flexibility and is intended to narrow the results to just a few References meeting a specific search criteria. Currently, there are twelve ways to narrow the search results, each of which has its own section. Additionally, at any time search criteria can be saved for use later or to be shared with others.

Other notes:

- All sections where search criteria are defined are intersected together.
- At least one criterion in one of the sections must be specified to run a search.
- A section may be excluded at any time by checking the 'Exclude' option. This will keep the search criteria within a section but not use it for a specific search.
- Only Public and Internal References are returned with this search. See the top of Section 2 for more information
- This search interface has been tested for 10 criteria per section, thus, if 5,000 search criteria are added there is no guarantee that meaningful results will be returned within a reasonable time period.
- All versions of a Reference are returned. There is no search filter for version.

Saved Searches

This search can be limited to any saved search. When selecting a saved search, other search criteria fields will automatically be populated.

See Also

Saving Your Searches (Section 2.5)
 Manage Saved Searches (Section 4.4)

Reference Type Groups

The Service Catalog allows users to be very specific on the types of information they catalog (e.g., published report, journal article, vector dataset). However, most users do not know, or even care, about the subtle differences between these types of information (e.g., journal article vs. published report). Therefore, the ability to search for categories of information is offered:

- Datasets – All types of tabular and spatial data
- Documents – All synthesized and written information, including reports, journal articles, books, book chapters, notes, etc.
- Geospatial Datasets – All types of natively geospatial data (e.g., geodatabases, vector data, satellite images, etc.)
- Multimedia – All photos, audio, and other types of non-traditional media (e.g., movies).
- Projects – All projects
- Web Resources – All information resource whose primary means of conveying information is through the use of the internet.

If the 'All' option is selected (default), no Reference Type filter will be used.

See Also

Reference Type Definitions (Section 6.4)
 Reference Type Groups (Section 6.7)
 Links Among References (Section 6.9)
 Reference-Organization Links (Section 8)

Search Fields

The first section is devoted to searching for a text string using the fields that are both frequently searched and common to all Reference Types.

The screenshot shows the 'Search Fields' section of a search interface. A dropdown menu is open for the 'Display Citation' field, showing options: 'Abstract or Full Description', 'Brief Description', 'Display Citation' (selected), 'Title', 'Date of Issue/Publication', 'Content Begin Date', 'Content End Date', 'Last Edited', 'Owner', 'Viewer', 'Keyword', 'Contact Name', 'Any Common Text Field', and 'Reference Visibility'. The main search area contains a table with columns for the field name, the search operator (e.g., 'containing'), the search value (e.g., 'pupfish'), and an 'Exclude' checkbox. The first row is for 'Display Citation' with the value 'pupfish'. Below it, several other rows are partially visible, including 'Title', 'Date of Issue/Publication', 'Content Begin Date', 'Content End Date', 'Last Edited', 'Owner', 'Viewer', 'Keyword', 'Contact Name', and 'Any Common Text Field'. Each row has an 'Exclude' checkbox on the right.

Many filters may be added with the option of an intersection or union (i.e., AND, OR, AND NOT).

The screenshot shows the 'Search Fields' section with two filters added. The first filter is 'Display Citation' containing 'pupfish'. The second filter is 'Contact Name' containing 'Allen'. The filters are connected by an 'AND' operator. Each filter has a 'Remove' button next to it. At the bottom left, there is an 'Add Filter' button.

Filters may also be removed at any time using the 'Remove' option.

A few other notes regarding this search:

- Currently, the Active Directory name must be known to search by Reference Owner/Viewer
- Contacts refers to any contact type, including author, editor, publisher, etc. To be more specific about the contact type, use the “Reference Types and Specific Fields” section.

See Also

Advanced Search Logic(Section 17)

Reference Attribute Definitions (Section 6.3)

Regions

The advanced search provides flexibility to filter by a FWS region (e.g., Great Lakes - Big Rivers Region- Region 3, etc.). One or more regions can be specified and can be unioned (i.e., OR and NOT).

Organizations

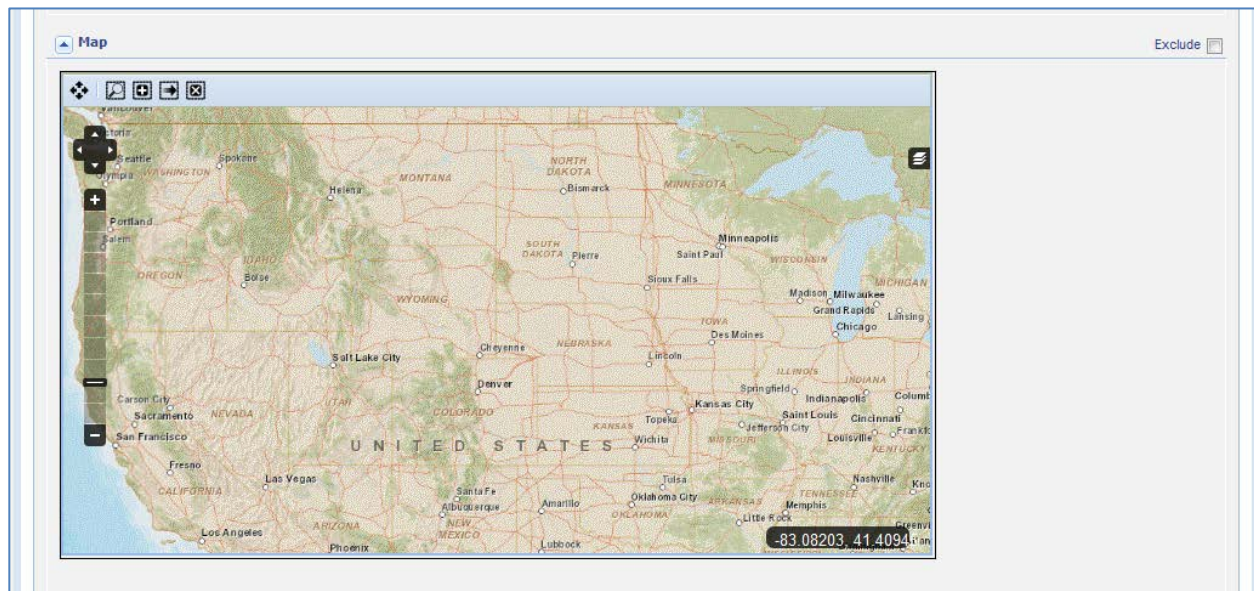
The advanced search provides flexibility to filter by a FWS organization (e.g., refuge, hatchery, etc.). One or more organizations can be specified, they can be unioned or intersected, and linked organizations may be included (i.e., Include all refuges for a given complex).

See Also

Reference Organization Links(Section 8)

Map

A map is provided to search for all References that intersect geographically with the bounding area of a Reference. If a bounding box for a FWS organization is used, the returned results may not always be for information specific to the organization. For example, if the search included the bounding area for Alamosa National Wildlife Refuge (NWR), results would include References specifically about Alamosa NWR and may also include others that overlap Alamosa NWR (e.g. a book titled 'Birds of Colorado').

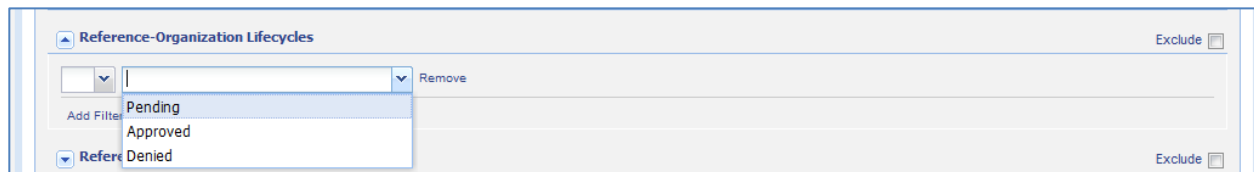


See Also

Reference Geospatial Attributes (Section 6.8)
Organizations and Geographical Tab (Section 3.4.3)

Reference-Organization Lifecycles

This section searches the Reference-Organization lifecycle.

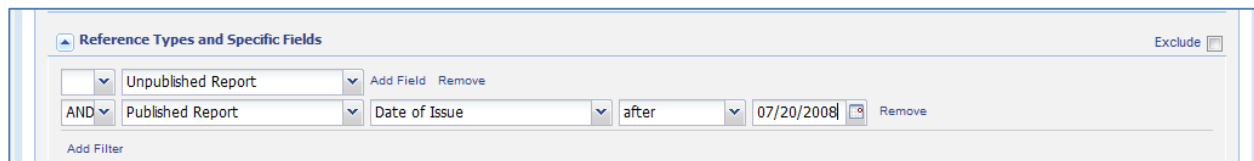


See Also

Reference-Organization Links (Section 8)

Reference Types and Specific Fields

This section searches by specific Reference Types and their associated attributes.



Specify only the Reference Type (e.g., IS Published Report or IS NOT Published Report) or specify specific fields for the Reference Type.

See Also

Advanced Search Logic (Section 17)
Reference Type Definitions (Section 6.4)
Reference Attribute Definitions (Section 6.3)
Attributes for Each Reference Type (Section 6.5)

Online Resources

This section limits the search to those References where a file can be downloaded (i.e., at least one Digital File or External Holding Location).

☒ Include Only Those References with Information Resources Accessible Online

Please note: Some References may have associated digital files which you do not have permissions to download

NOTE: It is possible to have online resources that are not accessible to all users due to permissions.

See Also

Holding Location Types and Attributes (Section 7.2)
Permissions and Accessing Information (Section 5)

Reference Visibility

As mentioned at the beginning of Section 2.2.2, Public and Internal References, by default, are returned with a search. To limit the search to view Public Reference (i.e., see what results are returned to the public), check only the 'Public' option. Likewise, to limit the results to Internal References, check only the "Internal" option. Unchecking both options will return no results.

Reference Visibility Exclude ☐

Limit results to References with visibility of: (You must select one or more visibility filters) ☒ Internal ☒ Public

NOTE: To access Restricted References (e.g., those that you own or have special permission to view), go to the Management Section or search for a Reference by Reference Code.

See Also

Permissions and Accessing Information (Section 5)
Management Interface (Section 4)

Holding Locations

This section limits References returned by specific attributes of the Holding Locations. For example, it is possible to search for all References where a physical copy resides at a specific refuge.

Holding Locations Exclude ☐

☐ Physical ☐ Organization

Add Filter

One or more holding types can be added, and, for a given holding type, filter further within a given field.

References will be returned where one or more of their holding Locations meet all of the criteria specified. For example, in the following example, References will only be returned in the search results if at least one of the Holding Locations is physically held at Wolf Island NWR with 'Wood Stork' in the location field.

Holding Locations Exclude ☐

☐ Physical ☐ Organization

AND ☐ Physical ☐ Location

Add Filter

See Also

Holding Locations (Section 7)

Reference Lifecycles

This section limits the search by Reference lifecycle.

Note that 'Draft', 'Quarantined', and 'Inactive' are not an option because References with these lifecycle states always have a visibility of 'Restricted' and are, therefore, never returned in the Advanced Search.

See Also

Reference Lifecycle States (Section 6.1)

Collections

Specify one or more Reference Collections to search within. Choose to only search within collections you own or search within any other collection as well.

See Also

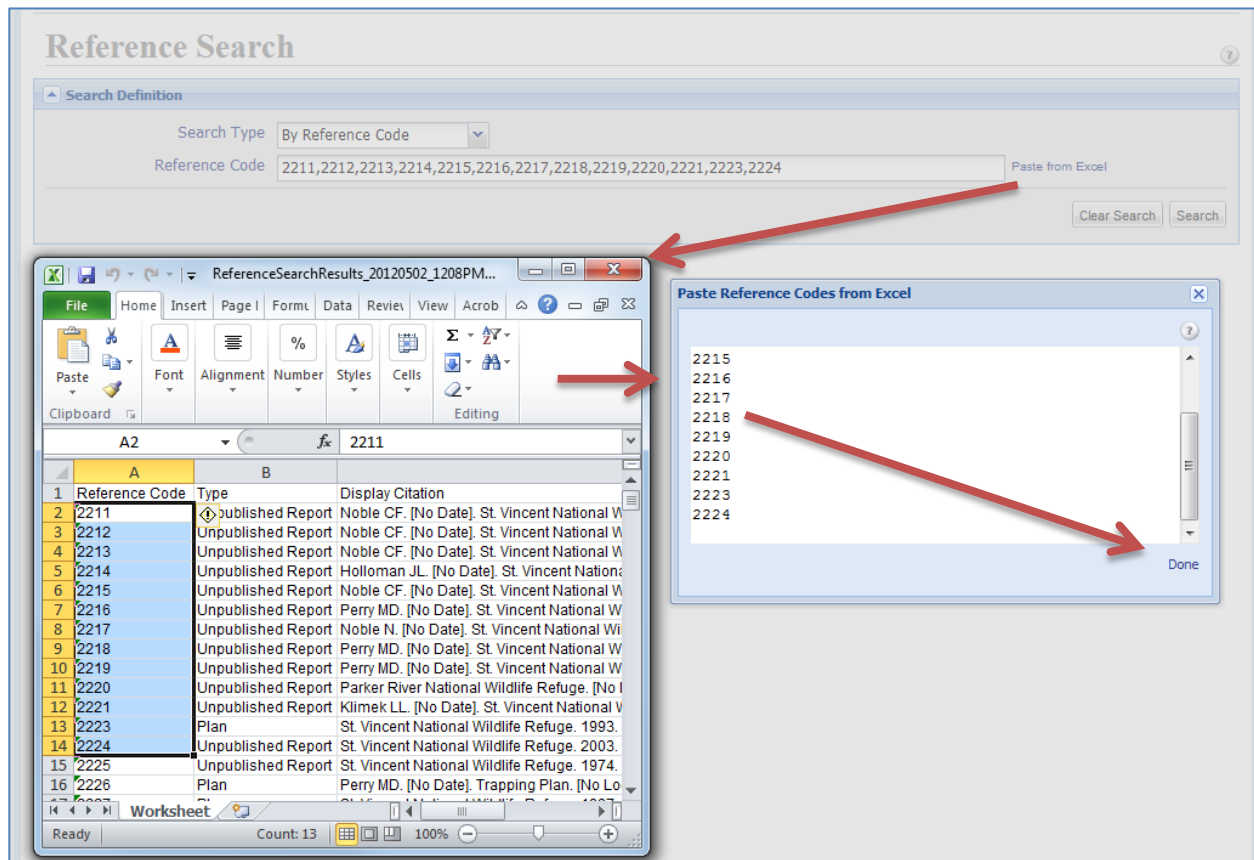
Manage Collections (Section 4.3)

2.1.3 Search Type: By Reference Code(s)

This search will search for a specific Reference, using its unique Reference Code.

Up to 2,000 Reference Codes can be specified as long as they are comma delimited.

The 'Paste from Excel' option can be used if a list of Reference Codes exist in a column of a spreadsheet. From the spreadsheet, copy the column of Reference Codes and paste them in the popup box. Once done pasting, click 'Done'.



2.2 Search Results

For any of the above mentioned searches, the Search Definition panel collapses and the results are displayed. A list of References are displayed that (1) meet your search criteria and (2) have a visibility of 'Internal' or 'Public'. The References are shown in a grid with five columns showing by default:

- Reference Code – The unique code for a Reference
- Type – Indicates the Reference Type.
- Display Citation – A quick summary of what the information is. Clicking on the display citation will take you to the profile for a given Reference.
- Title – The title of the Information Resource. Clicking on the title will take you to the Reference Profile.
- File Count – If there are Digital or External Holdings that can be downloaded, this will have a value greater than 0. Clicking on the number will download the digital file.

ServCat Search

Expand Panel to Revise Search Definition

Results Download

Reference Co...	Type	Display Citation	Title	File Co...
1447	Plan	2009. Koyukuk/Northern Unit Innoko/Nowitna National Wildlife Refuges Comp...	Koyukuk/Northern Unit Innoko/Nowitna National Wildlife...	1
1436	Plan	Adams R. 2004. Illinois River National Wildlife and Fish Refuges Complex Co...	Illinois River National Wildlife and Fish Refuges Complex...	1
1374	Plan	Alaska Pininsula and Becharof National Wildlife Refuges. 2006. Revised Com...	Revised Comprehensive Conservation Plan Alaska Peni...	1
1529	Plan	Alonso D. 2000. Ouray National Wildlife Refuge : Comprehensive Conservati...	Ouray National Wildlife Refuge : Comprehensive Conserv...	1
1372	Plan	Anderson M. 2005. Agassiz National Wildlife Refuge Comprehensive Conser...	Agassiz National Wildlife Refuge Comprehensive Conser...	1
1375	Plan	Antioch Dunes National Wildlife Refuge. 2002. Antioch Dunes National Wildlif...	Antioch Dunes National Wildlife Refuge Comprehensive...	1
1378	Plan	Arctic National Wildlife Refuge. 1988. Arctic National Wildlife Refuge Final Co...	Arctic National Wildlife Refuge Final Comprehensive Con...	1
1379	Plan	Arthur R. Marshall Loxahatchee National Wildlife Refuge. 2000. Arthur R. Mar...	Arthur R. Marshall Loxahatchee National Wildlife Refuge...	1
1417	Plan	Atzert S. 2004. Edwin B. Forsythe National Wildlife Refuge Comprehensive C...	Edwin B. Forsythe National Wildlife Refuge Comprehen...	1
1392	Plan	Baca T. 1998. Bitter Lake National Wildlife Refuge Comprehensive Conservat...	Bitter Lake National Wildlife Refuge Comprehensive Con...	1
1508	Plan	Baca T. 1998. San Andres National Wildlife Refuge : Comprehensive Conser...	San Andres National Wildlife Refuge : Comprehensive C...	1
1501	Plan	Baca T. 2000. Sevilleta National Wildlife Refuge : Comprehensive Conservati...	Sevilleta National Wildlife Refuge : Comprehensive Cons...	1
1383	Plan	Balcones Canyonlands National Wildlife. 2001. Balcones Canyonlands Nation...	Balcones Canyonlands National Wildlife Refuge Compre...	1
1423	Plan	Banta J. 2004. Fish Springs National Wildlife Refuge Comprehensive Conser...	Fish Springs National Wildlife Refuge Comprehensive Co...	1
1428	Plan	Barrd S. 2006. Great Dismal Swamp and Nansemond National Wildlife Refug...	Great Dismal Swamp and Nansemond National Wildlife...	1
1387	Plan	Bayou Coodrie National Wildlife Refuge. 2004. Bayou Coodrie National Wildl...	Bayou Coodrie National Wildlife Refuge Comprehensive...	1
1388	Plan	Bear Butte National Wildlife Refuge. 2007. Bear Butte National Wildlife Refug...	Bear Butte National Wildlife Refuge Comprehensive Con...	1

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Create Or Update Collection

Other Notes:

- To revise the search criteria, expand the search definition panel.
- Expand the lower panel titled 'Create or Update Collection' to add one or more References to a collection.
- Restricted References (i.e., those that are Draft, Inactive or Quarantined and are inaccessible to everyone but the Reference Owners) are never returned with the Quick or Advanced Search. To optimize search speed, the Service Catalog does not determine whether an user has permission to view restricted information, thus it only returns active records. To access Restricted References (e.g., those that you own or have special permission to view), use the Manage Section or search specifically for a reference code.
- To make searching faster, the most recent search results are cached, which can cause issues if recent changes have been made to a Reference or a Reference Collection. If issues are noticed, try refreshing the search by clicking on the search 'Refresh' option.
- By default, only 50 Reference records are display per page. This can be changed to either 100, 250 or 500.

Click on any of the column titles to sort or add other fields to the table. Select the 'Download' option to download the results of the search grid to a locally saved Excel spreadsheet or EndNote file (enw).

ServCat Search

Expand Panel to Revise Search Definition

Results

Download

Reference Co...	Type	Display Citation	Title	File Co...
1447	Plan	Unit Innoko/Nowitna National Wildlife Refuges Comp...	Koyukuk/Northern Unit Innoko/Nowitna National Wildlife...	1
1436	Plan	River National Wildlife and Fish Refuges Complex Co...	Illinois River National Wildlife and Fish Refuges Complex...	1
1374	Plan	Charof National Wildlife Refuges. 2006. Revised Com...	Revised Comprehensive Conservation Plan Alaska Peni...	1
1529	Plan	Comprehensive Conservatio...	Ourray National Wildlife Refuge : Comprehensive Conserv...	1
1372	Plan	Anderson M. 2005. Ag...	Agassiz National Wildlife Refuge Comprehensive Conser...	1
1375	Plan	Antioch Dunes Nationa...	Antioch Dunes National Wildlife Refuge Comprehensive...	1
1378	Plan	Arctic National Wildl...	Arctic National Wildlife Refuge Final Comprehensive Con...	1
1379	Plan	Arthur R. Marshall Lox...	Arthur R. Marshall Loxahatchee National Wildlife Refuge...	1
1417	Plan	Alzert S. 2004. Edwin...	Edwin B. Forsythe National Wildlife Refuge Comprehen...	1
1392	Plan	Baca T. 1998. Bitter L...	Bitter Lake National Wildlife Refuge Comprehensive Con...	1
1508	Plan	Baca T. 1998. San And...	San Andres National Wildlife Refuge : Comprehensive C...	1
1501	Plan	Baca T. 2000. Seville...	Seville National Wildlife Refuge : Comprehensive Cons...	1
1383	Plan	Balcones Canyonlands National Wildlife. 2001. Balcones Canyonlands Nation...	Balcones Canyonlands National Wildlife Refuge Compre...	1
1423	Plan	Banta J. 2004. Fish Springs National Wildlife Refuge Comprehensive Conser...	Fish Springs National Wildlife Refuge Comprehensive Co...	1
1428	Plan	Barrd S. 2006. Great Dismal Swamp and Nansemond National Wildlife Refug...	Great Dismal Swamp and Nansemond National Wildlife...	1
1387	Plan	Bayou Cocodrie National Wildlife Refuge. 2004. Bayou Cocodrie National Wildl...	Bayou Cocodrie National Wildlife Refuge Comprehensive...	1
1388	Plan	Bear Butte National Wildlife Refuge. 2007. Bear Butte National Wildlife Refug...	Bear Butte National Wildlife Refuge Comprehensive Con...	1

Page 1 of 5 Per Page: 50 Displaying 1 - 50 of 238

Create Or Update Collection

See Also

Reference Profile (Section 2.4)
 Reference Type Definitions (Section 6.4)
 Visibility/Downloadability (Section 5.1)
 Holding Location Types and Attributes (Section 7.2)
 Exporting References to Desktop (Section 19)

2.3 Reference Profile

The Reference Profile is intended as a user-friendly way to view all of the information specific to the record.

2.3.1 Option Banner

The Option Banner provides choices for manipulating the Reference. Enabled options indicated by blue text. Most often, actions are dependent on being a Reference Owner.

Add Digital File | Add Child | View Source XML | Clone | Add To Collection

Edit Details | Change Type | Manage Link | Inactivate | Quarantine | Activate

Cook R. 2006. Reelfoot/Lake Isom National Wildlife Refuge : Comprehensive Conservation Plan. Plan-1520.

Plan

Reference Code: 1520

Reference Status as of 05/23/2012: Active

Visibility: Public

Add Digital File

Anyone in the FWS can add (i.e., upload) a digital file for a Reference, regardless of whether they are the Owner. A digital file is the most common type of Holding Location (i.e., Directions on how to access the Information Resource), although there are other options from the Holdings Panel.

See Also

Add/Manage Holdings (Section 3.5)

Add Child

As long as this link is active, anyone can add a new child Reference. For example, a Book Reference can have one or more related Book Chapters as children. For more information on a child reference see Section 6.9.1. Clicking on this link will open the create a new Reference page (e.g., Create new Book Chapter that is part of this Book). For an existing child reference that needs a link to a parent, go to the that child Reference and select the option to manage its parent (Section 3.8).

See Also

Is Part Of Link (Section 6.9.1)
Editing a Reference (Section 3.4)

View Source XML

If the Reference was created from an XML metadata record, it is possible to view the source XML used to create that record. Please note that the source XML does not reflect any changes made to the Reference since it was created. This link is always active if there is a source XML metadata record.

See Also

Create a Reference by Uploading XML Metadata (Section 3.3)

Clone

You can create an almost identical Reference from the existing Reference.

See Also

Cloning (Section 6.10)

Add to Collection

Add a Reference to one or more Reference Collections

See Also

Reference Collections (Section 6.9.3)

Edit Details

Any Owner of a specific Reference will have the option to edit the Reference.

See Also

Reference Owners and Viewers (Section 5.3.1)
Editing a Reference (Section 3.4)

Change Type

This option allows the Owner to change the Reference type. This link will only be active for the Reference Owner(s).

See Also

Change Reference Type (Section 3.7).

Manage Link [Parent Reference]

If Active, a Reference may be added, removed, or re-linked from/to a parent Reference. This option supports the following cases:

- A Reference for a Project needs to be linked to a Program (e.g., Inventory and Monitoring), of which the Project is part of. Instead of creating a duplicate Reference for the Program, the Project is linked to the existing Reference for the Program.
- A Book is linked to the wrong Book Series. It is possible to re-link the Book to the appropriate Book Series Reference.
- An existing Published Report needs to be linked to a Report Series.

This link will only be active if the following conditions are met:

- You are the Reference Owner
- The Reference does not already have active children References. For example, if a Book already has five child Chapters, it is not possible to change the parent Reference (i.e., Book Series) for the Book.

Clicking on the link will open the Manage Parent Reference Link page.

Managing the parent link applies only to the 'IsPartOf' link among two References.

See Also

Managing Parent Reference Link (Section 3.8).

Is-Part-Of Link (Section 6.9.1).

Reference Owners and Viewers (Section 5.3.1).

Inactivate (Soft Delete)

If a Reference does not meet one of the following criteria, and you are the Reference Owner, it can be inactivated (i.e., soft delete):

- There are Active Holding Locations. This prevents inactivation of a Reference where someone else has a copy of the Information Resource.
- There is an another Active Reference linked to this Reference. For example, a Book cannot be deleted if there are Book Chapters linked to it. In addition, a Published Report cannot be deleted if it is bundled with a project.
- There is at least one Approved Reference-Organization Link.

In most cases, inactivating a Reference doesn't remove it entirely from the system. Instead, its lifecycle state is set to Inactive, which means only Reference Owners and Viewers may see the Inactive Reference. This is effectively a soft delete. The only time a Reference is completely removed from the system is if its lifecycle was 'Draft'.

See Also

Holding Location Types and Attributes (Section 7.2)

Inactivating/Deleting a Reference (Section 6.6)

Reference Organization Links (Section 8)

Reference Owners and Viewers (Section 5.3.1)

Reference Visibility/Downloadability (Section 5.1)

Quarantine

If a Reference does not meet certain criteria, and you are the Reference Owner, it can be quarantined.

See Also

Reference Lifecycle State (Section 6.1)

Reference Owners and Viewers (Section 5.3.1)

Reference Visibility/Downloadability (Section 5.1)

Activate

If a Reference does meet certain criteria, and you are the Reference Owner, it can be activated.

See Also

Reference Lifecycle States (Section 6.1)

Reference Owners and Viewers (Section 5.3.1)

Reference Visibility/Downloadability (Section 5.1)

2.3.2 Reference Header

The Reference header provides a few key pieces of information useful for the identification of the Reference and its status.

Add Digital File Add Child View Source XML Clone Add To Collection
Edit Details Change Type Manage Link Inactivate Quarantine Activate
<p>Cook R. 2006. Reelfoot/Lake Isom National Wildlife Refuge : Comprehensive Conservation Plan. Plan-1520.</p> <p>Plan</p> <p>Reference Code: 1520</p> <p>Reference Status as of 05/23/2012: Active</p> <p>Visibility: Public</p>

At the top of the profile there is some summary information that includes the display citation for the Reference. This display citation is a quick synopsis of what the information resource is, including authors, date published, title, etc. It is automatically calculated based on the Reference Type and information within the core fields.

Below the display citation is the indication of what type of information it is, also known as a Reference Type. Reference Types are intended to be very descriptive and are tailored to the types of information frequently managed by the FWS community.

The unique identifier for the Reference. This code never changes and easily identifies and locates the Reference. For example, you can take the following URL, change the code, and you will be taken to that Reference profile.

<https://ecos.fws.gov/ServCat/Reference/Profile/1520>

Reference Status indicates whether the Reference is Draft, Legacy, Active, InReview, Quarantined, or Inactive. The Lifecycle of a Reference helps determine the Reference Visibility, or who can see the Reference. The status date indicates the last time the Reference was edited for any reason (not including the addition, editing or removal or Holding Locations).

Visibility indicates who is granted permission to view the Reference.

See Also

[Visibility/Downloadability \(Section 5.1\)](#)
[Reference Lifecycle States \(Section 6\)](#)
[Reference Type Definitions \(Section 6.4\)](#)
[Core Panel \(2.4.3\)](#)
[Search by Reference Code \(2.2.3\)](#)
[Reference Type Definitions \(Section 6.4\)](#)
[Reference Owners and Viewers \(Section 5.3.1\)](#)

2.3.3 Core Panel

The core tab shows the core identifying attributes for the Reference, including its title, brief description, authors, etc. If the Reference is linked to parent References via the 'Is-Part-Of' relationship, the attributes for the parent References will also be shown. For example, when viewing a Journal Article, attributes for the Journal Issue and Journal will also be shown in their own collapsible sub-panels.

Core Information	
Journal	
View Profile	Journal Title Copeia
	Journal Purpose / Description -
Journal Issue	
View Profile	Publication Date August 28, 1973
	Volume 3
	Issue -
	Special Issue Title Copeia
	Brief Description -
	Notes -
Journal Article	
Article Title	Observations of the reproductive cycle of Cyprinodon diabolis
Article Brief Description	Observations of the reproductive cycle of Cyprinodon diabolis
Article Abstract/Full Description	Observations on reproductive activity of pupfish in nature were made by James(1969) and are not repeated here. We have taken James' collections and examined ovaries to determine reproductive condition and potential. While Miller (1961) and LaRivers (1962) correctly suggested that C.diabolis could probably spawn at any time during the year, we have attempted to determine when in fact the population probably did spawn during 1967-68.
Article Page Range	610-613
Article Notes	-
Author	Charles O Minckley; James E. Deacon
Editor	Copeia
Pages	5 Pages

See Also

Is-Part-Of Link (Section 6.9.1)

2.3.4 Related Reference (children) Panel

If the Reference Type supports children References, this tab will be visible for any children References. For example, when viewing a Journal Issue reference, this section would be titled Journal Article(s).

Journal Article(s)
Minckley CO, Deacon JE. 1973. Observations of the reproductive cycle of Cyprinodon diabolis. Copeia. 3: 610-613. Journal Article-565.

See Also

Is-Part-Of Link (Section 6.9.1)

2.3.5 Information Resource Evaluation Panel

There are three ways an Information Resource can be evaluated.

- Information Resource Sensitivity Evaluation indicates if the Information Resource contains any type of sensitive information.
- Information Resource Proprietary Evaluation details whether the Information Resource is copyrighted/proprietary and to whom it may be distributed.
- Information Resource Quality Evaluation provides rating of the quality of the information within the Information Resource.

Information Resource Evaluation	
Sensitivity	<u>Non-Sensitive</u> - The Information Resource does not contain any sensitive information.
Proprietary/Copyrights	<u>Non-Proprietary</u> - No copyrights or other ownership issues. There are no distribution restrictions based solely on the proprietary evaluation
Quality	<u>High</u> - The Information Resource is not known to be missing or contain misleading information AND adequate documentation on its generation is present. Generally, peer-reviewed materials (e.g., from published journal articles or rigorous monitoring programs) fall into this category.

These three categories have a strong bearing on who may access the information.

In addition, a 'Use Constraints' field allows the Reference Owner to detail any other considerations about the use of the information resource that isn't handled by one of the above categories.

See Also

Information Resource Evaluation (Section 6.2)
Permissions and Accessing Information (Section 5)

2.3.6 Holdings Panel

A Holding (aka Holding Location) shows how to obtain the Information Resource, or the thing being described by the Reference. Holdings can refer to downloadable digital files, locally held at a refuge, or copies available from another web page. The Holdings section has two purposes. First, it shows all of the Holdings for the particular Reference. Second, it allows anyone to add new Holding Location or, if they have permission, edit them.

Note: you do not need be the Reference Owner to add a Holding Location

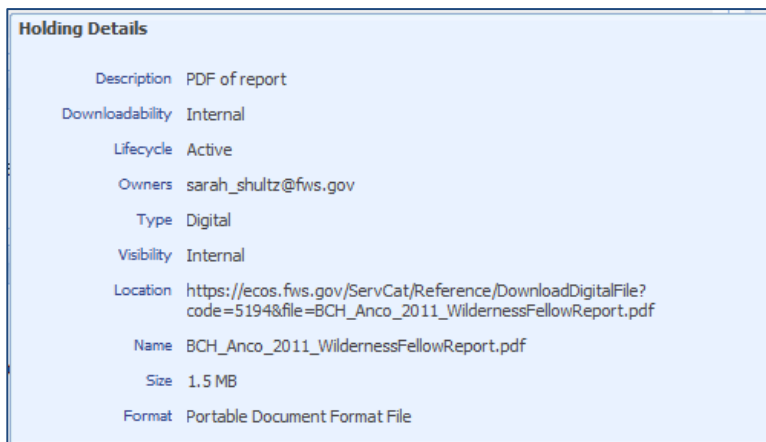


On the right side of the panel are three possible options for a Holding Location – Download/Open, Details, and Edit.

In cases where a Holding Location can be downloaded, a Download option appears to the right.

In cases where a Holding Location is External, an Open option appears to the right.

For all Holding Locations, the Details option provides more detailed information about the Holding Location



The Edit option will be visible if you are the Holding Location Owner. The Holding Management Page will open if Edit is selected..

There are three holding types:

- **Digital** - The Information Resource is a digital file that can be downloaded. Click on the 'Download' option to do so.
- **External Resource** - The Information Resource resides external to the Service Catalog but can be located directly with a URL.
- **Physical** - The Information Resource is held physically at an FWS organization.

For each Holding type, different attributes will be shown when clicking on the Details option. In addition, the following attributes are common to all Holdings:

- **Owner** - The User who may edit the Holding

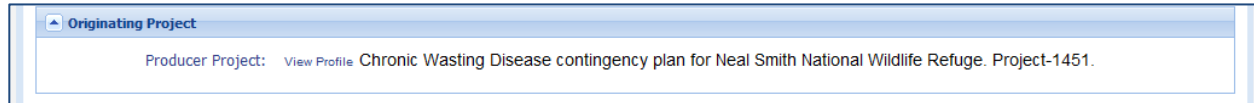
- **Visibility** - Indicates whether access to the Holding Location information is Public, Internal or Restricted.
- **Downloadability** - In cases where a digital file exists, indicates who can download the file (Public, Internal, or Restricted).

See Also

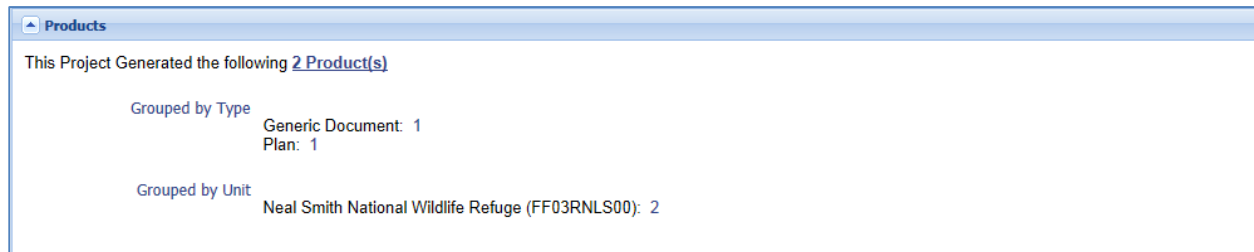
Holding Locations (Section 7)
 Add/Manage Holding Location (Section 3.5)
 Holding Location Owners (Section 5.3.2)
 Permissions and Accessing Information (Section 5)

2.3.7 Project Panel

The Project panel indicates whether the Reference was generated by a Project.



If the Reference is a Project Reference Type, this section will show a summary of the products produced/generated by the Project.



From the product summary, you can see a list of all products or a subset by Reference type or for a specific FWS organization.

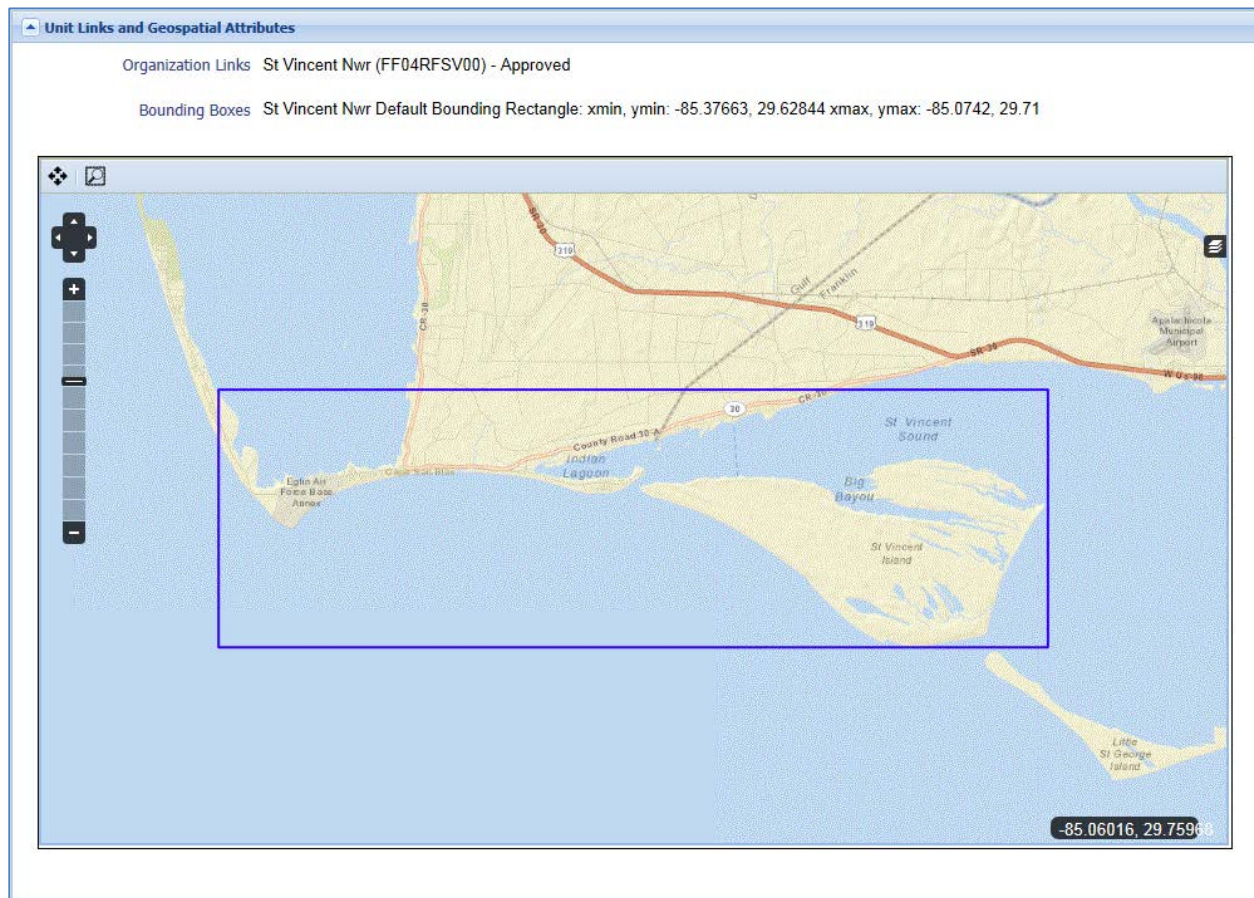


See Also

Link Project to Reference (i.e., Bundle) (Section 3.6)
 Generates/Was-Created-By Link (Section 6.9.2)

2.3.8 Organization Links and Geospatial Attributes Panel

Organization Links indicates whether the Reference contains any information specifically about a FWS Organization. Organization links will be shown when their lifecycle state is Approved or Legacy.



The bounding area defines the spatial footprint that the Information Resource describes. Each Reference can have one or more bounding areas.

See Also

Reference Organization Links (Section 8)

Reference Geospatial Attributes (Section 6.8)

2.3.9 Keywords Panel

There are three types of keywords – subject categories, biological taxa and freeform keywords .

Keywords

Subject Categories General: Biology | Species | Birds

Biological Taxa

Scientific Name	Organization	Category
Caprimulgus maculosus	St. Vincent National Wildlife Refuge	Bird
Mimus gundlachii	St. Vincent National Wildlife Refuge	Bird
Pipilo aberti	St. Vincent National Wildlife Refuge	Bird

3 record(s) found

Freeform Keywords Duck, Eagle, Osprey, Vulture, Ibis, Egret, Bittern, Nightjar, Cuckoo, Dove, Dunlin, Gull, Tern, Flycatcher, Woodpecker, Kingfisher, Swift, Heron, Pelican, Jay, Crow, Vireo, Bluebird, Thrush, Mockingbird, Nuthatch, Wren, Titmouse, Warbler, Towee, Tanager, Cardinal, Bunting, Oriole, Blackbird, Allie, Swallow, Gnatcatcher, Sparrow

Subject Categories

Subject Categories are fixed sets of categorical lists specified by one or more thesauri. A Reference can have an unlimited number of subject categories from multiple thesauri.

See Also

Subject Categories (Section 6.11)

Biological Taxa

Biological Taxa indicates organisms that have been mentioned in the information resource and serve as additional keywords for the information resource. When an organism is presented in the context of an FWS Organization in the Biological Taxa table; FWS Organization abbreviations will display to indicate that the organism is specific to the FWS Organization. Because this section is presented as a table, you have the options of sorting, moving columns, and adding columns.

Please be aware that the content of the Biological Taxa section (Reference-Taxa-Organization links) is in no way verified and may either be inaccurate or misleading. Therefore, using this as an official species list for a refuge unit is completely inappropriate.

See Also

Reference-Taxa-Organization Links (Section 9)

Freeform Keywords

This section presents zero or more freeform keywords for the Reference.

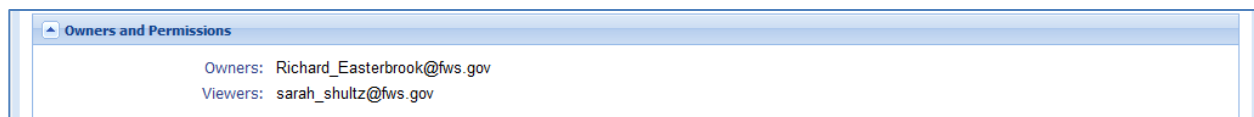
See Also

Keywords Tab (Section 3.4.4)

2.3.10 Owners and Permissions Panel

This panel shows who the Reference Owners and Viewers are. Currently, only Active Directory names are shown. Owners always have permission to access all information about the Reference, including the ability to download any of the Digital Holding Locations. In addition, Owners may edit the Reference.

Viewers may view all information and download all associated Digital Holding Locations although they may not edit the Reference.



See Also

Record-Specific Permissions (Section 5.3)
Ownership of Legacy Records (Section 15)

2.3.11 Version History

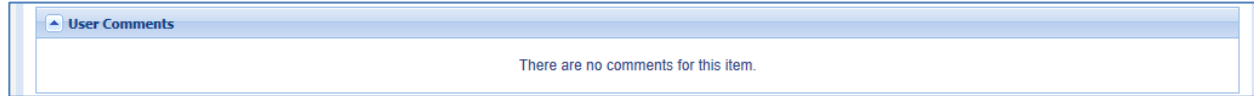
If the Information Resource being described by the Reference is an older or newer version of another Information Resource, then the version history will be presented here. Versions are hyperlinked if permission to access them is available.



See Also

2.3.12 User Comments Panel

This section shows private and FWS-wide comments. Private comments are only visible to the Reference Owner while FWS-wide are those visible to the entire FWS.



Currently, it is not possible to create or edit comments.

See Also

Comments (Section 10)

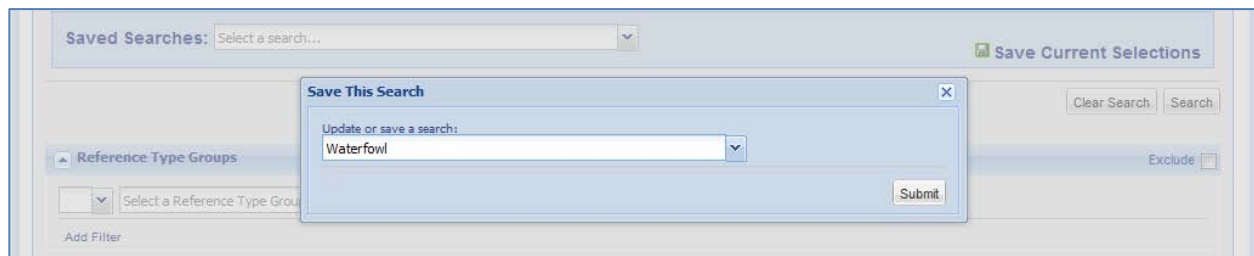
2.4 Saving Your Searches

Saved searches allow any FWS user to save one or more search criteria that are defined in the Advanced Search. Once saved, the person creating the search can repeat the exact same search at a later date or share the search with others, regardless of whether they are with the FWS or public.

The following concepts and rules apply to saved searches:

- Any FWS user can create one or more saved searches. There is currently no limit on the number of saved searches a user can create
- By creating a saved search, the user is the Owner and therefore may edit or delete the saved search. There is currently no way to share ownership.
- For a specific user, the name of the search must be unique. However, names must not be unique across all users
- The results returned in saved searches are dynamic and likely to change over time.
- The number of records returned in a search will depend on whether the person running the search is internal to the FWS or the public.
- If you know the unique numeric search code of someone else's saved search you may run it at any time.
- Only References that have a visibility of Public and/or Internal will be returned. There is currently no way to save searches that would return References that have a visibility of Restricted.
- Once a saved search is removed, it is gone forever. Anyone attempting to call that search will not be successful. Please note that removing a saved search does not removed the References from ServCat.

Creating a saved search is as simple as specifying advanced search criteria, clicking on the save current selections option, and giving the search a unique name.



It is possible to create a new search by selecting an existing saved search, then updating the search criteria.

Once saved, a screen showing the URL of the search is displayed. This URL can be sent to any user who, upon clicking on the URL, would activate a search within Reference.

Save This Search

The saved search titled **"Waterfowl"** has been updated/saved with the new search criteria. You can access this saved search at any time through the following:

Saved Search URL: **<https://ecos.fws.gov/ServCat/Reference/Search/15#Waterfowl>**

From Manage > My Saved Searches

Close

See Also

Manage Saved Searches (Section 4.4)

3 Create Interface

Tips and Rules for creating a Reference:

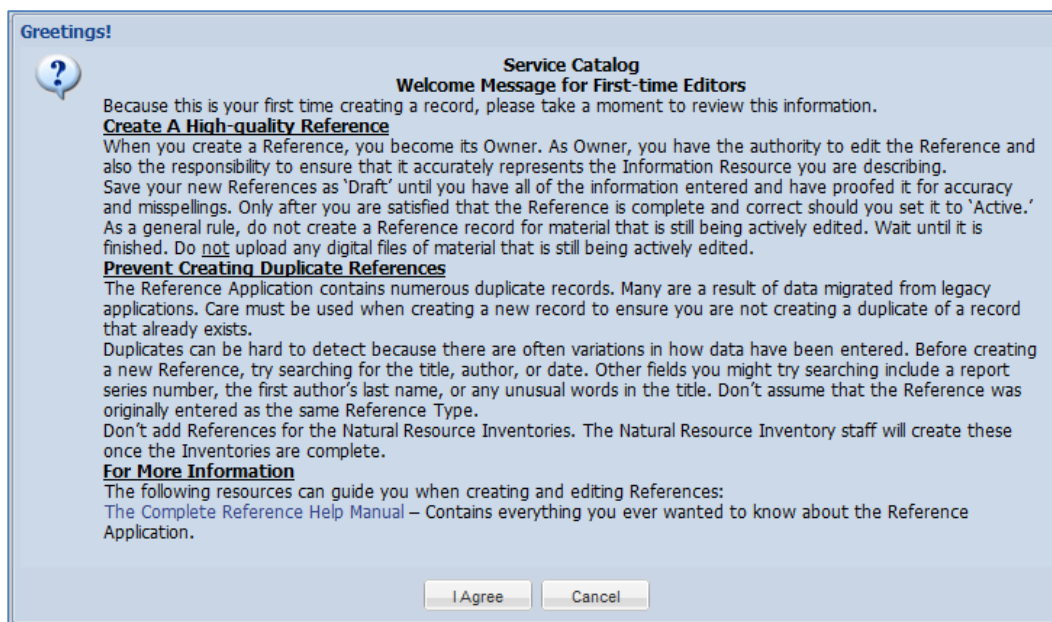
- Everyone with an FWS Active Directory account can create references.
- FWS staff from every resource discipline and program are invited and encouraged to use the Service Catalog. A reference record, or 'Reference' is the essential metadata for a citation about an information resource.
- References do not include all of the information contained in the original information resource.
- A Reference entry is owned by its creator, who is responsible for its content.
- Users who create references must eliminate all sensitive and/or proprietary information in the reference record.
- Newly created references must include appropriate attribute values to protect sensitive and proprietary information.
- Viewing a reference and downloading an information resource depends on the assigned attribute values for a reference and its linked holdings.
- Create new references only for final versions of information resources, and upload only final electronic files.
- Failure to comply with the rules regarding sensitive and proprietary information can result in loss of privilege and/or disciplinary action.

There are three ways to create a reference:

1. From the top menu, select Create, References, then Create a Reference.
2. Create a local metadata record (e.g., ESRI ArcCatalog) and then upload it to the Service Catalog by selecting Create, References, then Create a Reference from XML.
3. From an existing reference profile that supports child references (e.g., Book), click on the link to Add the respective Child Reference (See Section 6.9.1).

3.1 Notice for First-Time Editors

When a first-time user attempts to create a Reference, regardless of whether the form or upload from XML is being used, a welcome message will appear. Please read it. Once 'I Agree' is selected, the create process will continue and the user will not be prompted again. Its purpose should be rather self-explanatory.



*Note that text in this screen capture may differ from what you see online

3.2 Create a Reference Using a Form

One way to create a Reference is to use the online form, which walks the user through a wizard to help fill in the required and optional information. While the wizard is new and may be unfamiliar at first, it is intended to help prevent duplicate records and also minimize the amount of information to type.

Depending on the Reference Type, between 2 and 4 steps are required when creating a reference through the wizard. Those Reference Types that are linked to others may have additional wizard steps.

See Also

Is-Part-Of Link (Section 6.9.1)

3.2.1 Step 1.

In this first step, select a Reference Type to create.

The screenshot shows a web form titled "Creating a New Reference". Below the title is the instruction "Step 1: Select a reference type." There is a label "Type" next to a dropdown menu. The dropdown menu is open, showing three options: "Published Report", "Report Series", and "Unpublished Report". The "Published Report" option is highlighted. To the right of the dropdown menu is a "Next" button.

Please note that the list can be filtered by typing any text.

If none of the categories are adequate to describe the Information Resource, the following are recommend for use:

- Generic Document - Any original or official paper that conveys information. Applied to any type of document that cannot be more specifically defined
- Generic Dataset - Applied to any type of spatial or tabular data that cannot be more specifically defined (e.g., as a vector dataset)
- Generic Multimedia - Any Information Resource pertaining to sound or graphics that is not described by a more specific Reference Type.

In most cases, following the creation of the Reference, the Reference Type can be changed to a more appropriate type.

See Also

Reference Type Definitions (Section 6.4)

Change Reference Type (Section 3.7)

3.2.2 Steps 2-4.

If the Reference has no parents or grandparents, the form will open with a number of tabs: Core, Info Resource Evaluation, Organizations and Geographical, Keywords, and Permissions (Section 3.4). If the Reference has a parent /grandparent, there will be additional steps.

 Select an existing Book Series

☐ Skip this step

 Create a new Book Series

Book Series Title *

Book Series Description

Contacts:

Contacts (e.g., Authors, Publishers, etc.)				
Contact Type	Individual/Business	Contact Information	Order	

Thus, for the book chapter, Step 2 will have three options:

- The next steps will walk through the wizard process for a book. Once a book has been selected or created, then the form will open to create the book chapter information.

See Also

Editing a Reference (Section 3.4)
Is-Part-Of Link (Section 6.9.1)

3.3 Create a Reference by Uploading XML Metadata

30

Create a record using an XML file »

1) Select a Reference Type
 Geospatial Dataset

2) Select XML file(s) and then upload

Name	Status	Size	Progress	Detail
FwsApproved.xml	Pending	11 KB		clear

0 of 1 Complete

[Select Files](#) [Upload](#) [Clear All Rows](#)

First, select the Reference type to create. Currently, all dataset Reference Types are supported with the default being 'Geospatial Dataset'.

Second, browse to one or more XML records and select them.

Third, click 'Upload' to begin the process of uploading the XML file.

When the XML record is uploaded, SerCat will attempt to parse the record as best as possible. It is important to note that:

- Parsing errors will be ignored
- Text larger than the maximum field size will be truncated in the reference. This is often the case for the 'Brief Description' field.
- A copy of the original XML will be preserved. In addition, a copy of the XML will be updated to reflect the path (i.e., <networkr>) where the digital file can be downloaded. All other changes to the Reference will not be reflected in the XML. For example, a modification to the title will not be reflected in the original XML record.
- The ability to view the Reference with a geospatial search relies upon bounding area coordinates. Ensure that they are in the XML file before uploading.
- All References created are saved as 'Draft'. You will need to activate those References before they are visible to a broader audience.
- ServCat does not automatically take the bounding area for any supplied FBMS Cost Center codes (e.g., refuge codes). Because the XML upload is designed for the geospatial community, we are anticipating that the appropriate spatial coordinates will be provided in the designated metadata tags.

Following the creation of the Reference(s), an option is given to either view the Reference profile or go directly to the edit session for any of the records uploaded. Clicking on clear does not inactive/delete your Reference; it only clears the upload history from this screen.

Create a record using an XML file »

1) Select a Reference Type
 Vector Dataset

2) Select XML file(s) and then upload

Name	Status	Size	Progress	Detail
FwsApproved.xml	Complete	11 KB		Profile Edit clear

1 of 1 Complete

[Select Files](#) [Upload](#) [Clear All Rows](#)

Other Notes

- There is no need to create a separate holding location for the XML file – it is already uploaded.
- If you are unsure of which XML template to use, here is an example XML metadata record ([XML file](#)).
- For a Reference to be loaded to [Geospatial Platform](#), the metadata must meet the following requirements. Foremost, the Metadata Date field (metadata/metainfo/metd) needs to be updated. In addition, [Geospatial Platform](#) has their own [requirements](#) for accepted XML for upload. However, XML metadata with FWS Metadata Profile elements like OrganizationCode is accepted as well. If possible, use [MetaParser](#) to check the XML metadata prior to upload.

See Also

Rules for Mapping XML to the Service Catalog (Section 13)
 Editing a Reference Page (Section 3.4)

3.4 Editing a Reference Page

To edit a reference, go to Edit Details on the Reference Profile page.

[Add Digital File](#) | [Add Child](#) | [View Source XML](#) | [Clone](#) | [Add To Collection](#)

[Edit Details](#) | [Change Type](#) | [Manage Link](#) | [Inactivate](#) | [Quarantine](#) | [Activate](#)

Adams R. 2004. Illinois River National Wildlife and Fish Refuges Complex Comprehensive Conservation Plan and Environmental Assessment. Plan-1436.

Plan

Reference Code: 1436
Reference Status as of 12/30/2011: Active
Visibility: Public

When editing a Reference, the Core, Information Resource Evaluation, Organizations and Geospatial, Keywords, and Permissions tabs will be available. It is recommend that each tab be visited when creating or editing a Reference, although the most important tabs are the first two – Core and Information Resource Evaluation.

3.4.1 Core Tab

The core tab is where the critical and required information about a Reference is entered. Depending on the Reference Type, the number of fields, their labels and whether or not they are required will change. An asterisk will indicate those fields that are required. A list of all of the possible Core fields is found in Section 6.5.

This section also allows the Reference Owner to define various contact types (e.g., authors, editors, publishers, etc) and Sizes (e.g, number of pages, physical size, recording length, etc).

See Also

Contact Types (Section 6.5.2)
Size (Section 6.5.3)

3.4.2 Information Resource Evaluation Tab

The information on this tab is critical to evaluate some key qualities of the information resource being described by the Reference. It is important to note that this evaluation is strictly for the Information Resource and not for the Reference. **DO NOT embed any sensitive and/or proprietary information into the Reference itself.**

This evaluation is a critical determinant as to who can see the Reference and/or download a digital file (if one exists).

The Information Resource Sensitivity Evaluation has three options to choose from:

- **Non-Sensitive** – The Information Resource does not contain any sensitive information
- **Sensitive** – If selected, a reason for why the Information Resource is sensitive must be chosen. Because an Information Resource can be sensitive for a number of reasons, select all that apply.
- **Unknown** – The Information Resource has not been evaluated to determine that it contains sensitive information AND there is a likely chance that it may contain sensitive information. Materials that can be found in public libraries or are highly circulated (e.g., journal articles, books, etc.) are unlikely to contain sensitive information.

Note: If Unknown or Non-Sensitive is selected for a Reference previously saved as Sensitive, all Sensitivity criteria will be cleared. If by accident this happens, restore the selection by clicking 'Reload Saved Values'.

The Information Resource Proprietary Evaluation also has three options to choose from:

- **Non-Proprietary** – The Information Resource does not contain any proprietary information.
- **Proprietary** – If selected, you must specify exactly why the Information Resource is proprietary. Only one proprietary level can be selected. Please note that journal articles are almost always proprietary. Unless otherwise known, please indicate that journal articles are proprietary without permission to distribute. This evaluation will not affect the ability of FWS users to discover the Reference but will prevent the automatic download of a digital file.
- **Unknown** – The Information Resource has not been evaluated to determine that it contains sensitive information AND there is a likely chance that it may contain sensitive information.

Proprietary Evaluation

☐ Non-Proprietary ☒ Proprietary/Copyrighted ☐ Unknown

If Proprietary, Choose 1

☒ Permission to Distribute for Non-Commercial ☐ Permission to Distribute Internally ☐ No Permission to Distribute

Choose one of the following in the Information Resource Quality Evaluation section:

- **High** – No missing or misleading information with adequate documentation. For example, peer-reviewed materials.
- **Medium** – Missing some information, but not what is essential for correct interpretation. Some internal review of the Information Resource, but not a formal peer-review.
- **Low** – Missing information and/or limited documentation.
- **Poor** – Has missing and misleading information.
- **Unknown** – Unknown and/or unevaluated.

Feel free to comment on any other issues related to the access and use of the Information Resource. Please note that ServCat will not make use of this text statement to control who has access to the Information Resource.

See Also

Information Resources Evaluation (Section 6.2)
 Visibility/Downloadability (Section 5.1)

3.4.3 Organizations and Geographical Tab

This tab covers two topics: what is specific to an Organization and what is relevant to the Organization.

Core Information Resource Evaluation **Organizations and Geographical** Keywords Permissions

A Reference should only be linked to a FWS Organization if the Information Resource contains information specifically about that Organization. See help for more guidance.

St. Vincent National Wildlife Refuge (FF04RFSV00) Add ☒ Automatically Add Bounding Box

Organizations			
Name ▲	Code	Status	
St Vincent Nwr	FF04RFSV00	Approved	delete

Delete Selected Add Bounding Box

Bounding Boxes	
Name ▲	Coordinates
<input type="checkbox"/> St Vincent Nwr Default Bounding Rectangle	xmin, ymin: -85.3766251, 29.628437 xmax, ymax: -85.0741959, 29.7100048

Reference Organization Links

Linking a Reference to an Organization means that the Information Resource contains information specifically about that Organization. Having such a strict definition about the Organization link ensures that users can always search for and discover information specific to their Organizations. Other reasons that have historically been used to link a Reference to an Organization is handled elsewhere. (e.g., a copy is housed at the Organization, the Organization uses the Information Resource, a person at the Organization really likes the information resource, it was produced by the Organization, etc.). References can be linked to one or more Organizations. When an Organization is added, "Pending" will appear under the status field. This pending refers to the Organization Steward/OPOC approval process, where the OPOC confirms that the information resource does indeed contain information about their Organization.

When adding an Organization, a bounding box will automatically be added, unless the 'Automatically Add Bounding Box' option is unchecked. In general, it is recommend to always leave this option checked. There are only a few cases where a geographic bounding box is misrepresentative (e.g., Office Organizations) and it is far easier to delete an additional bounding box than trace out one by hand. The default name of the bounding box is: "[OrganizationName] Default Bounding Rectangle".

The Organization selector filters by typing in any part of the Organization name or code.

See Also

Reference Organization Links(Section 8)
 Reference Geospatial Attributes (Section 6.8)
 OPOC Approval (Section 8.2)

Spatial Bounding Area

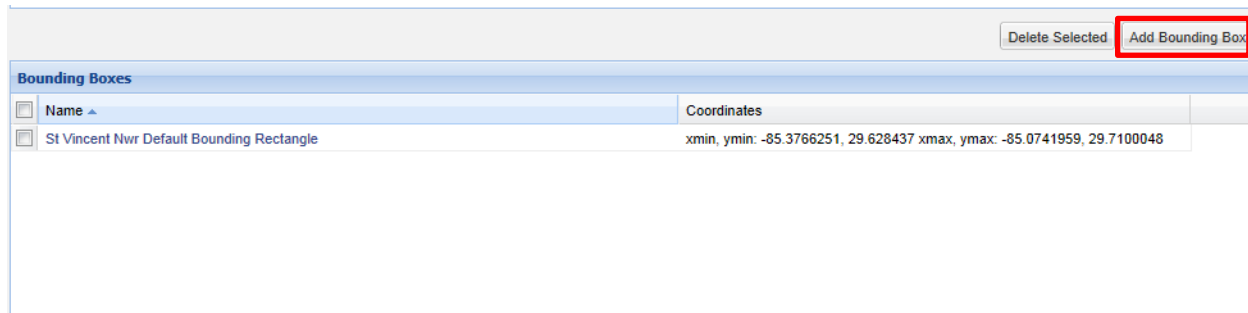
The spatial bounding area defines the geographic relevance of the information resource. A Reference can have one or more bounding areas to represent any location. For example, a project that inventoried vegetation may have occurred in three separate regions of a refuge. In this case, it would be very easy to create three different bounding boxes.

Bounding boxes may overlap zero or more refuges, especially in cases of general references. For example, a book titled "Birds of Colorado" would have a bounding box for the entire state of Colorado.

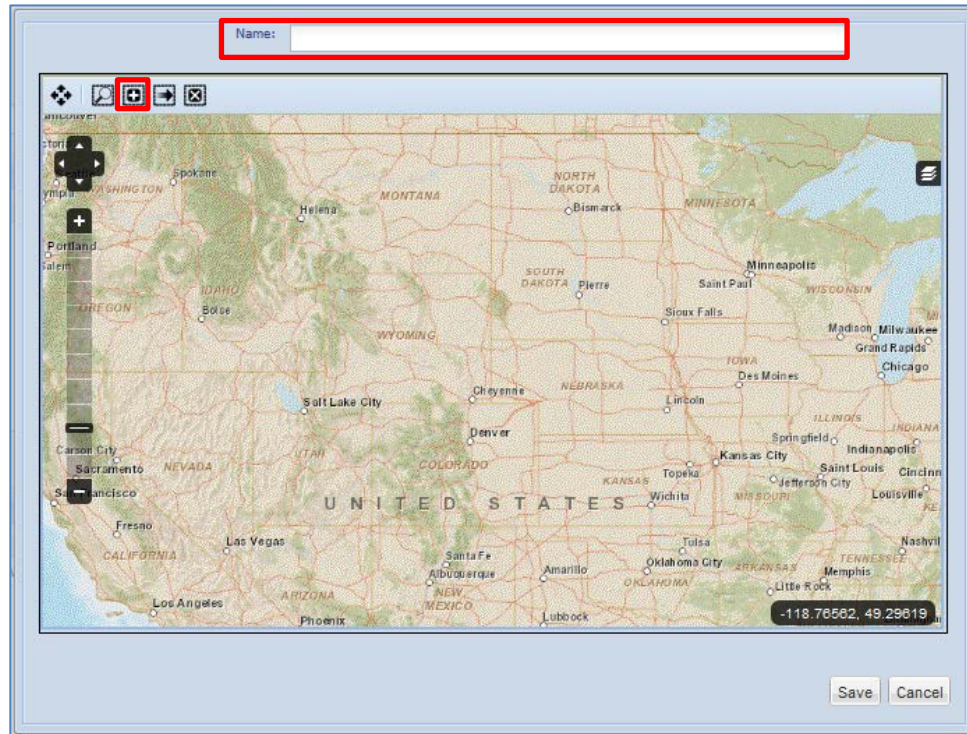
When defining a bounding area, please be aware of accidentally disclosing the location of sensitive information. For example, if you are describing a report about cave entrances, we strongly recommend against having anything more detailed than a bounding box for the entire refuge.

There is no limit on the number of bounding boxes a Reference can have.

First, select the 'Add Bounding Box' option in the Bounding Boxes panel.



Second, select the '...Draw Bounding Box' tool, draw the box, provide a name and then select 'Save'.



See Also

Reference Geospatial Attributes (Section 6.8)

3.4.4 Keywords Tab

Reference currently supports three types of keywords: subject categories, freeform keywords and biological taxa.

Core Information Resource Evaluation Organizations and Geographical **Keywords** Permissions

Subject Categories

Remove General: Biology | Species | Birds
Add Subject Category

Biological Taxa

Taxa Code	Scientific Name	Organization(s)		
271743	Caprimulgus maculosus	St. Vincent National Wildlife Refuge	Edit Orgs.	Delete
83838	Pipilo aberti	St. Vincent National Wildlife Refuge	Edit Orgs.	Delete
89975	Mimus gundlachii	St. Vincent National Wildlife Refuge	Edit Orgs.	Delete

3 record(s) found

Add Biological Taxa

Keywords

Enter keywords, comma separated.

Duck, Eagle, Osprey, Vulture, Ibis, Egret, Bittern, Nightjar, Cuckoo, Dove, Dunlin, Gull, Tern, Flycatcher, Woodpecker, Kingfisher, Swift, Heron, Pelican, Jay, Crow, Vireo, Bluebird, Thrush, Mockingbird, Nuthatch, Wren, Titmouse, Warbler, Towee, Tanger, Cardinal, Bunting, Oriole, Blackbird, Allie, Swallow, Gnatcatcher, Sparrow

Subject Categories

Add one or more subject categories using one or more of the supported thesauri. To facilitate finding the proper subject category and rapid selection, the list of category options auto-filters as you type.

Subject Categories

Remove General: Biology | Species | Birds

General: Air and Climate | Air Quality | Air Contaminants

General: Air and Climate | Air Quality | Visibility and Particulates

General: Air and Climate | Air Quality | Wet and Dry Deposition

General: Weather and Climate | Climatology

General: Weather and Climate | Climate Change

General: Biology | At-Risk-Biota | T&E Species

General: Biology | Communities and Ecosystems | Barren Land

General: Biology | Communities and Ecosystems | Cultivated Crop/Pasture

General: Biology | Communities and Ecosystems | Estuary

General: Biology | Communities and Ecosystems | Forest

General: Biology | Communities and Ecosystems | Grassland/Herbaceous

General: Biology | Communities and Ecosystems | Lacustrine

General: Biology | Communities and Ecosystems | Lichen/Moss

General: Biology | Communities and Ecosystems | Ocean

General: Biology | Communities and Ecosystems | Riverine

3 record(s) found

Add Biological Taxa

See Also

Subject Categories (Section 6.11)

Free Form Keywords

Add as many keywords as necessary for the Reference. Keywords should be comma-delimited. Please follow the general rules for adding keywords:

- Keywords should be Proper Case, meaning that the first letter should be capitalized (e.g., Fish Chips)
- Common words, including 'and' and 'or' are generally lower case (e.g., Fish and Chips)
- Species names represented in lower case (e.g., *Pylodictis olivaris* and *Solanum tuberosum*)
- Acronyms are capitalized (e.g., FWS)

Please note that case of the keyword is not always preserved. The Service Catalog does not preserve unique cases of keywords. This was done to ensure better search performance and also make case more consistent among keywords. Therefore, the first time a keyword is entered, the case is fixed. Keyword case will be routinely monitored and fixed for those that do not follow the rules defined above.

See Also

Keywords Panel (Section 2.4.9)

Biological Taxa

A Reference can be linked to zero or more taxa and optionally, one or more FWS Organizations for each taxa added can be specified. This tool only works with scientific names (rather than common names) and will often require a user to select from a number of taxa with virtually identical species names. Please be aware that this tool is geared towards users who have some knowledge of biology and may be overwhelming to those who have no experience with taxonomy.

The screenshot shows a web form titled 'Biological Taxa'. It contains a table with three columns: 'Taxa Code', 'Scientific Name', and 'Organization(s)'. The table is currently empty. Below the table, there is a button labeled 'Add Biological Taxa'.

Clicking on the 'Add Biological Taxa' button, will initiate the popup for selecting a taxa to add.

The screenshot shows a popup window titled 'Add Taxon to Reference'. It has a close button in the top right corner. The main heading is 'Step 1: Select a Taxon'. Below this, there is a search bar with the placeholder text 'Search by scientific name' and 'Start typing here...'. To the right of the search bar is a 'Next' button.

Always search for the taxon by scientific name to see if it already exists within the application. By typing in at least three letters, a search for names begins that returns a list of possible results. Continue to type the name to narrow the list.

Add Taxon to Reference

Step 1: Select a Taxon

Search by scientific name:

Next

- Canis lupus Linnaeus, 1758. Mammal. ITIS. Species-93337
- Canis lupus albus Kerr, 1792. Mammal. ITIS. Subspecies-632221
- Canis lupus alces Goldman, 1941. Mammal. ITIS. Subspecies-632224
- Canis lupus arabs Pocock, 1934. Mammal. ITIS. Subspecies-632226
- Canis lupus arctos Pocock, 1935. Mammal. ITIS. Subspecies-632228
- Canis lupus baileyi Nelson and Goldman, 1929. Mammal. ITIS. Subspecies-632230
- Canis lupus beothucus G. M. Allen and Barbour, 1937. Mammal. ITIS. Subspecies-632232
- Canis lupus bernardi Anderson, 1943. Mammal. ITIS. Subspecies-632234
- Canis lupus campestris Dwigubski, 1804. Mammal. ITIS. Subspecies-632236
- Canis lupus chanco Gray, 1863. Mammal. ITIS. Subspecies-632238
- Canis lupus columbianus Goldman, 1941. Mammal. ITIS. Subspecies-632240
- Canis lupus crassodon Hall, 1932. Mammal. ITIS. Subspecies-632242
- Canis lupus dingo Meyer, 1793. Mammal. ITIS. Subspecies-632245
- canis lupus disbioaaa. Mammal. IRMA Animals. Subspecies-773759
- canis lupus disbioggg. Mammal. IRMA Animals. Subspecies-773766

Add B

There will often be a number of taxon to choose from. When in doubt, add the taxon at the top on the shortlist since ITIS accepted species sort to the top.

Add Taxon to Reference

Step 2: Link Taxon to an Organization

Canis lupus Linnaeus, 1758

Available Organizations to link the Taxon:

☒ National Elk Refuge (61550)

Deselect All Select All Finish and Add Another Finish and Close Start Over

At this point there are the following options:

- Start Over – Go back to the beginning of the 'Add Taxon' form without linking the taxon to the Reference.
- Finish and Add Another – Link the taxon to the Reference and then go back to the beginning of the 'Add Taxon' form.
- Finish and Close – Completely close out of the 'Add Taxon' form and return to editing your Reference profile.

If, and only if, the Reference is already linked to a FWS organization, will the option of linking the taxon to one or more unit codes be available. For guidance on when to (and when not to) link a taxon to a Organization, please refer Section 9.

See Also

Reference-Taxa-Organization Links (Section 9)
Reference Organization Links (Section 8)

3.4.5 Permissions Tab

In this tab, add or remove Reference Owners and Viewers. Reference Owners have permission to edit the Reference and download all digital attachments for the specific Reference. Reference viewers have permission to download all digital attachments for a specific Reference.

See Also

Visibility/Downloadability (Section 5.1)
Record-Specific Permissions (Section 5.3)
Add/Manage Holdings (Section 3.5)

3.4.6 Buttons

At the bottom of the form are a number of buttons giving options of how to save a Reference and set its lifecycle state. These buttons apply to all of the information found on all tabs. For more information on each of these lifecycle states, including why they are occasionally disabled, please refer to Section 6.1

Save and set to

Cancel

See Also

Reference Lifecycle States (Section 6.1)
 Visibility/Downloadability (Section 5.1)

3.5 Add/Manage Holdings

The addition and editing of Holding Locations is entirely independent of managing a Reference. Thus, any user can create a Holding Location for a Reference, even if they do not own the Reference. By creating a Holding Location, the user becomes the owner of that Holding Location.

Select 'Add Digital File' from the Options Panel to add a digital Holding Location to a Reference.

Adams R. 2004. Illinois River National Wildlife and Fish Refuges Complex Comprehensive Conservation Plan and Environmental Assessment. Plan-1436.

Plan

Reference Code: 1436
Reference Status as of 12/30/2011: Active
Visibility: Public

Select the plus symbol from the Holding Location Panel to add any type of Holding Location to a Reference.

Holdings

Digital

Illinois River NWFR Complex CCP and EA

Download Details Edit

Then select the Holding Type to create.

Holdings

Add New Holding of Type

Digital

PDF

See Also

Holding Location Owner (Section 5.3.2)
 Holding Locations (Section 7)

3.5.1 Add/Edit Holding Location

There are three options when creating a new Holding Location:

- **Digital** - The Information Resource is a digital file that will be upload.
- **External Resource** - A URL that points to the file on another web site (e.g., USGS web page).
- **Physical** - The Information Resource is managed locally at a FWS Organization. The Information Resource can be either hardcopy or digital.

Other Notes:

- Depending on the holding type, the attributes will change.
- If editing an existing Holding Location, the option to change the Holding Type is not available.
- Adding html or xml tags to the holding location description is likely to cause errors. Some of these characters can be a java script injection risk.

See Also

Holding Locations (Section 7)

Information Resource Evaluation (Section 6.2)

Digital File

Adding digital files to the Service Catalog is encouraged - a Reference isn't worth much if there isn't an information resource to go with it. For a given Reference, add one or more digital files as individual holding locations.

- First, please read the disclaimer because it describes how to handle sensitive and copyrighted materials.
- Second, click on the 'Select Files' button and browse to the file(s) to upload for a given Reference.
- Third, click upload and wait for the files to upload. For files less than 4 gigabytes in size, users should not experience issues (e.g., timeouts). If problems occur, please contact the ECOS Help Desk.

Holding Type: Digital File

NOTE - PLEASE READ THE DISCLAIMER REGARDING SENSITIVE AND COPYRIGHTED INFORMATION BEFORE YOU UPLOAD ANY DIGITAL FILE.

[View Disclaimer](#)

Name	Status	Size	Progress
FOSS4G_2011_Program.pdf	Complete	4 MB	<div><div></div></div> clear

Total: 1 4 MB of 4 MB

[Select Files](#) [Upload](#) [Clear All Rows](#)

[Continue](#)

Please Continue the Upload By Setting Permissions:

- Fourth, optionally add helpful descriptions of each file and/or add other Holding Location co-Owners.

Holding Type: Digital File

Modify the permissions and status for the following new Holdings.
Code(s): 1504

User	Permission	
richard_easterbrook@fws.gov	Owner	delete

User: Add

Save and set to

Cancel

- Finally, save the Holding Location as Draft or Active.

Other Notes:

- Zip up shapefiles, file geodatabases or other file formats which are composed of multiple dependent pieces. **DO NOT create a separate Holding Location for each piece.**
- There is no ability to indicate whether the digital file is sensitive or proprietary. The ability to do this is at the Reference level. This prevents holding locations of the same information resource from being attributed differently. For example, if there were two identical copies of a journal article with proprietary information, it would be nonsensical for one to be attributed as non-proprietary while another is attributed as proprietary.
- Ownership of the Holding Locations is separate from the Reference.
- A new file cannot be specified for a Digital Holding during editing. The existing file must be inactivated and a new one created for the Holding Location.

External Resource

If a digital file exists on another web site, then create this type of Holding Location.

Holding Type: External Resource

Description: Download the book from the Alaska Fish and Game Web site.

URL *: http://www.adfg.alaska.gov/

Date URL Last Visited *: 01/03/12

User	Permission	
richard_easterbrook@fws.gov	Owner	delete

User: Add

Save and set to:

Cancel

Physical

Use the Physical Holding Location if a copy of the Information Resource exists in an office. The copy can be hardcopy or digital.

Holding Type: Physical

Description: Bound Copy

Select Organization *: Alaska Maritime National Wildlife Refuge (74500)

Location *: 3rd Floor, Room 315, Top Shelf

System:

System Code:

User	Permission	
richard_easterbrook@fws.gov	Owner	delete

User: Add

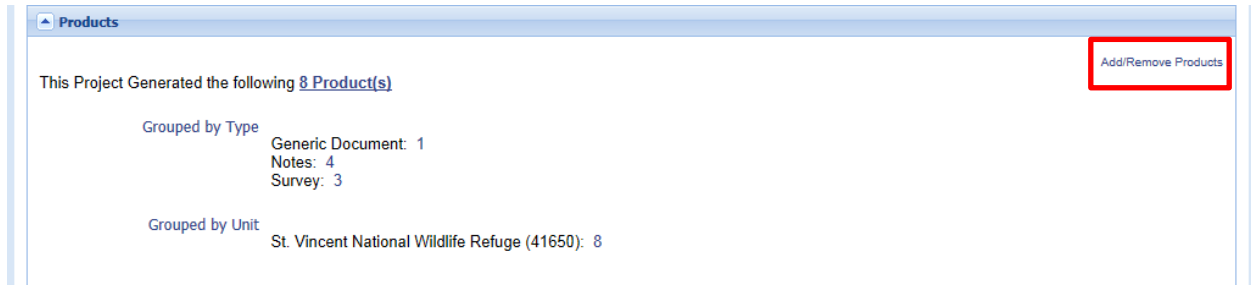
Save and set to:

Cancel

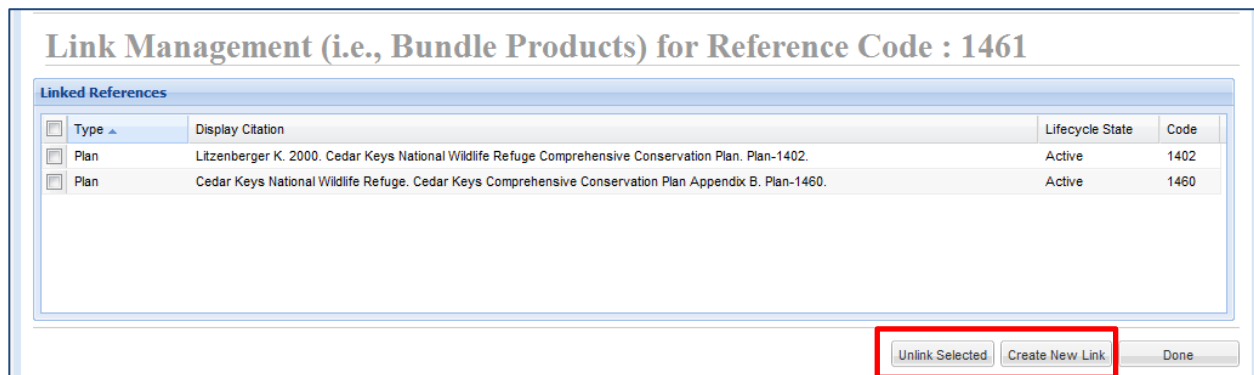
3.6 Link Project To Reference (i.e., Bundle)

This page allows one or more References to be bundled in the context of a Project. By definition, bundling implies that a Project 'generated' an Information Resource. Examples of References that can be bundled with a Project include Published and Unpublished Reports, Maps, and Relational Databases.

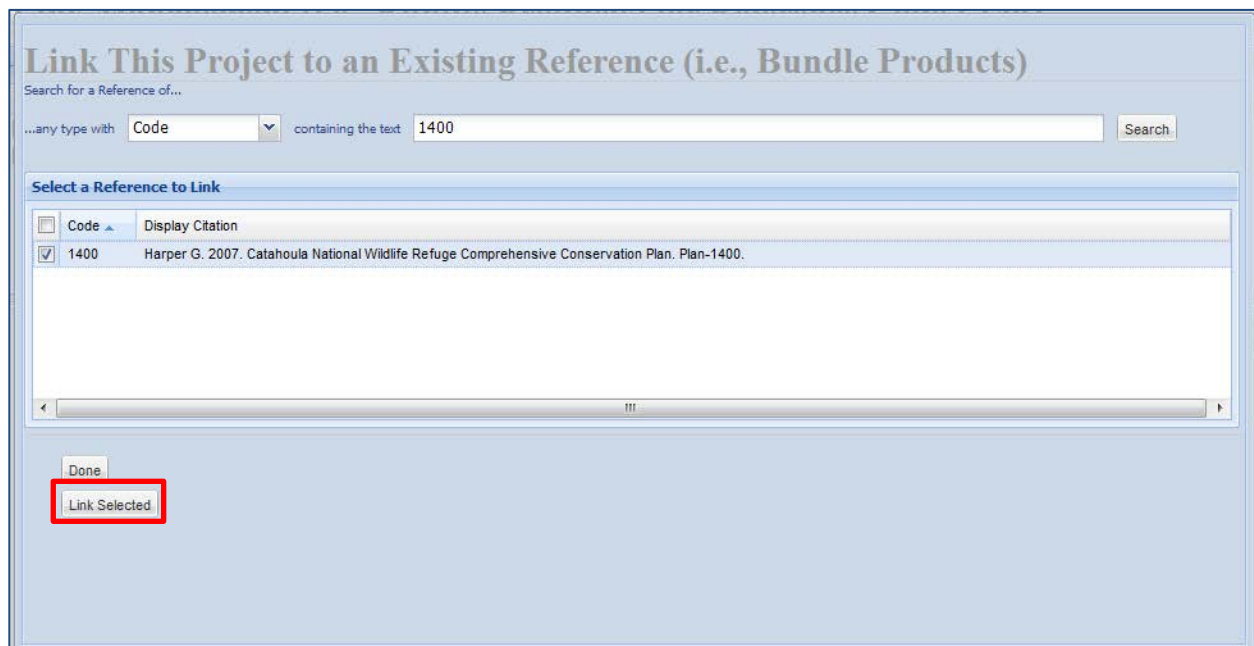
First, select 'Add/Remove Products' from the Products Panel of the Project's profile page.



From the Link Management page, add or remove one or more links to the Project. To remove a link, check the Reference and select the 'Unlink Selected' option. To add a new link, select the 'Create New Link' option.



Search for the Reference, check that Reference from those returned in the search and select the 'Link Selected' option.



To bundle a Reference, the following criteria must be met:

- The Reference was not already bundled with another Project.**
- The Reference has an **Active** Lifecycle State.
- You must have ownership of the Project. You do not need ownership of the other References being bundled

**The system is currently designed to bundle References *generated* from a particular Program or Project into a Reference Project. There are cases when a user would want to include a Protocol to provide guidance for how the data were collected. However, unless the Protocol was developed specifically for that Project, it is simply a guide and not a product. In the future, the system will allow the user to link ancillary reference materials to each Project. Yes, we know this rule is limiting since it prohibits someone from linking a Project to a Reference because the Project used the Information Resource. For example, a Project relied on a Protocol to provide guidance for how data was collected. In the future, we will offer this ability as yet another way References can be linked to each other (See Section 6.9.5).

See Also

Generates/Was-Created-By Link (Section 6.9.2)

Reference Lifecycle States (Section 6.1)

Reference Owners and Viewers (Section 5.3.1)

3.7 Change Reference Type

When necessary, it is possible to change the Reference Type. This will be particularly useful for the following common cases:

- The reference was not identified properly during a data mining effort
- The Upload Metadata option only supports Generic Dataset and Data Standard
- There was confusion over which Reference Type was most appropriate

The screenshot shows a web interface for a reference. At the top, there are links: "Add Digital File", "Add Child", "View Source XML", "Clone", and "Add To Collection". Below these are "Edit Details" and "Change Type" (highlighted with a red box), followed by "Manage Link", "Inactivate", "Quarantine", and "Activate". The main content area displays the following text: "1981. Annual narrative report calendar year 1980 [Kern National Wildlife Refuge complex]. U.S. Fish and Wildlife Service. Kern, Pixley, and Seal Beach NWR's. Unpublished Report-3155. Unpublished Report. Reference Code: 3155. Reference Status as of 03/05/2012: Active. Visibility: Public".

The screenshot shows a dialog box titled "Change Reference Type". At the top, there is a warning message in a red box: "Warning! Click here to see the risks involved in this operation." Below the warning, it says "Current type: Plan". There is a "Change to:" label followed by a dropdown menu. At the bottom right, there are two buttons: "Cancel" and "Change type".

In cases when the Reference is linked to another Reference, it will not be possible to change the Reference Type since it would likely violate the strict rules for linking References. For example, if a Project Reference is linked to a Vector Dataset, thereby indicating that the Project has created the Vector Dataset, it would be illogical to change the Project to an Email.

The ability to change the Reference Type is only possible if:

- You are the Reference Owner
- The Reference is not linked to any other another Reference (except those that are Inactive). This is enforced to preserve the integrity of links among References

In some cases, changing reference types may result in the loss of contact information (e.g., author). In general, this should not be an issue when switching among similar types (e.g., published report to unpublished report), but may be an issue when switching between drastically different type (e.g., memo to geodatabase).

Because changing the Reference Type is considered to be a modification of the Reference, if the Reference is Active, it will change to 'In Review'. Therefore, re-activation of the Reference is necessary. This rule is implemented because there are different validation requirements (i.e., which fields are required), based on the Reference Type.

See Also

Reference Type Definitions (Section 6.4)
Reference Owners and Viewers (Section 5.3.1)
Reference Lifecycle States (Section 6.1)

3.8 Managing Parent Reference Link

For Reference Types that are allowed to have parent links (i.e., Is Part Of), you can manage the appropriate links. This option will appear in the Reference profile when the following conditions are met:

- You own the Reference
- The Reference can have a related parent Reference (e.g., a book can have a parent Book Series)
- The Reference does not currently have any children References that are Active (e.g., the Book does not have any Book Chapters that are Active).

If click on 'Manage Link to...' to add/remove/change the parent Reference. A simple search screen will help locate the appropriate Reference.

[Add Digital File](#) | [Add Child](#) | [View Source XML](#) | [Clone](#) | [Add To Collection](#)
[Edit Details](#) | [Change Type](#) | **[Manage Link to Book](#)** | [Inactivate](#) | [Quarantine](#) | [Activate](#)

Watts BM. 1975. Ghosts of St. Vincent. Pages 112-118. In The Water Wilderness of Apalach, Florida. Book Chapter-2870.
 Book Chapter
 Reference Code: 2870
 Reference Status as of 03/02/2012: Active
 Visibility: Public

Manage Parent Link for Book Chapter: 2870

Current parent: Book 2871
 Change parent to another Book

with equal to

Depending on whether the Reference has a required or optional parent, different options will be given.

See Also

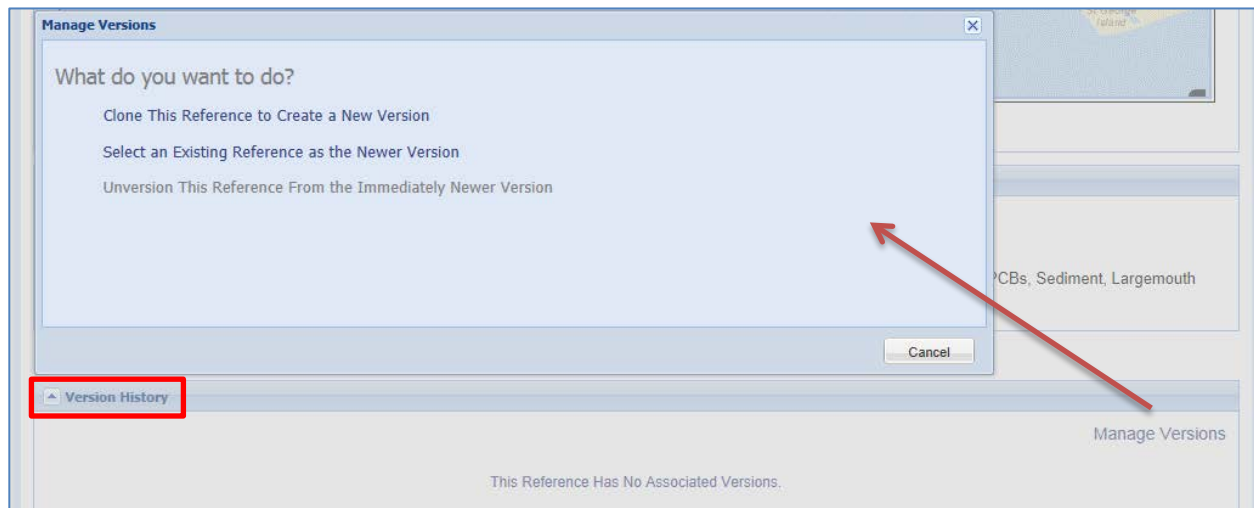
Is-Part-Of Link (Section 6.9.1)
Reference Owners and Viewers (Section 5.3.1)

3.9 Manage Versions

In cases where a Reference can be versioned (i.e., there is a new version of the Information Resource), the Version History panel, with the option to manage versions, will be displayed.

Except where the action does not apply, you will have three possible options:

- **Clone the Reference to Create a New Version** – This will create a new Reference by cloning the existing one.
- **Select an Existing Reference as the Newer Version** – If the Reference already exists in ServCat, specify its Reference Code
- **Unversion This Reference From the Immediately Newer Version** – If the Reference is pointing to a newer version, the link can be undone.



See Also

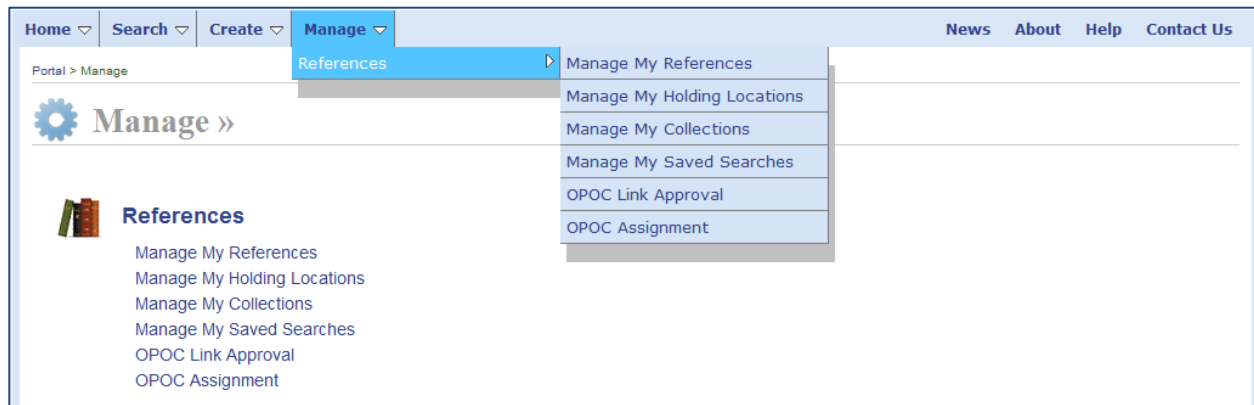
Version History (Section 2.4.11)

Versioning (Section 6.9.4)

Cloning (Section 6.10)

4 Management Interface

The Manage page is where power users (e.g., Reference Owners, OPOCs and Administrators) go for management-related activities.



Buttons may or may not be visible depending on an users permissions.

- Manage My References – Search for and manage permissions for References you own (Section 4.1)
- Manage My Holding Locations- Search for all Holding Locations you Own (Section 4.2)
- Manage My Collections – Search and manage Collection you own (Section 4.3)
- Manage My Saved Searches – Search and manage Saved Searches you own (Section 4.4)
- OPOC Link Approval – Location where OPOCs approve or deny Reference-Organization Links (Section 4.5)
- OPOC Assignment – Location where OPOCs manage all OPOCs for your Organization (Section 4.6)

4.1 Manage My References

This search returns all References for a Reference Owner that may be edited. Currently, all References for a Reference Owner (default) will be returned or filtering using criteria from the advanced search can be used.

Manage My References »

Search Parameters

References per Page

Saved Searches:

- ☒ Reference Type Groups
- ☒ Search Fields
- ☒ Regions
- ☒ Organizations
- ☒ Map
- ☒ Reference-Organization Lifecycles
- ☒ Reference Types and Specific Fields
- ☒ Online Resources
- ☒ Reference Visibility
- ☒ Holding Locations
- ☒ Reference Lifecycles
- ☒ Collections

When the search is run, the search criteria panel contracts and the results grid is displayed.

Manage My References »

Expand Panel to Revise Search Definition

Results

<input type="checkbox"/>	Reference Co...	Type	Display Citation	Title	File Co...
<input type="checkbox"/>	4360	Plan	1987. Search and Rescue Plan. Big Stone National Wildlife Refuge. Plan-4360.	Search and Rescue Plan. Big Stone National Wildlife Ref...	1
<input type="checkbox"/>	1506	Plan	2006. San Diego Bay National Wildlife Refuge Sweetwater Marsh and South...	San Diego Bay National Wildlife Refuge Sweetwater Mar...	1
<input type="checkbox"/>	1447	Plan	2009. Koyukuk/Northern Unit Innoko/Nowitna National Wildlife Refuges Comp...	Koyukuk/Northern Unit Innoko/Nowitna National Wildlife...	1
<input type="checkbox"/>	4849	Standard Operating...	2013. SI 2. Standard Operating Procedure-4849.	SI 2	1
<input type="checkbox"/>	1446	Plan	Acheson G. 1996. Kofa National Wildlife Refuge & Wilderness and New Wate...	Kofa National Wildlife Refuge & Wilderness and New Wa...	1
<input type="checkbox"/>	4830	Plan	Adams NR. 1989. Management Plan : Part 3 : Forestry Chapter. Plan-4830.	Management Plan : Part 3 : Forestry Chapter	1
<input type="checkbox"/>	1436	Plan	Adams R. 2004. Illinois River National Wildlife and Fish Refuges Complex Co...	Illinois River National Wildlife and Fish Refuges Complex...	1
<input type="checkbox"/>	4743	Unpublished Report	Agee DL. 1950. White River National Wildlife Refuge : Narrative Report : May...	White River National Wildlife Refuge : Narrative Report : ...	1
<input type="checkbox"/>	4751	Unpublished Report	Agee DL. 1954. White River National Wildlife Refuge : Narrative Report : May...	White River National Wildlife Refuge : Narrative Report : ...	1
<input type="checkbox"/>	4757	Unpublished Report	Agee DL. 1956. White River National Wildlife Refuge : Narrative Report : May...	White River National Wildlife Refuge : Narrative Report : ...	1
<input type="checkbox"/>	3880	Unpublished Report	Akin JR. 1963. Refuge Narrative Report : Delta National Wildlife Refuge : Sep...	Refuge Narrative Report : Delta National Wildlife Refuge...	1
<input type="checkbox"/>	1374	Plan	Alaska Pininsula and Becharof National Wildlife Refuges. 2006. Revised Com...	Revised Comprehensive Conservation Plan Alaska Peni...	1
<input type="checkbox"/>	1529	Plan	Alonso D. 2000. Ouray National Wildlife Refuge : Comprehensive Conservatio...	Ouray National Wildlife Refuge : Comprehensive Conserv...	1

Page 1 of 33 Selected: 0 Displaying 1 - 50 of 1628

At the bottom right is the count of References. To manage lifecycle states (e.g., Activate 1 or more References) or Permissions Ownership, select one or more References and then click on one of the two button. There is also the option of assigning one or more References to a collection.

See Also

Reference Owners and Viewers (Section 5.3.1)
 Reference-Organization Links (Section 8)
 Reference Lifecycle States (Section 6.1)
 Reference Collections (Section 6.9.3)

4.1.1 Permissions Batch Management

To batch manage Owners and Viewers of the selected References, select 'Manage Permissions'. Management applies to the selected References as well as **all** related Holding Locations and Comments that you own.

The dialog box titled "Manage Permissions of Selected References" contains two main sections. The first section, "Select a user", features a text input field with the placeholder text "Start typing to look up users..." and a dropdown arrow. The second section, "Select an action", contains five radio button options: "Add as Owner" (which is selected), "Add as Viewer", "Remove as Owner", "Remove as Viewer", and "Transfer Ownership". At the bottom right of the dialog are two buttons: "Close" and "Save".

There are five options for managing ownership.

- First, add someone as an Owner. If already an Owner of a Reference, the request will be ignored.
- Second, add someone as a Viewer. Since ownership only applies to References and Comments, adding a viewer will not apply to Holding Locations. If someone is added as a Viewer and they are already Owner, the request will be ignored.
- Third, remove someone as Owner. If someone is removed as an Owner and they are not an Owner of a Reference, the request will be ignored. If you remove yourself as Owner and you are the last Owner, the request will be ignored.
- Fourth, remove someone as Viewer. Removing a viewer will not apply to Holding Locations. If someone is removed as Viewer and they are already an Owner, the request will be ignored.
- Finally, transfer Ownership from yourself to someone else. Following the transfer, you will no longer own any of the References as well as associated Holding Locations and Comments.

See Also

Reference Owners and Viewers (Section 5.3.1)

4.1.2 Lifecycle State Batch Management

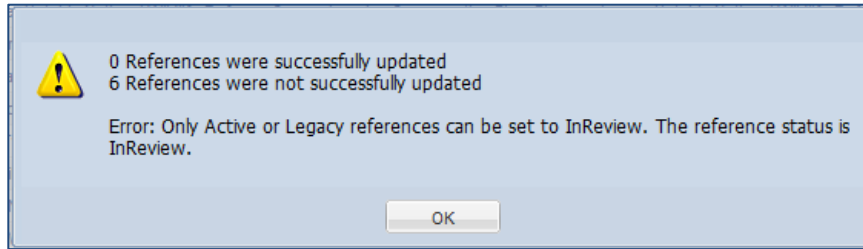
To batch manage the lifecycle states of the selected References, click 'Manage Lifecycle State'.

The dialog box titled "Set the Lifecycle State to..." contains four radio button options: "Active" (which is selected), "In Review", "Quarantined", and "Inactive". At the bottom right of the dialog are two buttons: "Cancel" and "Submit".

When attempting to change lifecycle in batch, be aware of the following:

- Applying the same lifecycle state to a Reference (e.g., Activating an already active Reference) will change the date of when the Reference was last edited.

- Any failed attempt to change the lifecycle state for a Reference will not affect the processing of others. For example, if inactivating 50 References, and inactivation fails for the first Reference, the Service Catalog will still attempt to inactivate the other 49.
- Any failures to change the lifecycle state are noted in the status pop-up.



4.2 Manage My Holding Locations

Search for Holding Locations that you own and therefore may edit. Search for all holding locations you own (default) or filter the results by the Holding Location Lifecycle State(s) and/or Holding Location Type(s).

Manage My Holding Locations »

Search Definition

Lifecycle States

☒ Legacy
 ☒ Draft
 ☒ Active
 ☒ Inactive
 ☒ In Review
 ☒ Quarantined

Holding Types

☒ Digital File
 ☒ Physical
 ☒ External Resource
 ☒ Cross Reference

Search

Run a search to see a grid displaying all of the Holding Locations meeting the search criteria in the Search Definition Panel.

Manage My Holding Locations »

Expand Panel to Revise Search Definition

Results Download

Reference Code	Reference Display Citation	Code	Display Citation	Lifecycle State
1643	Cook R. 2006. Lower Hatchie Nation...	1675	Digital File: Lower Hatchie NWR CCP....	Legacy
1642	Ditto L. 1997. Lower Rio Grande Vall...	1674	Digital File: Lower Rio Grande and Sa...	Legacy
1641	Lower Suwannee National Wildlife Re...	1673	Digital File: Lower Suwannee NWR FL...	Legacy
1640	Cooper J. 2008. Mackay Island Natio...	1672	Digital File: Mackay_Island_NWR_CC...	Legacy
1639	Cox T. 2004. Mark Twain National Wil...	1671	Digital File: Mark Twain NWR Comple...	Legacy
1638	Maxwell National Wildlife Refuge. 20...	1670	Digital File: Maxwell NWR CCP.pdf	Legacy
1637	Mid-Columbia River National Wildlife R...	1669	Digital File: McNary National Wildlife R...	Legacy

Page 1 of 1

Columns

- ☒ Reference Code
- ☒ Reference Display Citation
- ☒ Code
- ☒ Display Citation
- ☐ Description
- ☐ Type
- ☒ Lifecycle State
- ☐ Holding Location Owners
- ☐ Reference Owners
- ☐ Format
- ☐ Last Accessed
- ☐ Location
- ☐ Unit Code
- ☐ Name
- ☐ Size
- ☐ System
- ☐ System Code
- ☐ Visibility
- ☐ Downloadability

In addition to the Holding Locations attributes, some of the Reference Information is displayed. By default, only a few fields are shown. Please note that a number of fields can be turned on:

Other Notes:

- Clicking on the Display Citation of the Holding Location will open the edit session for that respective Holding Location (Section 3.5.1)
- Clicking on the Display Citation of the Reference will open the Reference Profile (Section 2.4)

See Also

Holding Location Types and Attributes (Section 7.2)
Reference Owners and Viewers (Section 5.3.1)

4.3 Manage My Collections

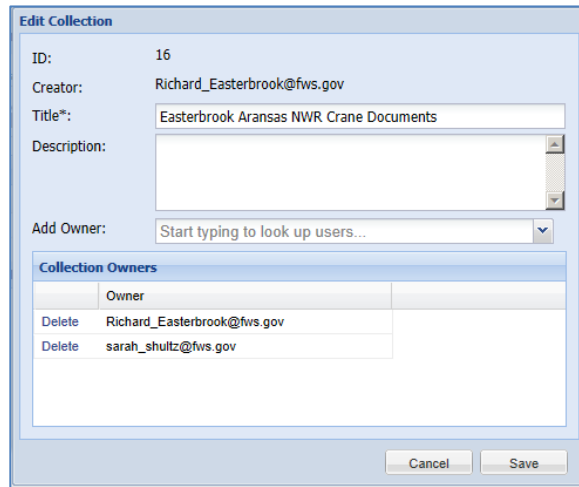
Collections that you own are managed here.

Manage My Collections »

Collections I Own

		ID	Title	Description	Creator	Owners
Delete	Edit	12	Water		Richard_Easter...	1
Delete	Edit	15	Cape Romain Annual Narratives		Richard_Easter...	1
Delete	Edit	16	Easterbrook Aransas NWR Crane D...		Richard_Easter...	2

To edit the Collection (i.e., Title, Description or Permissions), click on Edit.



Edit Collection

ID: 16

Creator: Richard_Easterbrook@fws.gov

Title*: Easterbrook Aransas NWR Crane Documents

Description:

Add Owner: Start typing to look up users...

Collection Owners

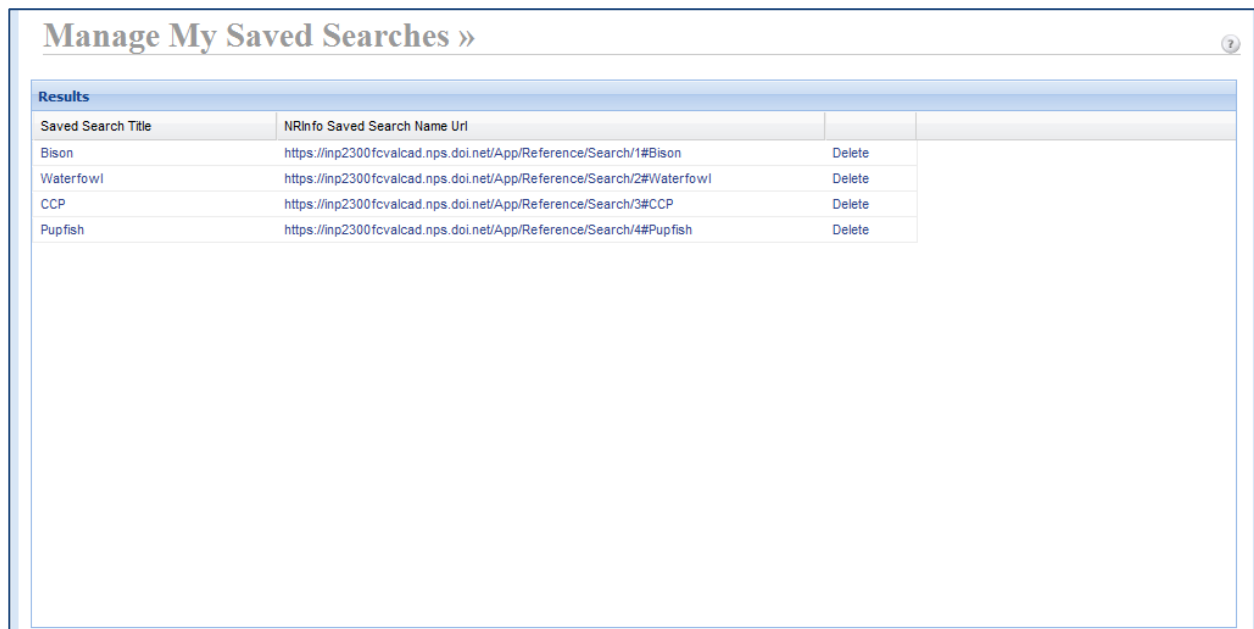
	Owner
Delete	Richard_Easterbrook@fws.gov
Delete	sarah_shultz@fws.gov

Cancel Save

Selecting the Delete option will completely delete the Collection. This will not affect any of the References within the Collection. Be aware that other users will no longer be able to use a Collection that is deleted.

4.4 Manage My Saved Searches

Saved Searches you own are managed here.

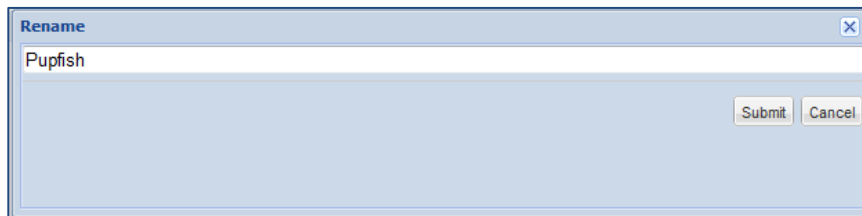


Manage My Saved Searches »

Results

Saved Search Title	NRInfo Saved Search Name Url	
Bison	https://inp2300fcvalcad.nps.doi.net/App/Reference/Search/1#Bison	Delete
Waterfowl	https://inp2300fcvalcad.nps.doi.net/App/Reference/Search/2#Waterfowl	Delete
CCP	https://inp2300fcvalcad.nps.doi.net/App/Reference/Search/3#CCP	Delete
Pupfish	https://inp2300fcvalcad.nps.doi.net/App/Reference/Search/4#Pupfish	Delete

To edit the name of a Saved Search, click on the title.



Rename

Pupfish

Submit Cancel

Clicking on the search URL, will run the search.

Selecting the delete option will completely delete the Saved Search. This will not affect any of the References meeting the search criteria. Be aware that other users will no longer be able to use a Saved Search that is deleted.

See Also

Saving Your Searches (Section 2.5)

4.5 OPOC Link Approval

Anyone who is an OPOC can approve or deny Reference-Organization Links for their respective Organization. To search for References to approve or deny, select an Organization for which you are an OPOC. In addition to selecting an Organization, advanced search criteria can be used.

The screenshot shows a web interface titled "OPOC Link Approval »". Below the title is a tab labeled "Approve/Deny Reference-Organization Link Search". In the top right corner, there is a dropdown menu for "# References per Page" set to "50", and two buttons: "Clear Search" and "Search". The main area contains a list of search criteria, each with a dropdown arrow on the left and an "Exclude" checkbox on the right:

- OPOC Organization
- Reference Type Groups
- Search Fields
- Regions
- Map
- Reference-Organization Lifecycles
- Reference Types and Specific Fields
- Online Resources
- Reference Visibility
- Holding Locations
- Reference Lifecycles
- Collections

At the bottom right of the form, there are "Clear Search" and "Search" buttons.

Following a search, References meeting the search criteria are displayed. From this list, approve or deny the Reference-Organization Link. Optionally defer a decision by leaving both blank. Changes are not made until the Commit button is clicked. For more information about a specific Reference, click on the Display Citation to see the complete Reference Profile (Section 2.4).

OPOC Organization Link Approval »

Expand Panel to Revise Search Definition

Results Download

Appr...	Deny	Link Status	Title	Display Citation
<input type="checkbox"/>	<input type="checkbox"/>	Pending	SI 2	2013. SI 2. Standard Operating Procedure-4849.
<input type="checkbox"/>	<input type="checkbox"/>	Approved	Narrative Report : Aransas National Wildlife Refuge : January 1 to December 31, 1968	Adams DE. 1969. Narrative Report : Aransas National Wildlif...
<input type="checkbox"/>	<input type="checkbox"/>	Approved	Predatory Animal Report: Aransas Refuge	Aransas National Wildlife Refuge. 1938. Predatory Animal R...
<input type="checkbox"/>	<input type="checkbox"/>	Approved	USFWS Narrative Report Aransas Migratory Waterfowl Refuge October 1938	Aransas National Wildlife Refuge. 1939. USFWS Narrative Ara...
<input type="checkbox"/>	<input type="checkbox"/>	Approved	Narrative Report Aransas National Wildlife Refuge January 1, 1950 to April 30, 1950	Aransas National Wildlife Refuge. 1950. Narrative Report Ara...
<input type="checkbox"/>	<input type="checkbox"/>	Approved	Review and Approvals: Matagorda Island National Wildlife Refuge: Annual Narrative...	Aransas National Wildlife Refuge. 1997. Review and Approv...
<input type="checkbox"/>	<input type="checkbox"/>	Approved	Matagorda Island National Wildlife Refuge: Annual Narrative Report	Aransas National Wildlife Refuge. 1998. Matagorda Island N...
<input type="checkbox"/>	<input type="checkbox"/>	Approved	Review and Approvals: Matagorda Island National Wildlife Refuge: Annual Narrative...	Aransas National Wildlife Refuge. 2000. Review and Approv...
<input type="checkbox"/>	<input type="checkbox"/>	Approved	Site Specific Spill Response Contingency Plan for Aransas National Wildlife Refuge ...	Aransas National Wildlife Refuge. 2004. Site Specific Spill R...
<input type="checkbox"/>	<input type="checkbox"/>	Approved	Aransas National Wildlife Refuge : Biological Correspondence 1940	Aransas National Wildlife Refuge. Aransas National Wildlife...
<input type="checkbox"/>	<input type="checkbox"/>	Approved	Aransas National Wildlife Refuge : Biological Correspondence 1941	Aransas National Wildlife Refuge. Aransas National Wildlife...
<input type="checkbox"/>	<input type="checkbox"/>	Approved	Aransas National Wildlife Refuge : Narrative Report : May-June-July-August-1942	Aransas National Wildlife Refuge. Aransas National Wildlife...
<input type="checkbox"/>	<input type="checkbox"/>	Approved	Aransas National Wildlife Refuge : November, December, 1941, January, 1942	Aransas National Wildlife Refuge. Aransas National Wildlife...
<input type="checkbox"/>	<input type="checkbox"/>	Approved	Bird list : Aransas Refuge	Aransas National Wildlife Refuge. Bird list : Aransas Refuge....
<input type="checkbox"/>	<input type="checkbox"/>	Approved	Bird Sighting Lists 1938-1941	Aransas National Wildlife Refuge. Bird Sighting Lists 1938-19...
<input type="checkbox"/>	<input type="checkbox"/>	Approved	Brief Report on the Status of Whooping Cranes on the Aransas Refuge 1941-44 (with...	Aransas National Wildlife Refuge. Brief Report on the Status...
<input type="checkbox"/>	<input type="checkbox"/>	Approved	CCC Narrative Report Aransas Camp BF-1, Aransas Migratory Waterfowl Refuge	Aransas National Wildlife Refuge. CCC Narrative Report Ara...

Page 1 of 6 Selected to Approve: 0 Selected to Deny: 0 Displaying 1 - 50 of 289

Clear Selections Commit

See Also

Organization Steward/Organization Point of Contact (Section 5.2.3)
 Reference Organization Links (Section 8)
 Reference Profile (Section 2.4)

4.6 OPOC Assignment

The OPOC Management Page allows OPOCs to manage the list of OPOCs for their Organization(s). There is no restriction on the number of OPOCs that an Organization can have. OPOCs can remove themselves as long as another OPOC has been added to take their place.

First, select an Organization.

OPOC Assignment »

OPOC Search

Select Organization: Aransas National Wildlife Refuge (21532)

Clear Search

Second, select the 'Add OPOC' option.

OPOC Assignment »

Expand Panel to Revise Search Definition

Add/Remove OPOCs for Aransas National Wildlife Refuge (21532)

OPOC Results

Remove	Code
Remove	Cynthia_Eichhorn@fws.gov

Add OPOC

Done

Lastly, type the new OPOCs active directory name and select the 'Add as OPOC' option.

OPOC Assignment »

Expand Panel to Revise Search Definition

Add/Remove OPOCs for Aransas National Wildlife Refuge (21532)

OPOC Results

Remove	Code
Remove	Cynthia_Eichhorn@fws.gov

User: richard_easterbrook@fws.gov

Add as OPOC

Done

Please note that the search list is limited to those Organizations for which a user is an OPOC.

See Also

Organization Steward/Organization Point of Contact (Section 5.2.3)

5 Permissions and Accessing Information

The Service Catalog has a very robust means for controlling access to information. The following sections describe:

- **Visibility/Downloadability** – ServCat has different levels of visibility that are automatically handled as References are managed.
- **System-Level Roles** – Users in Service Catalog will automatically be given one or more system level roles. Based on their role, users will be granted access to information based on its visibility
- **Record-Specific Roles** – In addition to one or more system-level roles, a user may inherit record-specific roles. As the name implies, these roles give permission to access information on a record-by-by basis above and beyond the permissions granted by the system-level roles.

5.1 Visibility/Downloadability

5.1.1 Levels of Visibility

The Service Catalog recognizes three levels of visibility/downloadability*, which apply to all References, Holding Locations and Comments:

- **Public** – Accessible/downloadable to any anonymous person, including the general public
- **Internal** - Accessible/downloadable to any individual who is logged-on to the FWS active directory using their account.
- **Restricted** – Accessible/downloadable only to a select group of individuals. Most often these individuals are the record owners or designated viewers.

References, Holding Locations, and Comments can only have a single value for visibility, although the visibility may change through time.

*Yes, we know downloadability is not a real word; however, it does accurately represent what is possible.

5.1.2 How Visibility is Automatically Calculated

When determining who may view/access information, the Service Catalog makes the optimistic assumption that, unless there is a need to restrict access, all References and associated holding locations should be available to the public. There are, however, a number of reasons why there is a need to limit access to the public or all of the FWS. In general, these reasons fall into the following categories:

- The Information Resource describes sensitive information
- The Information Resource is proprietary
- The Information Resource is of questionable quality
- The Information Resource is for general use and is not refuge-specific
- The Reference is not ready for prime-time, is a duplicate, or is deleted

These five factors were used to guide the development of visibility/access in the Service Catalog through the development of objective rules based on how a Reference was attributed.

Simple Explanation

This simple explanation covers 99.5% of all References.

First, it is assumed that all References, Holding Locations and Digital Files have a visibility of Public. The following describes cases where this is not true.

A Reference has a visibility of internal if it:

- Lifecycle State is Legacy or In Review, OR
- Describes Sensitive Information, OR
- Describes Proprietary Information, OR
- Describes Poor Information, OR

- Is Not linked to any FWS Organization or if the link is denied

A Reference has a visibility of Restricted if it:

- Has a Lifecycle State of Draft, Quarantined or Inactive

A Holding Location has a visibility of Internal if:

- The Reference has a visibility of Internal, OR
- The Holding Location Lifecycle State is Legacy or In Review

A Holding Location has a visibility of Restricted if:

- The Reference has a visibility of Restricted, OR
- The Holding Location has a Lifecycle State of Draft, Quarantined, or Inactive

The ability to Download a Digital File is internal if:

- The Holding Location has a visibility of Internal, OR
- It contains Operationally Sensitive Information, OR
- It contains proprietary information, but there is permission to distribute

The ability to download a Digital File is Restricted if:

- The Holding Location visibility is restricted
- It contains sensitive information (e.g., T&E Locations)
- It contains proprietary information with no permission to distribute

Detailed Explanation

The following logic will apply to Service Catalog References. Each row shows that, if the condition is met, how the visibility would be affected. For example, if the Information Resource is marked as being sensitive because it contains information on an archeological site, the Reference Visibility can never be more than Internal. If, in addition, the Reference Lifecycle is Draft, the Reference Visibility can never be more than Restricted.

Object Visibility/ Downloadability	Category	Value	Maximum Possible Visibility
Reference Visibility	Information Resource Sensitivity	archeological, caves, commercial value, cultural, endangered, minerals, paleontology, threatened, wells, unknown, operations, Personal Info, Indian Sacred Sites, Security	Internal
	Reference Lifecycle	Legacy, InReview	Internal
	Reference-Organization Link	One or more, all in Legacy or Denied state (no reference-unit links pending or approved)	Internal
	Reference-Organization Link	None	Internal
	Information Resource Quality	Poor	Internal
	Reference Lifecycle	Draft, Quarantined, Inactive	Restricted
	Reference Sensitivity	In NatureBib, the legacy record was attributed as FWS Only	Restricted
Holding Location Visibility	Holding Location Lifecycle State	InReview, Legacy	Internal
	Reference Visibility	Internal	Internal
	Reference Visibility	Restricted	Restricted
	Holding Location Lifecycle State	Draft, Quarantined, Inactive	Restricted
Digital File Downloadability	Holding Location Visibility	Internal	Internal

Object Visibility/ Downloadability	Category	Value	Maximum Possible Visibility
	Information Resource Proprietary	Internal, NonCommercial, Unknown	Internal
	Information Resource Sensitivity	Operations, Personal Info	Internal
	Holding Location Visibility	Restricted	Restricted
	Information Resource Sensitivity	archeological, caves, commercial value, cultural, endangered, minerals, paleontology, threatened, wells, unknown, Indian Sacred Sites, Security	Restricted
	Information Resource Proprietary	NoDistribute	Restricted
Comment Visibility	Reference Lifecycle	Active, Legacy, InReview	Internal
	Comment Type	Public	Internal
	Reference Lifecycle	Draft, Quarantined, Inactive	Restricted
	Comment Type	Private	Restricted

See Also

Reference Organization Links (Section 8)

Reference Lifecycle States (Section 6.1)

Information Resource Evaluation (Section 6.2)

5.2 System Level Roles and Permissions

The Service Catalog recognizes five system-level roles. Roles are a set of connected behaviors, rights and obligations that a particular user may inherit or voluntarily accept in relation to owning, managing, stewarding, administrating and/or viewing References. Which Role a particular user inherits often depends on whether they have been authenticated and, if so, whether they are a FWS employee.

Authentication is the means by which a user identifies and verifies who they are. Users authenticate automatically to the Service Catalog by having already logged-on to a FWS computer (i.e., no need to provide an additional username and password). When not using a FWS computer, authentication will require providing a username and password, which, if the user is associated with the FWS, will be the same authentication as the FWS login.

5.2.1 Guest/Anonymous

The Guest/Anonymous role is given to any user that the Service Catalog is unable to identify. The general public or any user who abuses FWS policies when using the Service Catalog will be given this role.

5.2.2 FWS

The FWS Role is given to users who are permanently, temporarily, or seasonally employed by the FWS. FWS employment can include working at a refuge, complex, region, or other FWS office or can include FWS contractors and partners. Any user who has a FWS login will be part of this role.

5.2.3 Organization Steward/Organization Point of Contact (OPOC)

OPOC's are trusted data stewards who ensure the quality, integrity, and relevance of information about their FWS Organization in the Service Catalog. They use personal judgment and assistance from other subject matter experts to approve References containing information specific and relevant to their FWS Organization.

Since NRPC lacks the resources to directly monitor and manage the References for every FWS organization, managing References requires OPOCs who understand the content and value of local reference information. Within the Service Catalog, the OPOC has a critical role for a variety of reasons.

First, the OPOC provides informal review of information linked to their Organization. Because the NRPC has neither the staff nor the interest in being the "Reference Police," it will be up to the users of the system to create and effectively steward their own records. The Service Catalog will provide a number of tools for quality assurance and control (e.g., checking for duplicates, allow other users

to discover and flag errors in References, etc.). However, having the OPOC ensures that there is at least one individual whose purpose is to focus on particular records to ensure they are at a minimal level of integrity.

Second, the OPOC has the final say in what information is relevant for a FWS Organization. There have been problems in the past where individuals have posted erroneous information and linked it to a FWS Organization. This has created confusion over whether the information is representative of the Organization. Thus, the OPOC ensures that information linked to their Organization is both about that Organization and is not misleading information. Approval of a link should be guided by the following requirements: (1) The Information Resource explicitly refers to the Organization, as best as the OPOC can reasonably ascertain and (2) The Information Resource contains information that is appropriate and not misleading or misrepresentative, as best as the OPOC can reasonably ascertain. OPOCs should be aware that legal and/or programmatic requirements may prevail over a OPOC's preference as to whether a Reference is linked to an Organization. For instance, a program may have legal requirements to post various types of information about FWS Organizations.

Third, the OPOC is the gatekeeper of what information is accessible to the public. FWS staff have a need to manage all types of information, including refuge-specific datasets and reports as well as non-FWS reference documents and publications. While general references may be useful for internal management decisions (e.g., Birds of Colorado is useful to Colorado refuges), the public is more interested in refuge-specific information. Therefore, for a Reference to be accessed to the public, one criterion is that it must have at least one approved link to an FWS Organization.

Fourth, the OPOC has full knowledge of all information linked to their Organization. The Service Catalog has very tight security permissions allowing the Reference Owner to lock down access to sensitive and/or proprietary information. Being able to see all information linked to their respective Organization ensures that the OPOC is abreast of all information for their Organization and can help ensure that sensitive information is accessible to and managed by the appropriate individuals.

Finally, the OPOC ensures that useful information is not removed arbitrarily. If a Reference is linked to an Organization and the OPOC has approved the link, the Reference Owner may not delete the Reference without the OPOC's approval.

The time and expertise required depends on several factors, including the size and type of organization, the number of existing references, the expected rate at which new references are generated, and the organization's objectives for building and using content in the Service Catalog. Some OPOCs may choose to automatically approve all references, in effect trading off the time and work required with the quality of content. Another approach is to automatically approve most references and focus time and effort on reviewing certain types of references, or certain subject areas. Locating and consulting experts to determine whether a reference is appropriately linked will take time and require access to the appropriate subject matter experts. The most time consuming approach involves a thorough review of each Reference and associated Information Resource.

Every Organization within the FWS - whether it is a refuge, complex, regional office, or the national office – is encouraged to designate one or more Organization Point Of Contact(s) or OPOCs. This shared role can be given to any FWS employee, regardless of whether they reside at the organization. For instance, the I&M Data Manager for Region 2 could share the OPOC role with refuge staff at one of the Region's respective refuges. Likewise, larger Organizations may designate multiple users to be OPOCs. Although it will be up to each organization to define the criteria for selection, the Service Catalog will provide recommendations and offer clear guidance to the OPOCs.

The OPOC can delegate the role to other users. Delegation has the benefit of splitting up the workload, allowing OPOCs to handle specific areas of expertise, and cover for the OPOC if they are on annual leave. Ultimately, it will be up to each organization and OPOC to determine to whom and why they delegate the role.

See Also

OPOC Approval(Section 8.2)

5.2.4 Administrator

A very small subset of FWS employees will be given an administrator role. This role has all available rights and permissions associated with the Service Catalog.

5.2.5 Summary of System Level Permissions

The following table summarizes permissions based on the aforementioned roles.

System Level Permission	Anonymous	FWS	OPOC	Administrator
View/Download All Public References, Holding Locations, and Digital Files	Yes	Yes	Yes	Yes
Create a Reference	No	Yes	Yes	Yes
View/Download All Internal References, Holding Locations, and Digital Files	No	Yes	Yes	Yes
View/Download All Restricted References, Holding Locations, and/or Digital Files	No	No	Yes, if linked to their Organization	Yes
Approve/Deny Reference-Organization Link	No	No	Yes	Yes

See Also

Record-Specific Permissions (Section 5.3)

5.3 Record-Specific Permissions

5.3.1 Reference Owners and Viewers

When a user creates a Reference, the user inherits the Reference Owner assignment for that Reference and has complete authority and responsibility for its attribution and stewardship (content, quality, currency, etc.). For example, the Reference Owner is responsible to ensure the Reference describing an associated Information Resource is attributed correctly for sensitivity, proprietary ranking and quality.

The Reference Owner may do the following:

- Edit and delete the Reference.
- Assign Co-Owners or Viewers. Co-Owners will have the same privileges as the Owner and Viewers may view the Reference as well as all holding locations and be able to download any digital files associated with the Reference, regardless of how sensitive or proprietary the Information Resource is.
- Link to a parent Reference. For example, with the 'IsPartOf' relationship, the Owner of the Book Chapter decides which Book it belongs to.
- Bundle a Reference in the context of the Project Reference they own. The owner of the Project Reference must not be the owner of the other References which are bundled with the Project.
- Link a Reference to a Organization.

For each Reference, the Reference Owner should designate at least one other owner. Should the owner leave the FWS or permanently lose system level rights, having at least one other Reference Owner ensures records are not orphaned (i.e., without an owner). Reference Owners can be added and removed at any time as long as there is always at least one Reference Owner.

If a Reference Owner changes positions within the FWS, they will still maintain ownership of their respective References because the Reference Owner assignment does not depend on an organization affiliation. In many cases, however, it will be advantageous to transfer the Reference Owner assignment to the staff replacing them in their previous position.

See Also

Editing a Reference (Section 3.4)

Is-Part-Of Link (Section 5.2.3)

Generates/Was-Created-By Link (Section 6.9.2)

Reference Organization Links (Section 8)

Reference Profile (Section 2.4)

5.3.2 Holding Location Owner

When an user creates a Holding Location, the user inherits the Holding Location Owner assignment for that Holding Location (not the Reference) and has complete authority and responsibility for its attribution and stewardship (content, quality, currency, etc.).

See Also

Holding Locations (Section 7)

Add New Holding Location (Section 3.5.1)

Holdings Panel (Section 2.4.6)

5.3.3 Comment Owner

Note: This functionality is not complete in this release.

See Also

User Comments Panel (Section 2.4.11)
Comments (Section 10)

5.3.4 Summary of Record-Specific Permissions

The following table summarizes record-specific permissions.

System Level Permission	Reference Owner	Reference Viewer	Holding Location Owner
View Reference	Yes	Yes	Yes
View Holding Location	Yes	Yes	Yes
Download Digital File	Yes	Yes	Yes
Edit Reference	Yes	No	No
Edit Holding Location	No	No	Yes

See Also

Visibility/Downloadability (Section 5.1)

5.4 Summary of Permissions and Visibility

The following table provides a very simple summary of visibility and who has access:

	Access Permission			
	Public	Internal	Owner, Viewer, UPOC	Admin
Reference Visibility is Public	Yes	Yes	Yes	Yes
Reference Visibility is Internal	No	Yes	Yes	Yes
Reference Visibility is Restricted	No	No	Yes	Yes
Holding Location Visibility is Public	Yes	Yes	Yes	Yes
Holding Location Visibility is Internal	No	Yes	Yes	Yes
Holding Location Visibility is Restricted	No	No	Yes	Yes
Holding Location Downloadability is Public	Yes	Yes	Yes	Yes
Holding Location Downloadability is Internal	No	Yes	Yes	Yes
Holding Location Downloadability is Restricted	No	No	Yes	Yes

6 References

6.1 Reference Lifecycle States

An essential attribute that all References have is a Lifecycle State. Lifecycle States help explain where a Reference is in the edit and review process and is a powerful tool to allow you to prioritize the editing and overall management of your Reference. In addition, the lifecycle has a strong bearing on who may see a Reference (See Section 5.1)

Please note that Lifecycle State does not apply to the Information Resource being described by the Reference. For example, a 'Draft' Reference does not imply that the Published Report it is describing is 'Draft'. Instead, it implies that the Reference/Citation/Metadata describing the Published Report is still being edited.

The following sections provide definitions of each of the Lifecycle States. In addition, they discuss when a Lifecycle State may be changed. There are some cases where it may not be possible to transition a Reference to a certain lifecycle state. These cases are not intended as deliberate roadblocks to make your life more difficult. Rather, they help preserve the data integrity of the system.

See Also

Reference Organization Links (Section 8)
 Reference Lifecycle States (Section 6)
 Holding Locations (Section 7.2)
 Links Among References (Section 6.9)

6.1.1 Legacy

Legacy, by definition, implies that a Reference was imported from a legacy application and has not been reviewed as to whether it (1) meets the validation requirements; and (2) uses the same definitions, of the Service Catalog. Once edited in any way, a Reference can no longer be in this lifecycle state.

A Reference may never be saved back to Legacy, since Legacy implies the Reference has **never** been reviewed or edited in any way. To continue editing a Legacy Reference, set it to In Review.

6.1.2 Draft

The Reference has been created but has never been set to an Active lifecycle state. This lifecycle should be used when References are created but are not ready for widespread circulation within the FWS and possibly with the public.

6.1.3 Active

The Reference has met all validation requirements and is active. Current validation is limited to the completion of required fields. Activation indicates that all of the Reference is ready for broader circulation, throughout the FWS and, in many cases, the public.

A Reference can be activated if:

- You own the Reference;
- The Reference is not already 'Active';
- Required fields are not blank. If required fields (e.g., missing authors) are missing, edit the Reference and add the information.

6.1.4 In Review

The Reference, which had at one time been Active or Legacy and available for others to use, is currently being edited. Activation will require another round of validation.

A Reference can be set to In Review if:

- You are the owner of the Reference

- The Reference is not Draft.

6.1.5 Quarantined

The Reference Owner has determined there is a gross error in the attribution of the Reference, or a digital file has been uploaded, which might result in the inappropriate access to sensitive and/or proprietary information. Quarantining a References removes it from circulation (i.e., visibility is set to restricted) and should be used when the intent is to ultimately re-activate the Reference.

A Reference may be Quarantined if:

- You own the Reference
- It is not 'Draft', 'Inactive', or already 'Quarantined'.

6.1.6 Inactive (Soft Delete)

The record is no longer (or perhaps never was) of use and should be removed. Only Draft references will be completely purged (hard deleted) from the Service Catalog. All other References are set to Inactive meaning that they do not completely disappear from the system (in case there is a need to access the information²). Inactive References will be accessible to the Reference Owner(s) and Viewer(s) for one year. After one year of being Inactive, the References will be archived to a digital graveyard and will only be accessible upon request.

A Reference may be inactivated if it meets one of the following criteria:

- You own the Reference
- There are no Active Holding Locations. This prevents inactivation of a Reference where someone else has a copy of the Information Resource.
- There is not an active Reference linked to this Reference. Dependent References must either be unlinked or set to Inactive before the Reference can be removed. For example, a Reference to a book cannot be deleted if there is a book chapter linked to the book. In addition, if a Project is linked to a report, the report cannot be deleted. This restriction regarding linked References applies in one direction only. In the case of the 'IsPartOf' relationship, the parent Reference may not be deleted. In the case of the 'Generates' relationship, the References bundled with the Project may not be deleted.
- There are not any Approved Reference-Organization links. These References have been evaluated by the OPOC as containing useful information about their organization. The OPOC must first deny the Reference-Organization link before the Reference can be removed.

It is important to note that in cases where a Reference has more than one owner, any one of the owners can inactivate the Reference.

Following inactivation, there is a three month grace period before References are formally archived and are no longer immediately accessible to the Reference Owners. At this point, these References will only be accessible by request.

² There is a compelling legal reason why this is done. Any Reference (and Information Resource) that was accessible to others, may have been used to make a management decision. In the unlikely, albeit still possible, situation where decisions are challenged in court, it is critical to be able to reproduce the information.

6.2 Information Resource Evaluation

This section describes how an Information Resource can be evaluated for sensitivity, copyright, and quality. These criteria ultimately are important not only for communicating the type of information being managed, but also who should have access to that information (via Visibility).

There is no ability to indicate whether a holding location (e.g., digital file) is sensitive or proprietary. The ability to do this is at the Reference level. This prevents holding locations of the same information resource being attributed differently. For example, if there were two identical copies of a journal article with proprietary information, it would be nonsensical for one to be attributed as non-proprietary while another is attributed as proprietary.

See Also

Visibility/Downloadability (Section 5.1)

6.2.1 Information Resource Proprietary Rank

This rank indicates whether an Information Resource contains information that is copyrighted, has other legal restrictions, paid for access from a third party, and/or the data has recently been collected by a non-FWS Principal Investigator who plans to publish their results in a professional journal. Examples of when an Information Resource may contain proprietary information:

- Data was purchased from a private vendor (e.g., Ikonos Satellite Imagery)
- The article was downloaded from a bibliographic service
- There is any mention of copyright ©
- The information was collected as part of a contract and the contractor plans to publish information in the near future.

The following evaluations are possible:

- **Unknown** – Proprietary status cannot be determined.
- **Copyrighted, Do Not Distribute** – Known to contain copyrighted information without permission to distribute.
- **Copyrighted, Distribute Internally** – Known to contain copyrighted information. Permission secured to distribute internally within FWS.
- **Copyrighted, Distribute for Non-Commercial Use** – Known to contain copyrighted information. Public distribution allowed for non-commercial use.
- **Non-Proprietary** - No copyrights or other ownership issues. There are no distribution restrictions based solely on the proprietary evaluation.

Here are a few additional guiding principles to follow when setting the proprietary rank (some is paraphrased from <http://chillingeffects.org/fairuse/>):

- Works produced by the US government, or any government agency or person acting in a government capacity, are in the public domain. So in ServCat, these would be marked as non-proprietary, and the digital files of these works would be freely available to all, except if sensitivity rankings come into play.
- Fair use: If a copied work is used in a way that substitutes for the original in the market, it's unlikely to be a fair use. Linking to the original may also help to diminish the substitution effect. Especially with journal articles, do not upload a scanned copy without marking it as 'Proprietary - Do not distribute'. The copy uploaded is still available to the holdings owner, and could be shared with a colleague, in much the same way as it would be if the copy was in the owner's file cabinet. But in many cases, full text of journal articles is only available through subscription services, so our distribution would circumvent that and not be legal.
- As an alternative(or in addition) to uploading a scanned copy, add an external holding link, to direct someone to where they could either purchase a copy, or get a copy through a subscription service they have access to. For example, FWS employees have JSTOR access through the DOI, so by adding the JSTOR link to a journal article, we can indirectly give FWS users access to the journal article.
- Some journal articles and other materials are freely available online - it's on a case by case basis. It takes a little research to sometimes figure out whether uploading a digital copy or linking to the online document is the better bet.
- Published versus unpublished is really just a judgment call on the report Reference Type. This is not used as criteria that directs the proprietary status.

6.2.2 Information Resource Sensitivity

The Information Resource describes the specific location of a key resource and/or provides information not appropriate for the public. There are two general types of sensitivity, operationally sensitive, and legally sensitive. Once a document is marked as sensitive, the user must select at least one field to explain its sensitivity. Evidence of one of the following *must be present* in order for the document to be considered sensitive. Resources which do not specifically exhibit sensitive material should be marked as non-sensitive and available to the public. If you are unsure if the following apply or have specific concerns regarding your resource, please contact your regional FOIA officer for specific guidance.

Operationally Sensitive Information Resources are those that are important to the internal business operations of the FWS, but not appropriate to external audiences. Examples include: locations of social trails, planned construction sites, planned boundary acquisitions, in-holding information, etc. By selecting one of the following operationally sensitive fields, the Reference and the Information Resource will only be available within ServCat.

- **Operations:** Important to the internal business operations of the FWS, but not appropriate to external audiences. This may include information from another originator that is technically not 'sensitive' in nature, but should not be distributed publicly by the FWS.
- **Personally Identifiable Information (PII):** PII refers to information that can be used to distinguish or trace a living individual's identity such as their Social Security number, biometric records, etc. alone or when combined with other personal or identifying information that is linked or linkable to a specific individual, such as a date and place of birth, mother's maiden name, etc. Personnel, medical and similar files containing information of a highly personal nature are not appropriate for ServCat. Please note that information previously made public (for example: arrest/property records) and information more than 75 years old is not considered PII.
 - Types of sensitive PII:
 - a. an individual's social security number alone; or
 - b. an individual's name or address or phone number *in combination with one or more of the following:*
 1. date of birth
 2. Social Security number
 3. driver's license number or other state identification number
 4. passport number
 5. financial account number, or
 6. credit or debit card number

Legally Sensitive Information Resources must contain location-specific information that would create an unreasonable risk or harm, theft, or destruction of a natural or cultural resource or object, including individual organic or inorganic specimens or risk to the health and/or safety of refuge personnel or the public. Location specific information is defined as a descriptive, graphical or electronic portrayal of a place in such detail that knowledge of the place would permit a person to find the specific place, no matter where it is in the refuge.

For an Information Resource to qualify as having legally sensitive information, all of the following criteria must be met:

- Internal Resource- The resource contains information about a FWS resource specifically exempt from disclosure by statute when that statute: (a) requires withholding information from the public, or (b) establishes particular criteria for withholding or refers to particular types of matters withheld. (5 U.S.C §552 (b) 3.)
- Location Specific- The resource contains a descriptive, graphical or electronic (GPS) portrayal of a place in such detail that knowledge of the place would permit a person to find the specific place. For example GPS coordinates to a specific protected archeological site, nesting area, etc. It is important to note that disclosing that a resource is present at a refuge is not considered to be location specific. Likewise, generalized location data (cutting off the last digits in UTM coordinates, or 'in the wilderness') is also not considered location specific. In extremely rare instances where even the acknowledgement that a particular resource exists at a refuge may reveal too much location information. FWS employees should seek further guidance from their regional FOIA officer for any questions regarding their resource.
- Not Already Publicly Available- Information that already is publicly available is not legally sensitive. For example, information that can be derived from refuge websites, or the return of species documented by the media, etc.

If an Information Resources qualifies as having legally sensitive information one or more of the following fields can be checked. Both the Reference and the Information Resource will not be visible to the public:

- **Archaeological:** Location-specific, and non-public information about material remains of past human life or activities which are of archeological interest for which the excavation or removal requires a permit or other permission. (5 U.S.C. §552 (b) 3: Archeological Resource Protection Act, 16 U.S.C §470hh)
- **Caves:** Location-specific and non-public information about any naturally occurring void, cavity, recess, or system of interconnected passages which occurs beneath the surface of the earth or within a cliff or ledge (including any cave resource therein, but not including any vug, mine, tunnel, aqueduct, or other manmade excavation) and which is large enough to permit an individual to enter, whether the entrance is naturally formed or manmade. Such term shall include any natural pit, sinkhole, or other feature which is an extension of the entrance. (5 U.S.C. §552 (b) 3: The Federal Cave Resources Protection Act of 1988, 16 U.S.C. §4301-4309)
- **Commercially Valuable:** Location-specific and non-public information about a resource that has potential for being traded or sold in legal or illegal markets such that unauthorized removal of these resources from a refuge is likely to occur despite the potential of civil or criminal penalties. (5 U.S.C. §552 (b) 3: The Lacey Act as amended)
- **Cultural:** Location-specific and non-public information about cultural resources having importance for archeology, history, ethnography, literature, and/or art that are at risk of theft or damage to their physical and/or nonphysical integrity. (5 U.S.C. §552 (b) 3: 519 DM 1, Department of Interior Protection of the Cultural Environment)

- **Endangered:** Location-specific and non-public information about a species or population that has been formally designated as endangered or proposed for such designation by the FWS or other appropriate agency. (5 U.S.C. §552 (b) 3: Endangered Species Act of 1973, as amended)
- **In Litigation:** Resources that are currently being used in legal proceedings. Or information found in agency records that is subject to legally recognized privilege, including the deliberative process privilege, attorney work product privilege, and attorney-client privilege (5 U.S.C. §552 (b) 5.). Or information found in agency records compiled for law enforcement purposes, that could interfere with law enforcement proceedings, would deprive a person of a fair trial or impartial adjudication, reveal confidential sources and information, describe confidential investigative techniques, or endanger the physical safety of a person. (5 U.S.C. § 552 (b) 7.)
- **Indian Sacred Sites:** Location-specific, and non-public information about any specific, discrete, narrowly, delineated location on Federal land that is identified by an Indian tribe, or Indian individual determined to be an appropriately authoritative representative of an Indian religion, as sacred by virtue of its established religious significance to, or ceremonial use by, an Indian religion, provided that the tribe or appropriately authoritative representative of Indian religion the agency of the existence of such site. (5 U.S.C. §552 (b) 3: Executive Order No. 13007)
- **Minerals:** Location-specific and non-public information about naturally occurring, usually inorganic, discretely bounded crystalline substance with characteristic physical and chemical properties that are due to its atomic arrangement. While a mineral object usually has a characteristic crystal form, it may exhibit a non-crystalline form, such as occurs in opal or obsidian. A mineral object also includes organic substances such as oil and coal, and may contain substances in the category of natural aggregates of materials. (5 U.S.C. §552 (b) 3: 612 FW 1, Minerals and Mining)
- **Paleontological:** Location-specific and non-public information about any discretely bound organic remains of a plant or animal, trace of a plant or animal, imprint of a plant or animal, or cast of a plant or animal that has been preserved by natural processes within a geological context, together with geologic and paleontological data associated with the object. (5 U.S.C. §552 (b) 3; 16 U.S.C §470 aaa, Omnibus Public Lands Act, Paleontological Resources Preservation Subtitle)
- **Security:** Location-specific and non-public information regarding national defense, national or local security or foreign policy. (5 U.S.C. § (b) 1; Executive Order 12958, as amended)
- **Threatened:** Location-specific and non-public information about a species or population that has been formally designated as threatened or proposed for such a designation by the FWS or other appropriate agency. (5 U.S.C. §552 (b) 3: Endangered Species Act of 1974, as amended)
- **Wells:** Location-specific, non-public information about geological and geophysical information, data, including maps, concerning wells used for the purpose of withdrawing or injecting water, oil, or natural gas. (5 U.S.C. §552 (b) 9.)

Unknown-- By selecting unknown, the record defaults to sensitive. Unknown implies that the resource has not been evaluated as to whether it contains sensitive information *and* there is a likely chance that it contains sensitive information. The resource is assumed to contain legally sensitive information until otherwise evaluated.

See Also

Visibility/Downloadability (Section 5.1)

6.2.3 Information Resource Quality Rank

This rank describes the quality of information provided within the Information Resource. When assessing quality, you should consider the following:

- Documentation of and adherence to protocols
- Qualifications of observers or data collectors
- Consistency of observers or data collectors (e.g., high staff turnover that could result in variability?)
- Protocols and/or equipment used (e.g., current vs. outdated methods, quality and performance of equipment)
- Volume of data collected and duration of study
- Accuracy, consistency and completeness of data collection and data entry
- Documentation and precision of location data
- Level of synthesis or interpretation of raw data

One of the following evaluations is possible:

- **High** – The Information Resource is not known to be missing or contain misleading information AND adequate documentation on its generation is present. Generally, peer-reviewed materials (e.g., from published journal articles or rigorous monitoring programs) fall into this category.

- **Medium** – The Information Resource is missing some information, but not information that is essential to the correct interpretation. There may have been some internal review of the Information Resource, but not a formal peer-review. The information may be unpublished, but has had some level of informal review.
- **Low** – The Information Resource is missing some information. Documentation on its generation is limited. Correct interpretation is still possible by someone with an advanced knowledge of the topic. The information is from an unpublished source (e.g., unpublished report) and/or has not been reviewed.
- **Poor** – The Information Resource is missing key information or has misleading information that makes effective and correct interpretation extremely difficult. Examples include datasets with little or no documentation.
- **Unknown** – The quality of the Information Resource is unknown and/or unevaluated.

See Also

Visibility/Downloadability (Section 5.1)

6.3 Reference Attribute Definitions

Field	Alias/Label	Definition	Help
Title		The name given to the information resource.	<p>Transcribe the exact title from the resource itself, such as book title page, photograph caption, artist's caption, object name, etc.</p> <p>When no title is found on the resource itself, use the title assigned by the institution holding the resource or the title for the resource as cited in authorized reference sources.</p> <p>If no title is known, best practice is to construct a title, deriving it from the resource itself. Please indicate in the Reference Notes that the title was constructed because an original title was not available. When constructing a title, make it as descriptive as possible, especially for generic categories of resources, such as 'Papers..' or 'Annual reports...'</p> <p>Capitalize only the first letter of the first word of the title and any proper noun(s) in the title.</p> <p>Exception – the name of a conference is considered a corporate entity; as such, a conference name is treated as a proper noun phrase, i.e., all nouns in the conference name (appearing as part of the title) are capitalized.</p> <p>Additional exception – transcribe acronyms exactly as they appear in the title (e.g., ERA)</p> <p>Do not drop words out of the title, do not abbreviate words in the title, do not change the order of terms in the title, do not truncate the title (except in the case of extremely long titles typical of pre-20th century works, in which case it is acceptable to truncate at some point and indicate truncation by adding ellipsis, i.e., '...').</p> <p>In general, do not include punctuation when transcribing the title, with the exception of quotes appearing within the title.</p> <p>To set off a subtitle from a title proper, best practice is to use space colon space (substituting original punctuation, e.g., a comma or semicolon not preceded by a space, or space, dash, space)</p> <p>Do not embed any 'style' characteristics in the title, e.g., bolding, italicizing, underlining, use of multiple fonts and/or text size, etc.</p> <p>If the resource is a known 'draft' (per information provided in the preface or via a stamp), but the title page does not include 'draft,' best practice is to enter it (without capitalization) in square brackets at the end of the title [draft].</p> <p>If the work is a standard type of internal report -- e.g., 'plant inventory report' (*) -- and the report category is not contained within the title but would be critical for comprehensive retrieval, it is acceptable to add the report category phrase with no capitalization at the end of the title and within square brackets [plant inventory report].</p> <p>Include initial articles from Title (e.g., A, An, The)</p>
Content Description	Brief Description	A very brief account of the content of the resource.	<p>'Description' may include, but is not limited to, a condensed synopsis of the abstract, table of contents, purpose, reference to a graphical representation of content or a free-text account of the content. Note: Depending on the reference type, there are fields devoted to the complete</p>

Field	Alias/Label	Definition	Help
			<p>abstract, table of contents, and purpose.</p> <p>The best practice recommendation for this element is to use full sentences, as 'Brief Description' is often consulted by end-users for assistance in selecting appropriate resources from a set of search results.</p> <p>Descriptive information can be copied or automatically extracted from the item if there is no abstract or other structured description available.</p> <p>Please do not include HTML or other structural tags within the 'Brief Description' element text, that may negatively affect the interoperability of the metadata.</p> <p>Where applicable, use other, more specific elements such as Abstract/Full Description, Table of Contents, to provide further details of the Reference</p>
Abstract_Text	Abstract/Full Description	An account of the content of the resource.	<p>Provides a more detailed description beyond what is possible using the Content Description field.</p> <p>'Abstract' provides a summary of the resource's content. Used when a description of a resource consists of a formal abstract.</p>
Table Of Contents		A list of subunits of the content of the resource	When a description of a resource consists of a list of the contents, 'Table of Contents' can be used to differentiate this list from descriptive text that is written in sentence form. This allows more options for display and indexing.
Date Of Issue	Publication Date/Photo Date/Date Emailed/Date Produced/Date Last Visited/Completion Date	The Date the Information Resource was issued.	
Reference Type		The nature or genre of the content of the resource.	See Section 6.4 for list of all types and definitions.
Size		The size or duration of the resource.	See Size (Section 6.5.3)
Contacts		Entities responsible for the creation, production and/or distribution of the Information Resource	See Contact Types (Section 6.5.2)
Reference Code		A constant and unique identifier for each Reference	Any Reference created in the Service Catalog will automatically be given a unique code.
Display Citation		A bibliographic reference for the resource. This field is auto-populated and represents and aggregation of information based on the Reference Type.	
Content Begin Date	Date Measure Started/Project Begin Date/Field Date Begin	Starting date the content of the Information Resource refers to, or the temporal characteristic of the intellectual content of the resource.	In all cases, the information contained within the Information Resource should be earlier than the date the Information Resource was published. For example, a report published in 2006 describes fieldwork conducted in July, 2005; the Content Begin Date would be July, 2005. If the Content Begin and End Dates are the same, then only the Content Begin Date need only be completed.

Field	Alias/Label	Definition	Help
Content End Date	Date Measure Ended/Project End Date/Field Date End	Ending date the content of the Information Resource refers to, or the temporal characteristic of the intellectual content of the resource.	In all cases, the information contained within the Information Resource should be earlier than the date the Information Resource was published. For example, a report published in 2006 describes fieldwork conducted in July, 2005; the Content Begin Date would be July, 2005. If the Content Begin and End Dates are the same, then only the Content Begin Date need only be completed.
Version		Information designating the version of a work.	See Edition
Edition		Information designating the edition or version of a work.	This element is not to be used for versions in the sense of different physical formats (e.g. the PDF version of a textual resource).
Date Range		Any miscellaneous range of dates that further describes the Information Resource, such as the meeting dates for a conference.	
Issue		A single publication of a periodical.	
Location	Publication Location/URL/Location of Presentation	Description of the geographic locations characterized by the Information Resource.	
Meeting Place	Meeting Location	A geographic location that is not described by the Information Resource, but is important to its creation, publication and/or organization.	
Miscellaneous Code	Generic Code/Chapter Number/SOP Number/Other Code/Project Code/Language/ Platform/ Standard Number/Report Number Status	Any type of code that has been used to identify the information resource	
Notes		Other general notes about the Information Resource	
Page Range		Beginning and ending page numbers (in a book chapter, for example). If the information source is one page, the page range will be a single number.	
Purpose		Intent for the	

Field	Alias/Label	Definition	Help
		creation of the Information Resource	
Volume		A series of issues of a periodical	

6.4 Reference Type Definitions

This section presents a list of all Reference Types as well as their definitions. If unsure as to what Reference Type to select, assign a more generic category:

- Generic Dataset
- Generic Document
- Generic Multimedia

It is important to note that even if information is very explicitly described, it should not prevent the information from being broadly discoverable. Therefore, most Reference Types fall into one or more Reference Categories, which are used in the Quick and Advanced Search. Thus, when someone searches for Datasets, the Service Catalog automatically includes all types of datasets, including geodatabases, geospatial datasets, generic datasets, raster datasets, maps, etc.

See Also

Reference Type Groups (Section 6.7)

Quick Search (Section 2.2.1)

Name	Description
Aerial Photograph	Photographs taken off the ground from an elevated position where the camera is not supported by a ground-based structure. The most common platforms for aerial photography include fixed-wing aircraft.
Aerial Photograph Product Type	A series of aerial photographs grouped together based on common characteristics including their scale (e.g., 1-m), format/compression, or spectral signature (e.g., color or IR).
Aerial Photograph Series	A succession of Aerial Photograph Product Types. For example, the NAIP airphoto series has a number of different product types including 1-M color imagery.
Audio Recording	An electrical or mechanical inscription and re-creation of sound waves, such as spoken voice or the ambient environment. The two main classes of sound recording technology are analog recording and digital recording.
Book	A set or collection of written, printed, illustrated, or blank sheets, made of paper, parchment, or other material, usually fastened together by a hinge at one side.
Book Chapter	One of the main divisions of a book. Chapters are generally numbered or titled.
Book Series	A succession of books published with related subjects or authors, similar format, and/or continuous numbering
Brochure	An unbound booklet (that is, without a hard cover or binding), often consisting of a single sheet of paper that is printed on both sides and folded in half, in thirds, or in fourths (called a leaflet). It may also consist of a few pages that are folded in half and stapled at the crease to make a simple book.
Conference Proceeding	Collection of academic papers that are published in the context of an academic conference. They are usually distributed as printed books (or sometimes CDs) either before the conference opens or after the conference has closed. Proceedings contain the contributions made by researchers at the conference. They are the written record of the work that is presented to fellow researchers.
Conference Proceeding Paper	A paper from a Conference Proceeding
Conference Proceeding Series	A succession of conference proceedings published with related subjects, publishers, editors, similar format, and/or continuous numbering
Data Standard	A standard pertaining to the management of data
Dissertation	Document submitted in support of completing a Doctorate Degree that presents the author's research and findings
Docket	Summary of legal documents
Email	A digital message from one person to one or more other persons. An Email consists of two components, the message header, and the message body, which is the email's content.

Name	Description
Generic Dataset	Applied to any type of spatial or tabular data that cannot be more specifically defined (e.g., as a vector dataset)
Generic Document	Any original or official paper that conveys information. Applied to any type of document that cannot be more specifically defined
Generic Multimedia	Any Information Resource pertaining to sound or graphics that is not described by a more specific Reference Type.
Geodatabase	Any database containing more than one related tables, with the tables sharing data. In addition, some of the data types are natively geospatial (i.e., points, lines, and polygons).
Geospatial Dataset	Any dataset that is inherently geospatial in nature.
Journal	A periodical specific to peer-reviewed literature
Journal Article	An article from a peer-reviewed periodical relating to a particular academic discipline.
Journal Issue	Issue
Letter	A hand-written or typed message from one person to another
LIDAR Image	Light Detection And Ranging Image
Map	A visual representation of an area highlighting relationships between objects, regions, and themes
Map Series	A succession of maps published with related subjects or authors, similar format, and/or continuous numbering
Mapbook-Atlas	A digital file, book or other bound resource containing a collection of maps, sometimes with supplementary illustrations and graphic analyses.
Memorandum	A communication that contains directive, advisory, or informative matter
Movie/Video	A collection of still images, that when viewed in series, show motion.
Newsletter	Newsletter Series
Newsletter Article	A single article from a newsletter
Newsletter Issue	A single issue of a newsletter
Newspaper	A periodical publication containing news, information, and advertising
Newspaper Article	An article within a newspaper
Notes	A brief record, especially one written down to aid the memory
Permit	A document that gives formal permission to conduct an activity.
Photograph	A picture captured by an optical device, including cameras, mirrors, lenses, telescopes, microscopes. Images that are orthorectified (processing to geometrically correct it so that the scale of the photograph is uniform and it can be measured as a map) would be treated as a dataset.
Plan	Any type of generic planning document, including monitoring or management plans.
Podcast	A series of digital computer files, usually either digital audio or video, that is released periodically and made available for download by means of web syndication.
Poster	A poster is any piece of printed paper designed to be attached to a wall or vertical surface. Typically posters include both textual and graphic elements, although a poster may be either wholly graphical or wholly text. In some cases, a poster can also be a digital file that would be used for the purpose of printing a hardcopy. Poster formats (i.e. whether it is digital or hardcopy) should be described with separate holding locations.
Presentation	Used for the purpose of showing and explaining the content of a topic to an audience or learner. Most often this is a set of slides that rely on simple text statements and graphics.
Program	An ongoing business process that manages multiple interdependent projects
Project	A planned endeavor, usually with a specific goal and accomplished in several steps or stages that produces a variety of end-products.
Proposal	A document used to apply for sponsored program funds and/or permission to conduct activities that would otherwise not be allowed.
Protocol	A rule, guideline, or document which guides how an activity should be performed.
Protocol Development Summary	A report summarizing progress towards the development of a monitoring protocol.
Published Report	A formally published document which present focused, salient content to a specific audience. Reports are often used to display the result of an experiment, investigation, or inquiry. Often, the publisher is different than the report author.
Published Report Section	A section or component of a published report.
Raster Dataset	Storage format for managing the location of geospatial information as grids and their associated attribute information. Raster datasets are natively geospatial.

Name	Description
Relational Database	A database containing more than one table, with the tables sharing data.
Report Series	A succession of reports published with related subjects or authors, similar format, and/or continuous numbering.
Resource Guide	A document intended to provide an overview and inventory of natural resources
Satellite Image	Digital image taken of the Earth's surface using electromagnetic sensors on board a fixed-path orbiting or geostationary space-based satellite.
Satellite Image Product Type	A grouping of satellite images based on common characteristics including their scale (e.g., 1-m), format/compression, or spectral signature (e.g., color or IR).
Satellite Image Series	A succession of satellite images published with related subjects, producers, similar format, and/or continuous numbering
Site Specific Survey Protocol	A document that provides all of the details necessary to conduct an inventory or monitoring project at a particular Refuge System station.
Software	Computer programs or code read and written by computers
Sound Pressure Level Measurement	A measure of the local pressure deviation from the ambient (average, or equilibrium) pressure caused by a sound wave. Sound pressure can be measured using a microphone in air and a hydrophone in water.
Specimen	A collected individual, item, or part considered typical of a group, class, or whole
Standard	A document that is established by authority, custom, or general consent as a model or example
Standard Operating Procedure	Detailed written instructions to achieve uniformity of the performance of a specific function
Survey	A method for collecting quantitative information about items in a population
Survey Protocol Framework	A document that provides a general template for conducting an inventory and monitoring project (survey) and is used to develop more detailed instructions for conducting a survey at a specific station in the Refuge System.
Tabular Dataset	A collection of data. Data is presented in tabular form, where each column represents a particular variable, either as text string or geography (i.e., points, lines and polygons), and each row corresponds to a given member of the data set in question.
Thesis	Document submitted in support of completing a Master's Degree that presents the author's research and findings
Unpublished Report	A piece of information describing an event which given or presented to someone
Vector Dataset	Storage format for managing the location of geospatial information (points, lines and polygons) and their associated attribute information. Vector datasets are natively geospatial.
Web Service	Application programming interfaces (API) or web APIs that are accessed via Hypertext Transfer Protocol and executed on a remote system hosting the requested services
Web Site	A collection of related web pages, images, videos or other digital assets that are addressed relative to a common Uniform Resource Locator (URL).

6.5 Attributes for Each Reference Type

This section describes (1) the [Core Attributes](#), (2) [Contact Types](#), and [Size](#) attributes that are specific to each Reference Type

6.5.1 Core Attributes

This section details which fields are used by each Reference Type, as well as the current label. It is important to note that the same fields are used, regardless of Reference Type and label. For example, almost every Reference makes use of the Title field, even though it may be labeled "Air photo Title" in one case and "Product Type Title" in another.

Name	Keypath	Label	Required?
Aerial Photograph	Title	Airphoto Title	Yes
	ContentDescription	Airphoto Brief Description	No
	ContentBeginDate	Airphoto Content Begin Date	No
	ContentEndDate	Airphoto Content End Date	No
	MiscellaneousCode	Airphoto Generic Code	No
	AbstractText	Airphoto Full Description	No
	Purpose	Airphoto Purpose	No
	Notes	Airphoto Notes	No

	Location	Location Description	No
Aerial Photograph Product Type	Title	Product Type Title	Yes
	ContentDescription	Product Type Description	No
Aerial Photograph Series	Title	Airphoto Series Title	Yes
	ContentDescription	Airphoto Series Description	No
Audio Recording	Title	Title	Yes
	ContentDescription	Brief Description	No
	ContentBeginDate	Content Begin Date	No
	ContentEndDate	Content End Date	No
	AbstractText	Full Description	No
	Purpose	Purpose	No
	Notes	Notes	No
Book	Title	Book Title	Yes
	ContentDescription	Book Brief Description	No
	TableOfContents	Book Table of Contents	No
	DateOfIssue	Book Date Of Publication	No
	Location	Book Place of Publication	No
	Edition	Book Edition	No
	AbstractText	Book Full Description	No
	Notes	Book Notes	No
Book Chapter	Title	Chapter Title	Yes
	ContentDescription	Chapter Brief Description	No
	PageRange	Chapter Page Range	No
	MiscellaneousCode	Chapter Number	No
	AbstractText	Chapter Abstract/Full Description	No
	Notes	Chapter Notes	No
Book Series	Title	Book Series Title	Yes
	ContentDescription	Book Series Description	No
Brochure	Title	Title	Yes
	ContentDescription	Brief Description	No
	DateOfIssue	Date Issued/Published	No
	Notes	Notes	No
Conference Proceeding	Title	Proceeding Title	Yes
	ContentDescription	Proceeding Brief Description	No
	MeetingPlace	Proceeding Meeting Location	No
	DateRange	Date of Meeting	No
	Location	Place Published	No
	DateOfIssue	Proceeding Publication Date	No
	TableOfContents	Proceeding Table of Contents	No
	AbstractText	Proceeding Abstract/Full Description	No
	Notes	Proceeding Notes	No
Conference Proceeding Paper	Title	Paper Title	Yes
	ContentDescription	Paper Brief Description	No

	AbstractText	Paper Official Abstract	No
	PageRange	Paper Page Range	No
	Notes	Paper Notes	No
Conference Proceeding Series	Title	Conference Proceeding Series	Yes
	ContentDescription	Series Description	No
Data Standard	Title	Title	Yes
	ContentDescription	Brief Description	No
	AbstractText	Official Abstract/Full Description	No
	DateOfIssue	Publication Date	No
	Notes	Notes	No
Dissertation	Title	Title	Yes
	ContentDescription	Brief Description	No
	DateOfIssue	Completion Date	No
	TableOfContents	Table of Contents	No
	ContentBeginDate	Field Date Begin	No
	ContentEndDate	Field Date End	No
	AbstractText	Abstract/Full Description	No
	Location	City, State	No
	Notes	Notes	No
Docket	Title	Title	Yes
	ContentDescription	Brief Description	No
	DateOfIssue	Publication/Issue Date	No
	ContentBeginDate	Content Begin Date	No
	ContentEndDate	Content End Date	No
	TableOfContents	List of Contents	No
	AbstractText	Full Description	No
	Notes	Notes	No
Email	Title	Title/Subject	Yes
	ContentDescription	Brief Description	No
	DateOfIssue	Date Emailed	No
	Location	Location Emailed From	No
	AbstractText	Full Description	No
	Notes	Notes	No
Generic Dataset	Title	Title	Yes
	ContentDescription	Brief Description	No
	DateOfIssue	Date of Issue/Release	No
	ContentBeginDate	Content Begin Date	No
	ContentEndDate	Content End Date	No
	AbstractText	Abstract / Full Description	No
	Purpose	Purpose	No
	Edition	Version	No
	MiscellaneousCode	Generic Code	No
	Location	Place Produced	No

	Notes	Notes	No
Generic Document	Title	Title	Yes
	ContentDescription	Brief Description	No
	AbstractText	Abstract/Full Description	No
	DateOfIssue	Date of Issue	No
	ContentBeginDate	Content Begin Date	No
	ContentEndDate	Content End Date	No
	Notes	Notes	No
	DateRange	Date Range	No
	Edition	Edition/Version	No
	Issue	Issue	No
	Location	Place Produced	No
	MeetingPlace	Meeting Place	No
	MiscellaneousCode	Miscellaneous Code	No
	PageRange	Page Range	No
	TableOfContents	Table Of Contents	No
	Volume	Volume	No
Generic Multimedia	Title	Title	Yes
	ContentDescription	Brief Description	No
	DateOfIssue	Date Of Issue	No
	ContentBeginDate	Content Begin Date	No
	ContentEndDate	Content End Date	No
	DateRange	Date Range	No
	AbstractText	Abstract/Full Description	No
	Edition	Edition/Version	No
	Location	Place Produced	No
	Notes	Notes	No
Geodatabase	Title	Title	Yes
	ContentDescription	Brief Description	No
	DateOfIssue	Release/ Issue /Version Date	No
	ContentBeginDate	Content Begin Date	No
	ContentEndDate	Content End Date	No
	Edition	Version	No
	TableOfContents	Entity-Relationships	No
	AbstractText	Full Description	No
	Purpose	Purpose	No
	Location	Location Description	No
	Notes	Notes	No
Geospatial Dataset	Title	Title	Yes
	ContentDescription	Brief Description	No
	DateOfIssue	Date of Issue/Release	No
	ContentBeginDate	Content Begin Date	No
	ContentEndDate	Content End Date	No

	AbstractText	Abstract / Full Description	No
	Purpose	Purpose	No
	Edition	Version	No
	MiscellaneousCode	Generic Code	No
	Location	Location Description	No
	Notes	Notes	No
Journal	Title	Journal Title	Yes
	ContentDescription	Journal Purpose / Description	No
Journal Article	Title	Article Title	Yes
	ContentDescription	Article Brief Description	No
	AbstractText	Article Abstract/Full Description	No
	PageRange	Article Page Range	No
	Notes	Article Notes	No
Journal Issue	DateOfIssue	Publication Date	Yes
	Volume	Volume	No
	Issue	Issue	No
	Title	Special Issue Title	No
	ContentDescription	Brief Description	No
	Notes	Notes	No
Letter	Title	Title	Yes
	ContentDescription	Brief Description	No
	DateOfIssue	Date Produced/Written	No
	Location	Location Letter Was Written	No
	AbstractText	Full Description	No
	Notes	Notes	No
LIDAR Image	Title	Title	Yes
	ContentDescription	Brief Description	No
	ContentBeginDate	Content Begin Date	No
	ContentEndDate	Content End Date	No
	DateOfIssue	Date Issue/Published	No
	AbstractText	Full Description	No
	Purpose	Purpose	No
	Notes	Notes	No
	Location	Location Description	No
Map	Title	Map Title	Yes
	ContentDescription	Map Brief Description	No
	DateOfIssue	Map Date of Issue	No
	ContentBeginDate	Map Content Begin Date	No
	ContentEndDate	Map Content End Date	No
	Edition	Map Version	No
	Issue	Map Issue ID	No
	AbstractText	Map Full Description	No
	Purpose	Map Purpose	No

	Location	Place Produced	No
	Notes	Map Notes	No
Map Series	Title	Map Series Title	Yes
	ContentDescription	Map Series Description	No
Mapbook-Atlas	Title	Title	Yes
	ContentDescription	Description	No
	DateOfIssue	Date Published/Issued	No
	ContentBeginDate	Content Begin Date	No
	ContentEndDate	Content End Date	No
	Edition	Version	No
	AbstractText	Full Description	No
	Purpose	Purpose	No
	Notes	Notes	No
Memorandum	Title	Title	Yes
	ContentDescription	Brief Description	No
	DateOfIssue	Date Issued	No
	Location	Location	No
	AbstractText	Full Description	No
	Notes	Notes	No
Movie/Video	Title	Title	Yes
	ContentDescription	Brief Description	No
	DateOfIssue	Release Date	No
	ContentBeginDate	Content Begin Date	No
	ContentEndDate	Content End Date	No
	AbstractText	Full Description	No
	Notes	Notes	No
Newsletter	Title	Newsletter Title	Yes
	ContentDescription	Newsletter Brief Description	No
Newsletter Article	Title	Article Title	Yes
	ContentDescription	Article Brief Description	No
	PageRange	Article Page Range	No
	Notes	Article Notes	No
Newsletter Issue	DateOfIssue	Date Issued/Published	Yes
	Volume	Volume	No
	Issue	Issue	No
	Title	Special Issue Title	No
	Notes	Notes	No
Newspaper	Title	Title	Yes
	Location	City/Location Published	Yes
Newspaper Article	Title	Article Title	Yes
	ContentDescription	Article Brief Description	No
	DateOfIssue	Date of Publication	No
	Volume	Volume	No

	Issue	Issue	No
	AbstractText	Full Description	No
	PageRange	Page Range	No
	Notes	Notes	No
Notes	Title	Title	Yes
	ContentDescription	Brief Description	No
	DateOfIssue	Date Created	No
	ContentBeginDate	Content Begin Date	No
	ContentEndDate	Content End Date	No
	Notes	Notes	No
Permit	Title	Title	Yes
	ContentDescription	Brief Description	No
	DateOfIssue	Date the Permit was Issued	No
	ContentBeginDate	Date Permit Begins	No
	ContentEndDate	Date Permit Ends	No
	Notes	Notes	No
Photograph	Title	Photo Title	Yes
	ContentDescription	Photo Brief Description	No
	DateOfIssue	Photo Date	No
	AbstractText	Photo Full Description	No
	Purpose	Photo Purpose	No
	Notes	Photo Notes	No
Plan	Title	Title	Yes
	ContentDescription	Brief Description	No
	DateOfIssue	Date Issued/Published	No
	AbstractText	Abstract/Full Description	No
	TableOfContents	Table of Contents	No
	Notes	Notes	No
Podcast	Title	Title	Yes
	ContentDescription	Brief Description	No
	DateOfIssue	Date Produced	No
	ContentBeginDate	Content Begin Date	No
	ContentEndDate	Content End Date	No
	Notes	Notes	No
Poster	Title	Title	Yes
	ContentDescription	Brief Description	No
	DateOfIssue	Date Created/Issued	No
	Notes	Notes	No
Presentation	Title	Title	Yes
	ContentDescription	Brief Description	No
	DateOfIssue	Presentation Date	No
	Location	Location of Presentation	No
	Notes	Notes	No

Program	Title	Program Title	Yes
	ContentDescription	Program Description	No
	AbstractText	Full Description	No
Project	Title	Project Title	Yes
	ContentDescription	Project Brief Description	No
	ContentBeginDate	Project Begin Date	No
	ContentEndDate	Project End Date	No
	AbstractText	Project Full Description	No
	MiscellaneousCode	Project Code	No
	Notes	Project Notes	No
Proposal	Title	Proposal Title	Yes
	ContentDescription	Brief Description	No
	DateOfIssue	Date Issued	No
	Location	Location	No
	AbstractText	Full Description	No
	MiscellaneousCode	Proposal Code	No
	Notes	Notes	No
	ContentBeginDate	Field Date Begin	No
	ContentEndDate	Field Date End	No
	Purpose	Purpose	No
Protocol	Title	Title	Yes
	ContentDescription	Brief Description	No
	DateOfIssue	Date Produced / Published	No
	TableOfContents	Table of Contents	No
	MiscellaneousCode	Miscellaneous Code	No
	Notes	Notes	No
Protocol Development Summary	Title	Title	Yes
	ContentDescription	Brief Description	No
	DateOfIssue	Date Produced / Published	No
	TableOfContents	Measures	No
	MiscellaneousCode	Miscellaneous Code	No
	Notes	Notes	No
Published Report	Title	Report Title	Yes
	ContentDescription	Brief Description	No
	DateOfIssue	Date of Issue	No
	ContentBeginDate	Content Begin Date	No
	ContentEndDate	Content End Date	No
	Location	Place of Issue	No
	AbstractText	Abstract/Full Description	No
	TableOfContents	Table Of Contents	No
	MiscellaneousCode	Report Number/ID	No
	Edition	Edition	No
	Notes	Notes	No

Published Report Section	Title	Section Title	Yes
	ContentDescription	Section Brief Description	No
	PageRange	Section Page Range	No
	MiscellaneousCode	Section Number	No
	AbstractText	Section Abstract/Full Description	No
	Notes	Section Notes	No
Raster Dataset	Title	Title	Yes
	ContentDescription	Brief Description	No
	ContentBeginDate	Content Begin Date	No
	DateOfIssue	Date Issued	No
	ContentEndDate	Content End Date	No
	Edition	Version	No
	MiscellaneousCode	Other Code	No
	AbstractText	Full Description	No
	Purpose	Purpose	No
	Notes	Notes	No
	Location	Location Description	No
Relational Database	Title	Title	Yes
	ContentDescription	Brief Description	No
	DateOfIssue	Release/ Issue /Version Date	No
	ContentBeginDate	Content Begin Date	No
	ContentEndDate	Content End Date	No
	Edition	Version	No
	TableOfContents	Entity-Relationships	No
	AbstractText	Full Description	No
	Purpose	Purpose	No
	Notes	Notes	No
Report Series	Title	Report Series Title	Yes
	ContentDescription	Report Series Description	No
Resource Guide	Title	Title	Yes
	ContentDescription	Brief Description	No
	DateOfIssue	Date Of Issue	No
	ContentBeginDate	Content Begin Date	No
	ContentEndDate	Content End Date	No
	AbstractText	Full Description	No
	Notes	Notes	No
Satellite Image	Title	Image Title	Yes
	ContentDescription	Image Brief Description	No
	ContentBeginDate	Image Content Begin Date	No
	ContentEndDate	Image Content End Date	No
	MiscellaneousCode	Image Code	No
	DateOfIssue	Image Issue/Release Date	No
	AbstractText	Image Full Description	No

	Purpose	Image Purpose	No
	Notes	Image Notes	No
	Location	Location Description	No
Satellite Image Product Type	Title	Product Type Title	Yes
	ContentDescription	Product Type Description	No
Satellite Image Series	Title	Image Series	Yes
	ContentDescription	Image Series Description	No
Site Specific Survey Protocol	Title	Title	Yes
	ContentDescription	Brief Description	No
	TableOfContents	Table Of Contents	No
	DateOfIssue	Date Issued / Published	Yes
	MiscellaneousCode	Status	Yes
	AbstractText	Abstract/Full Description	No
	Notes	Notes	No
	Edition	Version	No
Software	Title	Title	Yes
	ContentDescription	Brief Description	No
	DateOfIssue	Date Issued / Published	No
	Edition	Version	No
	MiscellaneousCode	Language / Platform	No
	Notes	Notes	No
Sound Pressure Level Measurement	Title	Title	Yes
	ContentDescription	Brief Description	No
	ContentBeginDate	Date Measure Started	No
	ContentEndDate	Date Measure Ended	No
	AbstractText	Full Description	No
	Purpose	Purpose	No
	Notes	Notes	No
Specimen	Title	Title/Label	Yes
	ContentDescription	Brief Description	No
	DateOfIssue	Date Collected	No
	AbstractText	Full Description	No
	Purpose	Purpose	No
	Notes	Notes	No
Standard	Title	Title	Yes
	ContentDescription	Brief Description	No
	DateOfIssue	Publication Date	No
	AbstractText	Abstract/Full Description	No
	MiscellaneousCode	Standard Number / Code	No
	Notes	Notes	No
Standard Operating Procedure	Title	Title	Yes
	ContentDescription	Brief Description	No
	DateOfIssue	Date Issued/Published	No

		MiscellaneousCode	SOP Number / Code	No
		AbstractText	Abstract/Full Description	No
		Notes	Notes	No
Survey		Title	Title	Yes
		ContentDescription	Brief Description	No
		ContentBeginDate	Survey Begin Date	No
		ContentEndDate	Survey End Date	No
		TableOfContents	List of Questions	No
		Purpose	Purpose	No
		Notes	Notes	No
Survey Framework	Protocol	Title	Title	Yes
		ContentDescription	Brief Description	No
		TableOfContents	Table Of Contents	No
		DateOfIssue	Date Issued / Published	Yes
		MiscellaneousCode	Status	Yes
		AbstractText	Abstract/Full Description	No
		Notes	Notes	No
		Edition	Version	No
Tabular Dataset		Title	Title	Yes
		ContentDescription	Brief Description	No
		DateOfIssue	Date Issued / Released	No
		ContentBeginDate	Content Begin Date	No
		ContentEndDate	Content End Date	No
		TableOfContents	Attributes / Field Names / ERD	No
		AbstractText	Full Description	No
		Purpose	Purpose	No
		Notes	Notes	No
Thesis		Title	Title	Yes
		ContentDescription	Brief Description	No
		DateOfIssue	Date Approved/Completed	No
		ContentBeginDate	Content Begin Date	No
		ContentEndDate	Content End Date	No
		TableOfContents	Table Of Contents	No
		AbstractText	Abstract/Full Description	No
		Location	City, State	No
		Notes	Notes	No
Unpublished Report		Title	Title	Yes
		ContentDescription	Brief Description	No
		DateOfIssue	Date Issued/Produced	No
		ContentBeginDate	Content Begin Date	No
		ContentEndDate	Content End Date	No
		Location	Location	No
		Edition	Edition	No

Vector Dataset	AbstractText	Abstract/Full Description	No
	Notes	Notes	No
	Title	Title	Yes
	ContentDescription	Brief Description	No
	DateOfIssue	Date Published / Released	No
	ContentBeginDate	Content Begin Date	No
	ContentEndDate	Content End Date	No
	Edition	Version	No
	AbstractText	Full Description	No
	Purpose	Purpose	No
	Notes	Notes	No
	Location	Location Description	No
Web Service	Title	Title	Yes
	ContentDescription	Brief Description	No
	DateOfIssue	Date Last Accessed	No
	Location	URL	No
	Purpose	Purpose	No
	Notes	Notes	No
Web Site	Title	Title	Yes
	ContentDescription	Brief Description	No
	DateOfIssue	Date Last Visited	No
	Location	URL	No
	Notes	Notes	No

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See Also

Editing a Reference (Section 3.4)

6.5.2 Contact Types

Contacts are defined as entities responsible for the creation, production and/or distribution of the Information Resource. Each Reference Type can have one or more defined contacts with their own customized labels.

The following sections provide [contact type definitions](#) and indicate the [contact types specific to each Reference Type](#).

See Also

Core Tab (Section 3.4.1)

Core Panel (Section 2.4.3)

Contact Type Definitions

There are three broad categories of contact types.

Contact Type	General Definition	Label	Description
Creator	Entity with primary role in creation of intellectual or artistic content of the resource.	Producer	Name of person, institution of agency that is responsible for informally making information resource available to the public
		Author	Entity directly and primarily involved in creation and preparation of the Information Resource
		Creator	Entity directly and primarily involved in creation and preparation of the Information Resource
		Compiler	Entity directly and primarily involved in creation and preparation of the Information Resource
		Lead	Project lead
Publisher	An entity responsible for making the resource available.	Publisher	Name of person, institution of agency that is responsible for formally making the Information Resource available to the public
		Sponsor	The entity that provided funding or other support to create the Information Resource
		University	A University that produced a thesis or dissertation
		Steward	The party responsible for the maintenance of the Information Resource. Authoritative Data Source.
Contributor	An entity responsible for making contributions to the content of the resource.	Contributor	Entity that directly assisted in the creation of the Information Resource
		Editor	Coordinated compilation and review of the Information Resource
		Recipient	The intended recipient of the Information Resource

Contact Labels for Each Reference Type

Reference Type	Contact Type	Required?
Aerial Photograph	Originator	No
	Publisher	No
	Steward	No
Aerial Photograph Product Type	Publisher	No
Aerial Photograph Series	Publisher	No
Audio Recording	Author	No
Book	Author	No
	Editor	No
	Publisher	No
Book Chapter	Author	No
	Editor	No
Book Series	Publisher	No
Brochure	Author	No
	Publisher	No
Conference Proceeding	Author	No
	Editor	No
	Publisher	No
	Sponsor	No
Conference Proceeding Paper	Author	Yes
	Editor	No
Conference Proceeding Series	Publisher	No

Data Standard	Author	No
	Publisher	No
	Steward	No
Dissertation	Author	No
	University	No
Docket	Compiler	No
	Publisher	No
Email	Author	Yes
	Producer	No
	Recipient	No
Generic Dataset	Author	No
	Contributor	No
	Originator	No
	Producer	No
	Publisher	No
	Steward	No
Generic Document	Author	No
	Editor	No
	Producer	No
	Publisher	No
Generic Multimedia	Author	No
	Producer	No
	Publisher	No
Geodatabase	Contributor	No
	Producer	No
	Publisher	No
	Steward	No
Geospatial Dataset	Author	No
	Contributor	No
	Originator	No
	Producer	No
	Publisher	No
	Steward	No
Journal	Publisher	No
Journal Article	Author	Yes
Journal Issue	Editor	No
Letter	Author	No
	Producer	No
	Recipient	No
LIDAR Image	Producer	No
Map	Author	No
	Editor	No
	Publisher	No

Map Series	Publisher	No
Mapbook-Atlas	Author	No
	Editor	No
	Publisher	No
Memorandum	Author	Yes
	Producer	No
	Recipient	No
Movie/Video	Author	No
	Editor	No
	Publisher	No
Newsletter	Publisher	No
Newsletter Article	Author	No
Newsletter Issue	Editor	No
Newspaper	Publisher	No
Newspaper Article	Author	No
Notes	Author	No
Permit	Author	No
	Recipient	No
Photograph	Author	No
Plan	Author	No
	Editor	No
	Publisher	No
Podcast	Author	No
Poster	Author	No
	Publisher	No
Presentation	Author	No
	Recipient	No
Program	Sponsor	No
Project	Contributor	No
	Lead	No
	Sponsor	No
Proposal	Author	No
	Recipient	No
	Publisher	No
Protocol	Author	No
	Publisher	No
	Steward	No
Protocol Development Summary	Author	No
	Publisher	No
	Steward	No
Published Report	Author	Yes
	Editor	No
	Publisher	No

Published Report Section	Author	No
	Editor	No
Raster Dataset	Author	No
	Publisher	No
Relational Database	Author	No
	Contributor	No
	Producer	No
	Steward	No
Report Series	Publisher	No
Resource Guide	Author	No
	Editor	No
	Publisher	No
Satellite Image	Publisher	No
Satellite Image Product Type	Publisher	No
Satellite Image Series	Publisher	No
Site Specific Survey Protocol	Author	No
	Publisher	No
Software	Author	No
Sound Pressure Level Measurement	Author	No
	Publisher	No
Specimen	Sponsor	No
Standard	Author	No
	Originator	No
	Publisher	No
Standard Operating Procedure	Author	No
	Publisher	No
Survey	Author	No
	Publisher	No
Survey Protocol Framework	Author	No
	Publisher	No
Tabular Dataset	Author	No
	Publisher	No
Thesis	Author	No
	University	No
Unpublished Report	Author	No
	Editor	No
	Producer	No
Vector Dataset	Author	No
	Contributor	No
	Originator	No
	Producer	No
	Publisher	No
	Steward	No

Web Service	Publisher	No
Web Site	Publisher	No

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6.5.3 Size

Size is defined as the size or duration of the Information Resource. Many Information Resources can be characterized by a variety of sizes/measures. Because there are so many, and few standards for any Information Resource, a user has the ability to customize this. There are three elements to size: label, value and units:

- Label – What the measure is. For example: Pages, Physical Size, Scale, Resolution, etc.
- Value – The actual value. For example: 122, 6, 2, etc.
- Units – The units required to understand the value. For example: pages, inches, feet, hours, minutes, etc. Use units only when appropriate – it is not required.

In summary, combining the Label, Value and Units will produce such meaningful descriptions as:

- Pages: 55 pages
- Scale: 1:50K
- Resolution: 5 megapixels

It is important to note that size is never required and may not be appropriate for certain Reference Types. For example, it is unlikely that you will have a size for a Program or Project.

See Also

Core Tab (Section 3.4.1)
Core Panel (Section 2.4.3)

6.6 Inactivating/Deleting a Reference

In general, References can be inactivated (i.e., soft delete) at any time by the Reference Owner. When an owner chooses the Inactivate button, only Draft references will be completely purged (hard deleted) from the Service Catalog. All other References are set to Inactive so they can always be revived by the owner. After deletion/activation a user who is not the Reference's Owner will not be able to search for or view the Reference.

There are a few cases where a Reference Owner may be prevented from inactivating (soft deleting) their Reference:

- **The Reference Has an Approved Reference-Organization Link** – These References have been evaluated by the OPOC as containing useful information about their refuge. The OPOC must first deny the Reference-Organization link before the Reference can be removed.
- **The Reference Has Linked References that are not Inactive** – Dependent References must either be unlinked or set to Inactive before the Reference can be removed. For example, a Reference to a book cannot be deleted if there is a book chapter linked to the book. In addition, if a project is linked to a report, the report cannot be deleted. This restriction regarding linked References applies in one direction only. In the case of the 'IsPartOf' relationship, the parent Reference may not be deleted. In the case of the 'Generates' relationship, the References bundled with the Project may not be deleted.
- **The Reference has Holding Locations that are not Inactive** – Holding locations will first need to be set to Inactive before the Reference can be removed.

It is important to note that in cases where a Reference has more than one owner, any one of the owners can Inactivate the Reference.

See Also

Reference Organization Links (Section 8)
Reference Lifecycle States (Section 6.1)
Holding Locations (Section 7)
Links Among References (Section 6.9)

6.7 Reference Type Groups

The Service Catalog is very explicit when describing the type of Information Resource. This has its advantages because it allows users to search for one specific type of information and also removes ambiguity about what type of information something is.

For common searching, however, needing to specify all relevant Reference Types would be cumbersome and confusing. Therefore, to make it easy, all Reference Types are grouped into more generic categories. It is important to note that some Reference Types fall into one or more categories. For example, an Aerial Photograph can be considered to be both a Dataset and Multimedia. Other Reference Types may not fall under any of the currently defined groups (e.g., Journal).

See Also

Search Type: Quick (Section 2.2.1)

- **Datasets** – Any information resource whose primary means of conveying information is through the presentation of tabular information geospatially.
- **Documents** - Any information resource whose primary means of conveying information is through the presentation of textual information.
- **Geospatial Data** - Any information resource whose primary means of conveying information is through the presentation of tabular information that can be interpreted and displayed geospatially.
- **Multimedia** - Any information resource whose primary means of conveying information is through the use of sound or graphics
- **Projects** - A planned endeavor, usually with a specific goal and accomplished in several steps or stages that produces a variety of end-products.
- **Web Resources** - Any information resource whose primary means of conveying information is through the use of the internet

Reference Type Group	Group Definition	Associated Reference Types
Datasets	Any information resource whose primary means of conveying information is through the presentation of tabular information geospatially	AerialPhotograph
		AudioRecording
		GenericDataset
		Geodatabase
		GeospatialDataset
		LIDARImage
		Map
		Mapbook-Atlas
		Photograph
		RasterDataset
		RelationalDatabase
		SatelliteImage
		SoundPressureLevelMeasure
		Specimen
		Survey
		TabularDataset
		VectorDataset
		WebService
Documents	Any information resource whose	Book

	primary means of conveying information is through the presentation of textual information	BookChapter
		Brochure
		ConferenceProceedingPaper
		DataStandard
		Dissertation
		Docket
		Email
		GenericDocument
		JournalArticle
		Letter
		Map
		Mapbook-Atlas
		Memorandum
		NewsletterArticle
		NewsletterIssue
		NewspaperArticle
		Notes
		Permit
		Plan
		Proposal
		Protocol
		PublishedReport
		PublishedReportSection
		ResourceGuide
		Site Specific Survey Protocol
		Standard
		StandardOperatingProcedure
		Survey Protocol Framework
		Thesis
		UnpublishedReport
Geospatial Data	Any information resource whose primary means of conveying information is through the presentation of tabular information that can be interpreted and displayed geospatially	AerialPhotograph
		Geodatabase
		GeospatialDataset
		MapService
		RasterDataset
		SatelliteImage
		VectorDataset
Multimedia	Any information resource whose	AerialPhotograph

	primary means of conveying information is through the use of sound or graphics	AudioRecording
		GenericMultimedia
		Map
		Mapbook-Atlas
		Movie/Video
		Photograph
		Podcast
		Poster
		Presentation
		SatelliteImage
Projects	A planned endeavor, usually with a specific goal and accomplished in several steps or stages that produces a variety of end-products.	Project
Web Resources	Any information resource whose primary means of conveying information is through the use of the internet	WebService
		WebSite

Table Updated 2/15/2012

6.8 Geospatial Attributes

Bounding areas are represented in decimal degrees of latitude and longitude. For latitude, values in the northern hemisphere are positive. For longitude, values in the western hemisphere are negative. Thus, the bounding box for Aransas NWR, located in Texas, would have an approximate bounding box of 28.06 to 28.54 North and -96.99 to -96.38 West.

The spatial bounding area defines the geographic relevance of the information resource. A Reference can have one or more bounding areas to represent any location. For example, a project that inventoried vegetation may have occurred in three separate regions of the refuge. In this case, it would be very easy to create three different bounding boxes.

Please note the following:

- A Reference may have a bounding box that overlaps a FWS Organization without containing information explicitly about that organization. For example, a book titled "Birds of Colorado" would have a bounding box for the entire state of Colorado and overlap the Colorado refuges, but may not contain information explicitly about any one of those Organizations.
- If a Reference is linked to an organization, it should have a bounding area that intersects that organization. In other words, it would not make sense to have a report linked to Tetlin NWR but then have a bounding area located in South Carolina.
- When defining a bounding area, please be aware of accidentally disclosing the location of sensitive information. For example, if describing a report about cave entrances, we strongly recommend against having anything more detailed than a bounding box for the entire refuge.

See Also

Reference Organization Links (Section 8)
Search Type: Advanced (Section 2.2.2)

6.8.1 Creating

Bounding boxes can be added during the creation of a Reference or by Reference Owners during an edit session.

In addition to using the control buttons on top on the mapper, the following can be used to navigate:

- Pan - Click and hold the left mouse button.

- Zoom - Select the 'Shift' key and drawing a box.

The user will be presented with a map of the entire United States.

A descriptive label will need to be created for each bounding box created. If it is for the Organization as a whole, we recommend typing "Bounding Box for <Organization>". Otherwise, use a label that is descriptive and unique.

Please note that it is not critical to define precise bounding areas. These bounding areas are meant as a search tool.

See Also

Create a Reference Using a Form (Section 3.22.5)
 Organization Links and Geospatial Attributes Panel (Section 2.4.8)
 Reference Owners and Viewers (Section 5.3.1)
 Search Type: Advanced (Section 2.2.2)

6.8.2 Editing

Reference Owners can edit bounding boxes during an edit session.

See Also

Create a Reference Using a Form (Section 3.2)
 Organization Links and Geospatial Attributes Panel (Section 2.4.8)
 Reference Owners and Viewers (Section 5.3.1)
 Search Type: Advanced (Section 2.2.2)

6.9 Links Among References

The Service Catalog will ultimately support a number of ways that References can be related to each other. These include:

- Is a New Version Of/Is An Older Version Of – A newer version of an Information Resource exists.
- Cross-References/Is Cross-Referenced By – The information resource cross-references one or more other references
- Is a Duplicate Of/ Has a Duplicate – This reference is duplicative of another reference describing the same information resource.

Currently, there are only three types of links: 'Is-Part-Of', 'Generates', and within a 'Collection', which are described below. We also provide recommendations on how to address some of these other relationships until the functionality is formally integrated into the Service Catalog.

6.9.1 Is-Part-Of Link

By definition, this link is used when the identity of a reference (aka child reference) is completely dependent on another reference (aka parent reference). The most common example is a book chapter and book. Within the Service Catalog, the reference for the book chapter is distinct from the reference for the book. While separate records, the identity of the book chapter is completely dependent on knowing information about the book. Because this type of link among reference is so common, it is known as a primary link among References and will be described using the concept of child, parent, and grandparent.

There are a number of two-level hierarchies:

Child Reference	Parent Reference
Map	Map Series
Newspaper Article	Newspaper (required)
Project	Program
Standard Operating Procedure	Protocol
Site Specific Survey Protocol	Survey Protocol Framework

There are also a few cases with three-levels:

Child Reference	Parent Reference	Grandparent Reference
Newsletter Article	Newsletter Issue (required)	Newsletter
Aerial Photograph	Aerial Photograph Product Type	Aerial Photograph Series
Book Chapter	Book (required)	Book Series
Conference Proceeding Paper	Conference Proceeding	Conference Proceeding Series
Journal Article	Journal Issue (required)	Journal (required)
Published Report Section	Published Report	Report Series
Satellite Image	Satellite Image Product Type	Satellite Image Series

The purposes for implementing the primary links among children and parent References are fourfold. First, it helps prevent duplication of data entry. For example, if a user wishes to create a book chapter and the book already exists, they needn't re-enter all of the information about the book. Second, it will help minimize the creation of duplicate records since it will be very easy to see where children already exist for a Reference. Third, allows for greater ease of updating references. If a Journal has a misspelling in the title, changes will automatically be updated to all of the children. Fourth, it allows for a suite of rich attribution while maintaining a simpler system behind the scenes. Users will ultimately realize faster performance and more robust searching capabilities. Finally, establishing this hierarchy provides a simple way for users to browse for information. When someone selects a program, for example the Vegetation Mapping Program, they will see all of the individual projects that are part of that program.

See Also

Managing Parent Reference Links (Section 3.8)
Reference Owners and Viewers (Section 5.3.1)

6.9.2 Generates/Was-Created-By Link

The Generates/Was-Created-By link always involves a Project Reference Type. A Project Reference Type, when linked to another Reference, indicates that the project generated the Information Resource. Currently, the following Reference Types can be generated by a Project:

Aerial Photograph
Audio Recording
Book
Book Chapter
Brochure
Conference Proceeding Paper
Dissertation
Docket
Email
Generic Dataset
Generic Document
Generic Multimedia
Geodatabase
Geospatial Dataset
Journal Article
Letter

Map
Mapbook-Atlas
Map Service
Memorandum
Movie/Video
Notes
Permit
Photograph
Plan
Podcast
Poster
Proposal
Presentation
Program
Protocol
Protocol Development Summary
Published Report
Published Report Section
Raster Dataset
Relational Database
Site Specific Survey Protocol
Software
Specimen
Standard Operating Procedure
Survey
Survey Protocol Framework
Tabular Dataset
Thesis
Unpublished Report
Vector Dataset
Web Service

It is important to note that an Information Resource (and hence it's Reference) can only be generated by one project.

See Also

Link Project to Reference (Section 3.6)

6.9.3 Collections

Users may want to associate References together for any number of arbitrary reasons. Examples include 'My Favorite References About Elk', 'Recommended Further Reading About Chronic Wasting Disease', 'National Level Datasets', etc.

General Rules

General business rules regarding Collections:

- Any user can define one or more Collections.
- There is no limit to the number of References within a collection.
- There is no limit on the number of collections associated with a Reference.

Creating and Editing

A collection can be created at any time from the Quick, Advanced or By Reference Code Search by clicking on the 'Create or Update Collection' panel below the search results. Likewise, References can added or removed from any collection.

The screenshot shows the 'Reference Search' interface. At the top, there's a header 'Reference Search' with a help icon. Below it is a section 'Expand Panel to Revise Search Definition'. The main area is titled 'Results' and contains a table of search results. The table has columns: Reference Code, Type, Display Citation, Title, and File Count. A red box highlights the 'File Count' column header. Another red box highlights a small 'x' icon in the top right corner of the table area. Below the table, there's a 'Create Or Update Collection' panel. It has a dropdown menu for 'Select Collection' with 'WRIA - (1)' selected. Below the dropdown are two radio buttons: 'Add current Reference to Collection' (selected) and 'Remove current Reference from Collection'. A 'Submit' button is at the bottom right of the panel. The bottom status bar shows 'Page 1 of 2', 'Selected: 5', and 'Displaying 1 - 50 of 57'.

Reference Code	Type	Display Citation	Title	File Count
<input checked="" type="checkbox"/> 17	Plan	Napier LD. 1970. Stillwater Wildlife Management Area : Annual Water Manage...	Stillwater Wildlife Management Area : Annual Water Mana...	1
<input checked="" type="checkbox"/> 18	Plan	Napier LD. 1972. Stillwater Wildlife Management Area : Annual Water Manage...	Stillwater Wildlife Management Area : Annual Water Mana...	1
<input checked="" type="checkbox"/> 19	Plan	Napier LD. 1973. Stillwater Wildlife Management Area : Annual Water Manage...	Stillwater Wildlife Management Area : Annual Water Mana...	1
<input type="checkbox"/> 20	Unpublished Report	Williams B. 1989. Water level and vegetation change analysis at Stillwater Wildl...	Water level and vegetation change analysis at Stillwater...	1
<input checked="" type="checkbox"/> 26	Plan	Henry WG. 1997. Stillwater National Wildlife Refuge and Stillwater Wildlife Man...	Stillwater National Wildlife Refuge and Stillwater Wildlife M...	1
<input checked="" type="checkbox"/> 29	Plan	Henry WG. 2000. Stillwater National Wildlife Refuge : Annual Water Budget Pla...	Stillwater National Wildlife Refuge : Annual Water Budget...	1
<input type="checkbox"/> 39	Unpublished Report	Livingstone AC. 1989. On-site toxicity of irrigation drainwater from Stillwater N...	On-site toxicity of irrigation drainwater from Stillwater Nati...	1
<input type="checkbox"/> 40	Unpublished Report	Livingstone AC. 1989. Stillwater Wildlife Management Area : Lahontan Valley...	Stillwater Wildlife Management Area : Lahontan Valley We...	1
<input type="checkbox"/> 41	Unpublished Report	Stillwater National Wildlife Refuge. 1989. Lahontan Valley Wetlands : Water rig...	Lahontan Valley Wetlands : Water rights acquisition	1
<input type="checkbox"/> 45	Unpublished Report	Stillwater National Wildlife Refuge. 1992. Carson Lake water requirements. Un...	Carson Lake water requirements	1
<input type="checkbox"/> 47	Unpublished Report	Department of Interior- Bureau of Reclamation. 1993. Indian Lakes soil and wat...	Indian Lakes soil and water investigation	1
<input type="checkbox"/> 48	Unpublished Report	Stillwater National Wildlife Refuge. 1992. Implications of transfer of Navy wate...	Implications of transfer of Navy water rights to Pyramid L...	1
<input type="checkbox"/> 50	Unpublished Report	Stillwater National Wildlife Refuge. 1992. Stillwater National Wildlife Refuge wa...	Stillwater National Wildlife Refuge water requirements	1

Page 1 of 2 Selected: 5 Displaying 1 - 50 of 57

Create Or Update Collection

Select Collection: WRIA - (1)

☒ Add current Reference to Collection
☐ Remove current Reference from Collection

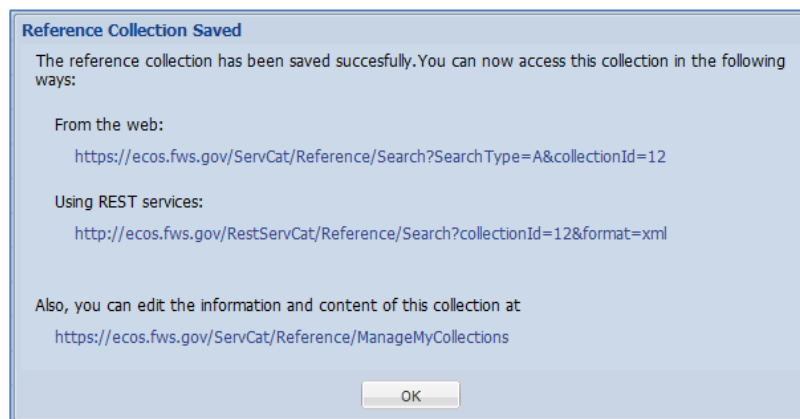
Submit

When this panel is expanded, an extra column appears in your search results that allows one or more References to be selected to add to (or alternatively remove from) a collection. To select multiple References, two options are available:

- Selectively check the boxes as between pages
- Select all References on a page by checking the box at the top of the first column

To clear selected References across all pages, select the 'Deselect...' button in the upper right corner of the search grid.

Once you save a collection, you are given directions on how to access it.



6.9.4 Is a New Version Of/Is An Older Version Of

There are cases where there is a newer version of a dataset or document. In many of these cases, it is still important to preserve the older version, even if it will not be used as often as the most recent copy. Thus, it is important that they all be discoverable and accessible, however, any user should always be pointed to the most recent version. Perfect examples include refuge boundaries, protocols and standard operating procedures.

In all cases, the following rules apply for versioning:

- The user attempting to create a version link must own both Reference (i.e., is the owner of the older and newer version)
- Versions are linear and do not branch or merge. An older version may only point to one newer version. Newer versions may only have one older version.
- Only specified Reference Types can be versioned
- Circular versioning is not allowed (e.g., $A \rightarrow B \rightarrow C \rightarrow A$)

The following table provides the valid Reference Type combinations:

Old Version	New Version
Aerial Photograph	Aerial Photograph
Brochure	Brochure
Data Standard	Data Standard
Docket	Docket
Geodatabase	Geodatabase
Geodatabase	Geospatial Dataset
Geodatabase	Vector Dataset
Geospatial Dataset	Geodatabase
Geospatial Dataset	Geospatial Dataset
Geospatial Dataset	Vector Dataset
LIDAR Image	LIDAR Image
Map	Map
Plan	Plan
Project	Project
Protocol	Protocol
Protocol Development Summary	Protocol
Protocol Development Summary	Protocol Development Summary
Published Report	Published Report
Published Report	Unpublished Report

Old Version	New Version
Raster Dataset	Raster Dataset
Relational Database	Relational Database
Resource Brief	Resource Brief
Resource Guide	Resource Guide
Satellite Image	Satellite Image
Site Specific Survey Protocol	Site Specific Survey Protocol
Software	Software
Standard	Standard
Standard Operating Procedure	Standard Operating Procedure
Survey Protocol Framework	Survey Protocol Framework
Tabular Dataset	Tabular Dataset
Unpublished Report	Published Report
Unpublished Report	Unpublished Report
Vector Dataset	Vector Dataset

Other Notes:

- Only the current version is returned in the Quick Search
- A URL to a Reference (e.g., <https://ecos.fws.gov/ServCat/Reference/Profile/1076>) can be suffixed with ?Inv=true (e.g., <https://ecos.fws.gov/ServCat/Reference/Profile/1076?inv=true>) to always point to the current version.
- An uploaded XML metadata record can version another Reference with the following tag:

```
<metadata>
  <ReferenceCode>1076</ReferenceCode>
  <VersionNotes>This is a test note.</VersionNotes>
```

6.9.5 Cross-References/Is Cross-Referenced By

There are many cases where a user may want to refer to one or more other references. For instance, a report may cross-reference other articles in the “List of References”. A protocol might cross-reference multiple standard operating procedures. Finally, creation of a dataset may have involved using one or more other datasets.

Because cross-referencing is currently not functional in ServCat, we recommend the following best practices as a short-term solution. Follow these guidelines and we will do everything possible to ensure that, when the functionality is added, the work is automatically preserved.

- In the “Notes” field of the Reference doing the cross-referencing, include the phrase “....cross-references the following [Reference Codes: #####; #####;#####,...]....” For example, a report cross-referencing a few other documents might read as “This report cross-references the following [Reference Codes - 123,1231,523423,56345] because they were used as background material in the creation of the report.”
- Do not attempt to show the “Is Cross-Referenced By” relationship in those multiple References. You’ll kill yourself attempting that.
- There must be a comma delimiter between two or more Reference Codes
- A Reference may cross-reference one or more other References
- A Reference may be cross-referenced by one or more other References

6.9.6 Is Duplicate of/Has Duplicates

See Duplicate Detection and Resolution (Section 21)

6.10 Cloning

Cloning is a useful tool in cases where an existing Reference has attributes so similar to the new one being created that it would be faster to create the new Reference by copying over the attributes and then editing them. When cloning an existing Reference, the new Reference is identical to the original except for the following:

- You are the Owner
- The Reference lifecycle state is 'Draft'
- Any Approved Reference Organization links will be set to Pending
- There are no Holding Locations
- There are no comments
- There is no Source XML
- Most related References are not preserved.
 - Project bundles are ignored (i.e., Was-Created-By link)
 - Child References are ignored (i.e., Is-Part-Of link). For example, cloning a Book does not automatically create new book chapters. However, when cloning a book, the link to the book series will be preserved.

Please take care to make the appropriate edits to the new Reference to prevent duplicate records.

See Also

Reference Profile-Clone Option (Section 2.4.1)

Reference Owners and Viewers (Section 5.3.1)

Is-Part-Of Link (Section 6.9.1)

Was-Created-By Link (Section 6.9.2)

6.11 Subject Categories

Subject categories are a controlled list of keywords defined by one or more thesauri. A Reference can be associated with one or more subject categories from one or more thesauri. The following thesauri are supported:

6.11.1 General

This is a general/generic thesaurus.

Sort Order	Subject
1	General: Air and Climate Air Quality Air Contaminants
2	General: Air and Climate Air Quality Wet and Dry Deposition
3	General: Air and Climate Air Quality Visibility and Particulates
4	General: Air and Climate Weather and Climate Climatology
5	General: Air and Climate Weather and Climate Climate Change
6	General: Biology Species Bacteria
7	General: Biology Species Fungi
8	General: Biology Species Invertebrates
9	General: Biology Species Pollinators
10	General: Biology Species Amphibians and Reptiles
11	General: Biology Species Birds
12	General: Biology Species Mammals
13	General: Biology Species Fishes
14	General: Biology Species Surrogate Species
15	General: Biology Invasive Species Invasive/Exotic Plants
16	General: Biology Invasive Species Invasive/Exotic Animals
17	General: Biology Infestations and Disease Insect Pests
18	General: Biology Infestations and Disease Plant Diseases

Sort Order	Subject
19	General: Biology Infestations and Disease Animal Diseases
20	General: Biology At-Risk-Biota T&E Species
21	General: Biology Communities and Ecosystems Lacustrine
22	General: Biology Communities and Ecosystems Wetland
23	General: Biology Communities and Ecosystems Riverine
24	General: Biology Communities and Ecosystems Estuary
25	General: Biology Communities and Ecosystems Salt Marsh
26	General: Biology Communities and Ecosystems Shore
27	General: Biology Communities and Ecosystems Ocean
28	General: Biology Communities and Ecosystems Lichen/Moss
29	General: Biology Communities and Ecosystems Grassland/Herbaceous
30	General: Biology Communities and Ecosystems Shrubland
31	General: Biology Communities and Ecosystems Woodland
32	General: Biology Communities and Ecosystems Forest
33	General: Biology Communities and Ecosystems Barren Land
34	General: Biology Communities and Ecosystems Cultivated Crop/Pasture
35	General: Geology and Soils Geomorphology Stream/River Processes
36	General: Geology and Soils Geomorphology Lake Processes
37	General: Geology and Soils Geomorphology Coastal/Shoreline Processes
38	General: Geology and Soils Geomorphology Hillslope Processes
39	General: Geology and Soils Geomorphology Windblown (Aeolian) Processes
40	General: Geology and Soils Subsurface Geologic Processes Tectonic Processes
41	General: Geology and Soils Subsurface Geologic Processes Seismic Processes
42	General: Geology and Soils Subsurface Geologic Processes Geothermal Processes
43	General: Geology and Soils Subsurface Geologic Processes Volcanology
44	General: Geology and Soils Subsurface Geologic Processes Cave and Karst
45	General: Geology and Soils Soil Quality Soil Function and Characteristics
46	General: Geology and Soils Paleontology Paleontology
47	General: Water Hydrology Groundwater
48	General: Water Hydrology Surface Water
49	General: Water Hydrology Estuary
50	General: Water Hydrology Marine
51	General: Water Water Quality Nutrients
52	General: Water Water Quality Algae
53	General: Water Water Quality Microorganisms
54	General: Water Water Quality Pollutants
55	General: Water Water Quality Water Chemistry
56	General: Water Water Quantity Water Level Management
57	General: Water Water Rights Water Use
58	General: Human Use Visitor Use and Recreation
59	General: Human Use Human-Wildlife Interactions
60	General: Human Use Ecosystem Services
61	General: Human Use Agriculture

Sort Order	Subject
62	General: Human Use Consumptive Use
63	General: Human Use Non-point Source Human Effects
64	General: Human Use Point Source Human Effects
65	General: Human Use Contaminants
66	General: Human Use Hazardous Material
67	General: Landscapes Landcover Disturbance Regimes
68	General: Landscapes Landscape Dynamics
69	General: Landscapes Landscape Ecology
70	General: Landscapes Fire and Fuel Dynamics
71	General: Landscapes Nutrient Dynamics
72	General: Landscapes Energy Flow
73	General: Landscapes Phenology
74	General: Landscapes Extreme Disturbance Events
75	General: Landscapes Viewscape Night Sky
76	General: Landscapes Soundscape Noise
77	General: Management Habitat Management Habitat Models
78	General: Management Habitat Management Range Management
79	General: Management Habitat Management Strategic Habitat Conservation (SHC)
80	General: Management Landscape Management Habitat Scale
81	General: Management Landscape Management Landscape Configuration
82	General: Management Landscape Management Landscape Connectivity
83	General: Management Landscape Management Landscape Conservation Planning
84	General: Management Landscape Management Land-use Planning
85	General: Management Natural Resources Management Minerals Management
86	General: Management Natural Resources Management Water Management
87	General: Management Natural Resources Management Flood Management
88	General: Management Natural Resources Management Forest Management
89	General: Management Natural Resources Management Fire Management
90	General: Management Natural Resources Management Fisheries Management
91	General: Management Natural Resources Management Wildlife Management
92	General: Management Natural Resources Management Integrated Pest Management
93	General: Management Cultural Resources Management
94	General: Management Visitor Use Management Visitor Impacts
95	General: Management Visitor Use Management Recreation - Aesthetics
96	General: Management Adaptive Management
97	General: Management Research
98	General: Management Inventory
99	General: Management Monitoring
100	General: Management Law Enforcement
101	General: Management Safety
102	General: Anthropology Cultural Landscapes
103	General: Anthropology Ethnology
104	General: Anthropology Archaeology

Sort Order	Subject
105	General: Anthropology History

7 Holding Locations

7.1 Overview

A Holding Location provides instructions on how the Information Resource can be obtained. In some cases it may be a link to a file, while in other cases it refers to a copy held locally at an office.

Anyone can create a Holding Location for a Reference, regardless of whether they own the Reference. This is allowed because there are many cases where there are multiple copies of an Information Resource at different offices. Requiring that a new Reference be created for each would result in duplicate References and unnecessary work.

When a Holding Location is created, the creator is assigned as the Holding Location owner. The Holding Location owner has complete authority and responsibility for stewardship of the Holding Information (e.g., content, quality, currency, etc.) and can edit or delete the holding location as needed.

All Holding Locations must refer to a single Reference, but a Reference can have zero or more Holding Locations. For example, in some cases, a large report may be divided into sections (e.g., separating a report from the related appendices). In other cases, the same resource might exist in hardcopy at three separate organizations.

7.2 Holding Location Types and Attributes

A Holding Location refers to the location of an Information Resource that is described by a Reference. Holding Locations can describe Information Resources held internal to the Service Catalog (via the File Service) or external to the FWS (e.g., Library of Congress, geospatial nodes, museums, etc.). There are three types of Holding Locations:

Holding Type	Definition
Physical	The Information Resource is held physically at an FWS Organization. The Information Resource may be hardcopy or digital.
Digital	The Information Resource is a digital file that is uploaded to and managed by the Service Catalog. There is currently a 2 gigabyte size limit for a digital file.
External Resource	The Information Resource resides external to the Service Catalog and generally external to the FWS. Examples include files located on other government servers (USGS, NOAA), public universities, or other web sites. With this holding type, there is the expectation that that a file that can be downloaded.

All Holding Locations have the following attributes in common:

- Holding Location Owner – One or more individuals who have permission to edit the Holding Location (Section 5.3.2).
- Lifecycle State – Indicates the status of the Holding Location (Section 7.3)
- Visibility – A calculated field indicating who has access to the Holding Location information (Section 5.1)

The following table lists all of the attributes associated with each Holding Location Type.

Holding	Field	Definition
Digital	Description*	Ancillary information about the digital file that isn't already covered elsewhere and/or is obvious (e.g., Scanning resolution and Missing pages, etc.)
	File Name	Name of the digital file, including its extension. This field is auto populated based on the name of the file during upload. This field cannot be edited.
	File Path	REST-enabled path to access the digital file
	File Format	Description of the file format. This is discerned from the file extension (e.g., .doc). This field cannot be edited.
	File Size	Size of file in bytes
Physical	Description*	Ancillary description of the quality of the information resource (e.g., Water Damage, Missing items, Local digital copy, etc.)
	Organization	FWS Organization where the Information Resource is held
	Location	Specific information on how to locate the Information Resource within the organization. Example: John Smith's Office, top shelf on right

Holding	Field	Definition
	System	Use this if the Information Resource is tracked with a local management system (e.g., refuge copy of Endnote)
	System ID	The unique Record ID in the local system being used.
External	Description*	Description of the external agency/group managing the Information Resource.
	URL	The URL which provides the most direct link to the Information Resource
	Last Accessed	Date the URL was confirmed to be accessible and valid.

*The description field currently fails if you attempt to add XML tags. Please stick to regular text.

See Also

Add/Manage Holding Location (Section 3.5)

7.3 Holding Location Lifecycle States

A critical attribute that all Holding Locations have is a lifecycle state.

Lifecycle State	Description
Legacy	The Holding Location was imported from a legacy application and has not been reviewed as to whether it (1) meets the validation requirements; and (2) uses the same definitions, of the Service Catalog
Draft	The Holding Location has been created but has not been validated for required fields. Note: This lifecycle state is not being used in the Web Form.
Active	The Holding Location has met all validation requirements and is active. Current validation is limited to the completion of required fields.
In Review	The Holding Location, which was previously Active, has been edited. Activation will required another round of validation.
Quarantined	The Holding Location Owner has determined there is a gross error in the attribution of the Holding Location, or a digital file has been uploaded, which might result in the inappropriate access of sensitive and/or proprietary information.
Inactive	The Holding Location has been deleted by the Holding Location Owner

Lifecycle state is important because it affects who can view a Holding Location.

See Also

Visibility/Downloadability (Section 5.1)

Add/Manage Holding Location (Section 3.5)

8 Reference Organization Links

8.1 Criteria

The Reference Owner should link a Reference to an Organization when the Information Resource explicitly refers to the particular Organization. Cases that warrant linking include:

- Description/discussion of the Organization in the Information Resource
- Data/information collected at the Organization or is explicitly about the Organization
- A shapefile or database containing a record of information specific to the Organization
- A satellite image has pixels that overlap the Organization
- The Information Resource was produced by a FWS Organization and therefore represents the mission/purpose of that Organization

Some common cases where linking a Reference to an Organization is not necessarily warranted or appropriate include:

- Mention of the Organization in the “List of References”, “Bibliography”, or “Acknowledgements” section of a document or report
- A quote made by someone working at a Organization, but not in reference to that Organization (e.g., a periodical refers to Judy’s knowledge of Alamosa NWR and Judy happens to work at Monte Vista NWR)
- A general reference document (e.g., Soils of North America) that is used by the Organization for management purposes
- A report that is housed on a shelf located in the Organization
- The extent of a dataset overlaps the refuge, but the dataset does not have any information specific to the refuge.
- The bounding box for the satellite image overlaps the Organization, but the satellite image does not have pixels overlapping or representative of the refuge Organization (e.g., diagonal images and cloud cover).

In addition, both the Reference and the Information Resource should be appropriate. Examples of inappropriate information include:

- Information that is out of scope (e.g., a report from a third grader)
- An incorrectly attributed Reference (e.g., misspellings, inaccurate evaluation of sensitivity, proprietary, or quality rankings, insufficient attribution to clearly identify what the Information Resource is, etc.)
- Duplicate Information – The Reference and/or the Information Resource is a duplicate of information that already exists
- Contradictory Information – The Reference/Information Resource contradicts another Reference/Information Resource which would result in a consumer of the information becoming confused over which source they should use.

See Also

Reference Geospatial Attributes (Section 6.8)

8.2 OPOC Approval

The OPOC has the authority to review and approve/deny any Reference links to their respective Organization. It is up to the OPOC and the Organization they represent, to decide how much time and resources they devote to the review process. At one extreme, some OPOCs may automatically approve all References linked to their Organization and devote negligible time to this duty. Others may automatically approve most and devote time to reviewing a select few. Still other OPOCs may consult an expert to determine whether a Reference is appropriately linked. Finally, some may thoroughly review each Reference and associated Information Resource.

Approving a Reference-Organization link is important for three reasons:

- The Reference can never be discovered by the public (i.e., public visibility) if it does not have an approved Organization link. Furthermore, it can only be discovered in the context of those with approved organization links. This, the OPOC can control which information is discoverable for their refuge organization and, in many cases, strongly influence whether the Reference can be viewed by the public.
- The Reference will never be discovered when searching specifically about the refuge organization. For example, a denied Reference for National Elk Refuge that is about elk will not be discovered when someone searches for elk at National Elk Refuge.

- A Reference can never be inactivated (soft deleted). This ensures that information specific to the FWS is never accidentally lost. To inactivate a Reference, the Reference Owner must ask the OPOC to deny the Reference-Organization link.

Approval of a link should be guided by the following criteria:

- The Information Resource explicitly refers to the Organization, as best as the OPOC can reasonably ascertain.
- The Information Resource and/or Reference contain(s) information that is appropriate, as best as the OPOC can reasonably ascertain.

A Reference linked to more than one Organization will require separate approval from each OPOC. However, OPOC approval does not affect approvals by other OPOCs. For instance, a Reference linked to both Vieques NWR and Culebra NWR will require approval by two OPOCs. The OPOC for Culebra NWR may approve this link while the OPOC for Vieques NWR, after reviewing the Reference and Information Resource, determines the Reference and associated Information Resource are not about Vieques NWR and rejects the link.

When a Reference-Organization Link is approved, the following happens:

- The Reference may no longer be Inactivated by the Reference Owner

When a Reference-Organization link is denied, the following happens:

- The Reference is no longer discoverable when searching for the organization
- Default organization bonding boxes are removed from the Reference
- In cases where a Reference is linked to a taxon and organization, the organization association is removed.

See Also

OPOC Approval (Section 4.5)

8.3 Reference-Organization Lifecycle States

There are three possible lifecycle states for a Reference being linked to an Organization. Each state has a different meaning.

Lifecycle	Definition
Legacy	Was imported from a legacy application and has not been reviewed as to whether it uses the same definitions as ServCat.
Pending	The OPOC has not reviewed the Reference-Organization link
Approved	The Reference-Organization link was is approved by the OPOC
Denied	The Reference-Organization link was not approved by the OPOC

The Reference-Organization lifecycle state is one determinant for the Reference visibility.

See Also

Visibility/Downloadability (Section 5.1)

9 Reference-Taxa-Organization Links

The Service Catalog treats taxonomy very much like it handles all other keywords, they are one extra way both to communicate the content of the information resource and also facilitate discovery. On the other hand, unlike simple free-form keywords, there is extra value with the taxa links, especially when associated with a FWS organization. This section provides guidance on when to link a Reference to one or more taxa and when it is appropriate to also associate the FWS organization.

It is appropriate to link a Reference to one or more taxa if the information resource:

- Mentions the taxon somewhere in the body of the text, using the scientific, common name, or taxonomic ID
- Contains a record for the specific taxon using the scientific, common name, or taxonomic ID

Each taxon can optionally be associated with the organization as well, assuming that the Reference is already linked to the respective organization. Only specify the organization if the information resource:

- Unambiguously indicates the taxon was observed within the boundary of the FWS organization
- Contains a record for that taxon whose spatial location is unambiguously within the boundary of the FWS organization

Please note that it is not permitted to have a case where a species is both linked to an organization and not. For example, a species is allowed to be linked to one or more refuges (e.g., *Canis lupus*-Yukon Delta NWR and *Canis lupus*-Togiak NWR), but is not allowed to have the following: *Canis lupus*- Yukon Delta NWR and *Canis lupus*).

After the Reference has a complete list of taxa keywords associated to an organization(s) this information may be linked to a species database as evidence of the existence of species within the FWS organization. The Service Catalog currently does not support this functionality.

10 Comments

Users may annotate References in a way that does not fit into the normal schema of attribution. In some cases, users may wish to annotate for their own personal use, including an annotated bibliography. In other cases, it may be important to document discussions among users regarding the editing of a Reference.

The Service Catalog currently does not support the creation or editing of comments.

See Also

User Comments Panel (Section 2.4.11)

11 Arbitration

The Service Catalog does not intend to be a top-down, formally-monitored, and controlled system (i.e., there is no Service Catalog “cop”). In extremely rare instances, users may not be able to resolve disputes and will need to rely on the guidance of individuals who specialize in various topic areas, including T&E species, FOIA, legal and policy requirements for information quality, organization-specific policies, taxonomy, etc.

Users should coordinate with each other any issues regarding the posting of all References, Holding Locations, and the Approval/Denial of Reference-Organization Links.

In cases where a non-owner and owner disagree on changes to a Reference, we will provide guidance for arbitration, including recommended experts in particular topical areas (e.g., FOIA), to provide assistance. The ability to refer to system-level experts ensures that legal requirements and FWS policies ultimately prevail in how information is managed and accessed.

12 Metadata Standards

The Service Catalog will ensure that it meets or exceeds two primary metadata standards: Dublin Core and ISO 19115 Metadata Standard/North American Profile.

The [Dublin Core](#) Metadata Element Set identifies 15 elements that are essential to describing an information resource. In all cases, the Service Catalog meets the minimum requirements defined by Dublin Core, with the exception of Language.

The [ISO19115:2003 Metadata Standard/North American Profile](#) (ISO19115:2003/NAP) is the North American customization of an international standard.

In all cases, the Service Catalog meets the minimum requirements defined by ISO19115:2003/NAP. The differences among ISO19115:2003/NAP and the Service Catalog can be summarized by the following points:

- Some of the mandatory if applicable fields are currently optional in the Service Catalog. Notable examples are spatial resolution and spatial representation.
- While the Service Catalog will not manage all of the ISO19115:2003/NAP mandatory if applicable fields directly, it is capable of managing and vending a source XML metadata record which does meet all of the ISO standards.

The following table lists each of the Dublin Core and ISO19115:2003-NAP key elements and indicates which fields in the Service Catalog correspond to these standards.

Dublin Core	ISO19115:2003-NAP	Service Catalog Element	Comments
Title(M)	Title (M)	Title (M)	
Creator (M)		Creator (MA)	
Contributor (M)		Contributor (MA)	
Publisher (M)		Publisher (MA)	
Subject(M)	Topic Category (R)	Subject (MA)	
Description (M)		Brief Content Description (R)	
Date (M)	Reference Date (M)	Date Of Issue (MA)	
Type(M)		Reference Type (M)	
Format (M)		Format (RA)	
Identifier (M)	Metadata File Identifier (A)	Reference Code (M)	
Source(M)		Holding Location (R)	
Language(M)	Language (M)	[Plan to Support] MA	
Relation (M)		LinkType (R)	
	Distribution Format (A)	HoldingType (R)	
Coverage (M)	Geographic location by coordinates (A)	Geography (MA)	
Rights(M)		Information Proprietary Rank (M)	Does not currently include full statement
	Metadata Point of Contact	Reference Owner (M)	
	Metadata Date Stamp (M)	Date Last Edited (M)	
	Responsible Party (A)	Contact.Steward (O)	
	Character Set (A)	"USA"	
	Spatial Resolution (A)	Size (O)	
	Spatial Representation Type (A)	Size (O)	
	Reference System (A)	Size (O)	

Dublin Core	ISO19115:2003-NAP	Service Catalog Element	Comments
	Lineage (A)	[Not Supported]	
	Online Resource (A)	Holdings(O)	

- M – Mandatory
- A – If Applicable
- R – Recommended
- O - Optional

See Also

Rules for Mapping XML to the Service Catalog (Section 13)

13 Rules for Mapping XML to the Service Catalog

This section shows the current logic for how an XML metadata record is mapped to the Service Catalog.

General rules for XML import:

- All date formats must be YYYYMMDD. Using other date formats will cause the mapping to fail.
- Custom XML tags embedded within the standard XML tags will cause the mapping to fail.

The following table applies to these reference types:

- Aerial Photograph:
- Generic Dataset
- Geodatabase
- Geospatial Dataset
- Raster Dataset
- Satellite Image
- Vector Dataset
- Web Service

Service Catalog Field	XML XPath
ReferenceTypeCode	GenericDataset
CodeId	/metadata/FWS_Info/Meta_MID
AbstractTextList	/metadata/idinfo/descript/abstract,/metadata/FWSDATA/Abstract
ContentDescriptionList	/metadata/idinfo/descript/abstract,/metadata/FWSDATA/Abstract
ContentBeginDateList	/metadata/idinfo/timeperd/timeinfo/rngdates/begdate,/metadata/idinfo/timeperd/sngdate/caldate,/metadata/idinfo/timeperd/mdattim/sngdate/caldate[1]
ContentEndDateList	/metadata/idinfo/timeperd/timeinfo/rngdates/enddate,/metadata/idinfo/timeperd/sngdate/caldate,/metadata/idinfo/timeperd/mdattim/sngdate/caldate[n]
Title	/metadata/idinfo/citation/citeinfo/title
DateOfIssue	/metadata/idinfo/citation/citeinfo/pubdate
DateRange1	/metadata/idinfo/timeperd/rngdates/begdate
DateRange2	/metadata/idinfo/timeperd/rngdates/enddate
Edition	/metadata/idinfo/citation/citeinfo/edition
Issue	/metadata/idinfo/citation/citeinfo/issue
Location	/metadata/idinfo/spdom/descgeog
Scale	/metadata/dataqual.lineage.srcinfo.srcscale
SizeAndOrganizations	/metadata/distinfo/stdorder/digform/digtinfo/transize
UpdateFrequencyList	/metadata/idinfo/status/update
KeywordList	/metadata/idinfo/keywords/theme/themekey,/metadata/idinfo/keywords/place/placekey,/metadata/idinfo/keywords/stratum/stratkt,/metadata/idinfo/keywords/temporal/tempkt,/metadata/idinfo/taxonomy/keywordtax/taxonkw,/metadata/FWS_info/servcat/category
NotesList	/metadata/idinfo/descript/supplinf,/metadata/FWSDATA/Supplinf
PurposeList	/metadata/FWSDATA/Purpose,/metadata/idinfo/descript/purpose
OriginatorContactsList	/metadata/idinfo/citation/citeinfo/origin,/metadata/idinfo/datacred
Contacts	/metadata/idinfo/ptcontac
ContactCorporateName	cntinfo/cntorgp
ContactLastName	cntinfo/cntperp/cntper
ContactAffiliationList	cntinfo/cntorgp/cntper,/cntinfo/cntperp/cntorg

ContactTitleList	cntinfo/cntpos
GeoDataDatumList	/metadata/spref/horizsys/geodetic/horizdn,/metadata/SPDOM/UTMDATUM
GeoDataProjectionList	/metadata/spref/horizsys/planar/mapproj/mapprojn,/metadata/spref/horizsys/coordsysn
GeoDataBoundingBoxEast	/metadata/idinfo/spdom/bounding/eastbc
GeoDataBoundingBoxNorth	/metadata/idinfo/spdom/bounding/northbc
GeoDataBoundingBoxSouth	/metadata/idinfo/spdom/bounding/southbc
GeoDataBoundingBoxWest	/metadata/idinfo/spdom/bounding/westbc
GeoDataCoordinateSystem	/metadata/spref/horizsys/planar/gridsysn
HoldingDescriptionGeneric	/metadata/Digtinfo/resdesc
HoldingDescriptionSpecific	digtinfo/formspec
HoldingName	/metadata/distinfo/stdorder/digform/digtinfo/formspec
HoldingsIterator	/metadata/distinfo/stdorder/digform
HoldingSize	digtinfo/transize
HoldingFormat	digtinfo/formname
HoldingFilePathsIterator	digtopt/onlinopt/computer/networka/networkkr
UnitIterator	/metadata/FWS_Info/FWS_Org
UnitCode	UnitCode
DefaultReferenceLifecycleState	Draft
DefaultHoldingLifecycleState	Draft
DefaultReferenceOrganizationLifecycleState	Pending
DefaultReferenceProprietaryRank	NonProprietary
UseConstraints	/metadata/idinfo/useconst

The following applies to the reference type of standard:

Service Catalog Field	XML XPath
CodeId	/metadata/FWS_Info/Meta_MID
AbstractTextList	/metadata/idinfo/descript/abstract,/metadata/FWSDATA/Abstract
ContentDescriptionList	/metadata/FWSDATA/Abstract,/metadata/FWSDATA/Purpose,/metadata/idinfo/descript/abstract,/metadata/idinfo/descript/purpose
ContentBeginDateList	/metadata/idinfo/timeperd/timeinfo/rngdates/begdate,/metadata/idinfo/timeperd/sngdate/caldate,/metadata/idinfo/timeperd/mdattim/sngdate/caldate[1]
ContentEndDateList	/metadata/idinfo/timeperd/timeinfo/rngdates/enddate,/metadata/idinfo/timeperd/sngdate/caldate,/metadata/idinfo/timeperd/mdattim/sngdate/caldate[n]
Title	/metadata/FWSDATA/Title
DateOfIssue	/metadata/statinfo/sdate/sngdate/caldate
DateRange1	/metadata/idinfo/timeperd/rngdates/begdate
DateRange2	/metadata/idinfo/timeperd/rngdates/enddate
Edition	/metadata/idinfo/citation/citeinfo/edition
Issue	/metadata/idinfo/citation/citeinfo/issue
Location	/metadata/idinfo/spdom/descgeog
Scale	/metadata/dataqual/posacc/horizpa/horizpar
SizeAndOrganizations	/metadata/distinfo/stdorder/digform/digtinfo/transize
UpdateFrequencyList	/metadata/idinfo/status/update,/metadata/FWSDATA/Updatefr

KeywordList	/metadata/Catref/Category/metadata/IsoTheme/metadata/KeyRef/Keyword_ID
NotesList	/metadata/idinfo/descript/supplinf/metadata/FWSDATA/Supplinf
PurposeList	/metadata/FWSDATA/Purpose/metadata/idinfo/descript/purpose
OriginatorContactsList	/metadata/idinfo/citation/citeinfo/origin/metadata/idinfo/datacred
Contacts	/metadata/idinfo/ptcontac
ContactCorporateName	cntinfo/cntorgp
ContactLastName	cntinfo/cntperp/cntper
ContactAffiliationList	cntinfo/cntorgp/cntper/cntinfo/cntperp/cntorg
ContactTitleList	cntinfo/cntpos
GeoDataDatumList	/metadata/spref/horizsys/geodetic/horizdn/metadata/SPDOM/UTMDATUM
GeoDataProjectionList	/metadata/spref/horizsys/planar/mapproj/mapprojn/metadata/spref/horizsys/coordsysn
GeoDataBoundingBoxEast	/metadata/idinfo/spdom/bounding/eastbc
GeoDataBoundingBoxNorth	/metadata/idinfo/spdom/bounding/northbc
GeoDataBoundingBoxSouth	/metadata/idinfo/spdom/bounding/southbc
GeoDataBoundingBoxWest	/metadata/idinfo/spdom/bounding/westbc
GeoDataCoordinateSystem	/metadata/spref/horizsys/planar/gridsysn
HoldingDescriptionGeneric	/metadata/Digtinfo/resdesc
HoldingDescriptionSpecific	digtinfo/formspec
HoldingName	/metadata/distinfo/stdorder/digform/digtinfo/formspec
HoldingsIterator	/metadata/distinfo/stdorder/digform
HoldingSize	digtinfo/transize
HoldingFormat	digtinfo/formname
HoldingFilePathsIterator	digtopt/onlineopt/computer/networka/networkr
UnitIterator	/metadata/FWS_Info/FWS_Org
UnitCode	UnitCode
DefaultReferenceLifecycleState	Draft
DefaultHoldingLifecycleState	Draft
DefaultReferenceOrganizationLifecycleState	Pending
DefaultReferenceProprietaryRank	NonProprietary
UseConstraints	/metadata/idinfo/useconst

In cases where the distribution disclaimer is blank, the following should be added:

“Although these data and information have been processed successfully on a computer system at the USFWS, no warranty expressed or implied is made regarding the accuracy or utility of the data and information on any other system or for general or scientific purposes, nor shall the act of distribution constitute any such warranty. This disclaimer applies both to individual use of the data, and information, and aggregate use with other data and information. It is also strongly recommended that careful attention be paid to the contents of the metadata file associated with these data and information. The USFWS shall not be held liable for improper or incorrect use of the data and information described and/or contained herein.”

See Also

Reference Attribute Definitions (Section 6.3)

14 Publishing Information via Web Accessible Folders

A number of search engines rely on having information accessible in a web accessible folder (WAF) where they can crawl and harvest the information for the purpose of their own federated search. The Service Catalog supports the ability to post metadata and digital files to a WAF (<http://ecos.fws.gov/ServCatGos/files/>) for harvesting by Geo.Data.Gov (<http://geo.data.gov/geoportal/catalog/main/home.page>) and the Geospatial Platform (<http://www.geoplatform.gov/home/>).

To successfully publish a metadata record and digital file, the following criteria must be met:

- Prior to uploading the XML, you must confirm that the XML is well formed and contains the required metadata fields.
- The Reference must be created by uploading a XML metadata record.
- The Reference Type must be any of the following types: Geospatial Dataset, Aerial Photograph, Data Standard, Generic Dataset, Geodatabase, Raster Dataset, Satellite Dataset and Vector Dataset.
- The Reference must have a visibility of Public.
- The Holding Location must be a Digital File and must have a visibility of Public.

Except for the management of network tags (i.e., Holding Locations) all changes made to the Reference using the web interface **will not** be reflected in the XML being posted to the WAF. Therefore, if you discover that something is incorrect in the XML, you will need to delete the Reference and re-upload the corrected XML.

Any change to the Reference and/or Digital Holding Location which results in a change to its visibility will result in the WAF being updated immediately. For example, deleting a Reference will result in the XML and associated digital files being removed from the WAF.

See Also

Creating a Reference via XML Upload (Section 3.3)

Visibility/Downloadability (Section 5.1)

Reference Type Groups (Section 6.7)

Rules for Mapping XML to the Service Catalog (Section 13).

15 Ownership of Legacy Records

In some cases, you may own Reference, Holding Locations and possibly Comments, even though you did not create them. This will be the case for any References created during the 2011/2012 data mining pilot effort sponsored by the NRPC. NRPC technicians gave Ownership to the refuge primary contact for any References entered during the pilot.

16 REST

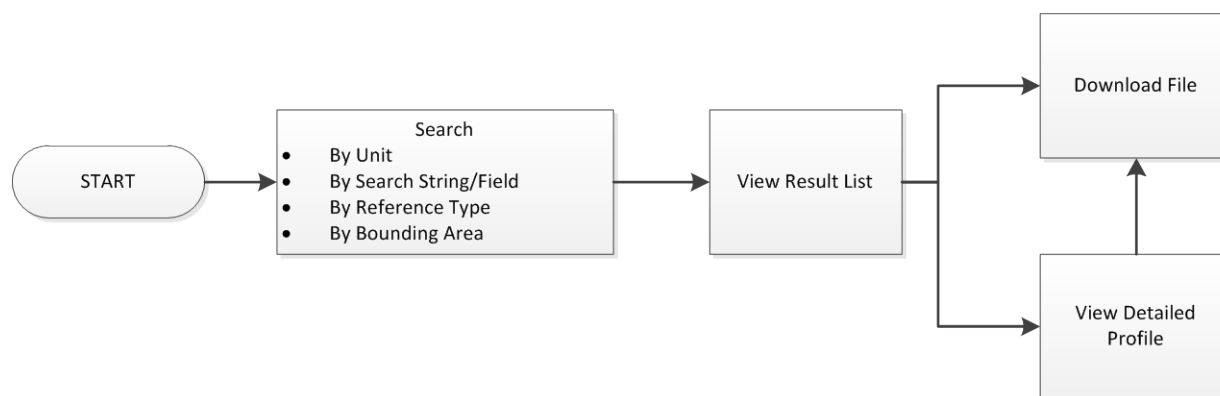
The goal is to allow users to place information in ServCat and then access it from their web pages or other applications. This is possible by setting-up web pages and applications to dynamically search ServCat and then present the information tailored to a specific audience. All of the services are located and more fully documented for developers here:

<http://ecos.fws.gov/ServCatServices/>.

The REST services:

- Are read-only. There is no ability to post information
- Have the advantage of being able to request information through a user-friendly URL
- Are fast and reflect the current information within ServCat
- Return information in XML and JSON format, which can easily be parsed and reformatted for a web page

The Service Catalog provides REST operations to support the most common scenario for querying information. This scenario involves a user searching for a list of references based on a combination search criteria. Then, based on the list, the user may want to view more detailed information about that Reference (i.e., its profile). Additionally, the user may wish to download any digital files while viewing the list of References or while viewing the profile.



Please be aware that minor modifications are still being made to the REST interface based on user feedback. Therefore, for those that are developing applications that consume REST services, we strongly recommend that the current online help manual be regularly referred to if you are having problems.

Please note that the terms “unit” and “unit code” are analogous to “organization” and “FBMS cost center code” (CCCode).

16.1 Quick Search

This simple search leverages the quick search logic (see Section 17.2) which searches across multiple fields. The template for such a search is as follows:

`http://ecos.fws.gov/ServCatServices/rest/datastore/{SEARCHTERM}?units={CCCode}&typeGroup={TYPEGROUP}`

One or more search terms must be specified and can optionally specify one or more units and reference type groups. In cases where there are more than one search terms, units or type groups, values should be comma-delimited. Using commas results in a union (i.e., elk, moose = elk OR moose) of terms. Valid TypeGroups to search are listed [here](#).

Here are example searches:

- Sandhill Crane: <http://ecos.fws.gov/ServCatServices/rest/datastore/sandhill crane>
- Sandhill Crane AND Aransas NWR: <http://ecos.fws.gov/ServCatServices/rest/datastore/sandhill crane?units=FF02RTAR00>
- Fire AND (Sabine NWR OR Pea Island NWR): <http://ecos.fws.gov/ServCatServices/rest/datastore/fire?units=FF04RLSB00,FF04RNPE00>
- Pupfish AND documents AND Ash Meadows NWR: <http://ecos.fws.gov/ServCatServices/rest/datastore/pupfish?units=FF08RASH00&typeGroup=Documents>

16.2 Advanced Search

The advanced search leverages the advanced search logic (see Section 17.3) which searches only specified fields. The template for such a search is as follows:

<http://ecos.fws.gov/ServCatServices/rest/datastore/advancedSearch?searchField={SEARCHFIELD}&searchStrings={SEARCHSTRINGS}&units={UNITS}&type={TYPE}&boundingArea={BOUNDINGAREA}&collectionId={COLLECTIONID}>

Thus, one can specify any of the following:

- searchFields – Valid fields to search are listed below.
- searchStrings - One or more search strings can optionally be specified.
- units - One or more FBMS cost center code can optionally be specified.
- Type - A Reference Type can optionally be specified.
- boundingArea - A single bounding area can optionally be specified.
- collectionId - The ID of a user-defined Reference Collection

SearchField Search Parameter

- The SearchField parameter is optional and is used together with the SearchStrings parameter.
- When specified, the SearchStrings parameter must also be present. Otherwise the call will return an error.
- Only one value can be specified and must be one of the following:
 - Abstract
 - Contacts
 - ContentDescription
 - DisplayCitation
 - Keyword
 - Title
 - UserCode
 - AllFields – when used, then all fields listed above are searched
- When the value specified is not in the list above, the following error is returned: “The SearchField when specified must be one of the following...”
- When no SearchField parameter is specified then all fields listed above are searched

Here are some example searches:

- Bat AND Title: <http://ecos.fws.gov/ServCatServices/rest/datastore/advancedSearch?searchField=title&searchStrings=bat>
- Bison AND Title AND Neal Smith NWR: <http://ecos.fws.gov/ServCatServices/rest/datastore/advancedSearch?searchField=title&searchStrings=bison&units=FF03RNLS00>
- Bat AND Title AND Neal Smith NWR AND Unpublished Report: <http://ecos.fws.gov/ServCatServices/rest/datastore/advancedSearch?searchField=title&searchStrings=bat&units=FF03RNLS00&type=UnpublishedReport>

Search Strings Search Parameter

The SearchStrings parameter is optional unless a search field is specified (see below). Strings that are composed of multiple words are treated as an exact phrase. When more than one search string is specified they must be delimited by a semi-colon. All search string are intersected together.

Example:

- Water AND Habitat AND Malhuer NWR: <http://ecos.fws.gov/ServCatServices/rest/datastore/advancedSearch?searchStrings=water;habitat&units=FF01RMLH00>
- This call will search records with the phrase ‘inventory and monitoring’: <http://ecos.fws.gov/ServCatServices/rest/datastore/advancedSearch?searchStrings=inventory%20and%20monitoring>

Unit Codes Search Parameter

Specifying an unit (FBMS Cost Center Code) returns information specifically about the FWS Organization. The 'unit' parameter is optional. When more than one unit is specified they must be delimited by a semi-colon. All Units are intersected together.

Examples:

- To search for references linked to Ash Meadows NWR and Stillwater NWR:
<http://ecos.fws.gov/ServCatServices/rest/datastore/advancedsearch?&units=FF08RASH00;FF08RSTL00>
- To search for references linked only to Parker River NWR:
<http://ecos.fws.gov/ServCatServices/rest/datastore/advancedsearch?units=FF05RPKR00>

Type Search Parameter

- The 'type' parameter is optional and is used to indicate a reference type.
- Only one type can be specified
- No check is performed to validate the reference type. If the type specified is not a valid type, no references will be returned.
- For reference types composed of multiple words, the spaces must be removed in the request.

Examples:

- Searches for references whose type is 'Published Report':
<http://ecos.fws.gov/ServCatServices/rest/datastore/advancedsearch?&type=PublishedReport>
- Searches for all Book Chapters: <http://ecos.fws.gov/ServCatServices/rest/datastore/advancedsearch?&type=BookChapter>

BoundingBox Search Parameter

- The 'boundingArea' parameter is optional and is used to indicate a geographic boundary to search within
- Only one 'boundingArea' can be specified
- The template for defining a bounding area is boundingArea=LL:-106,39.5;UR:-105.5,40 where LL is the lower left point (longitude, latitude) in decimal degrees and UR is the upper right point (longitude, latitude) in decimal degrees.
- If the template is not used correctly the following error occurs: "Invalid Bounding Area". Format should be boundingArea=LL:-106,39.5;UR:-105.5,40. LL is the lower left point: longitude, latitude. UR is the upper right point: longitude, latitude."

Examples:

- Search for area between 117.5-116.5 degrees West and 36-36.5 degrees North for the text string "marsh":
<http://ecos.fws.gov/ServCatServices/rest/datastore/advancedsearch?&boundingArea=LL:-114.2,32.9;UR:-113.7,33.5&searchStrings=marsh>

Reference Collection Search Parameter

- A Reference Collection ID parameter is optional and is used to indicate a user-defined Reference Collection (See Section 6.9.3)
- Only one CollectionID can be specified

Examples:

- Search for Reference Collection ID=12: <http://ecos.fws.gov/ServCatServices/rest/datastore/advancedsearch?CollectionId=12>

16.3 Level of Detail in Search Results

Regardless of whether you are using the quick or advanced search, you can specify different levels of detail returned in the XML.

- Basic – Very simple level of detail which is intended to support most common elements shown in a result grid. Information regarding which fields are returned is found [here](#).
- Profile – More robust and thorough level of detail which is intended for most common scenarios of showing Reference information. Information regarding which fields are returned is found [here](#).
- Project – The whole enchilada about a Reference including all linkages (e.g., products of a project). Information regarding which fields are returned is found [here](#).

Here are some examples:

- Basic: [http://ecos.fws.gov/ServCatServices/rest/datastore/sandhill crane?units=FF02RTAR00](http://ecos.fws.gov/ServCatServices/rest/datastore/sandhill%20crane?units=FF02RTAR00) OR [http://ecos.fws.gov/ServCatServices/rest/datastore/sandhill crane?units=FF02RTAR00&detail=basic](http://ecos.fws.gov/ServCatServices/rest/datastore/sandhill%20crane?units=FF02RTAR00&detail=basic)
- Profile: [http://ecos.fws.gov/ServCatServices/rest/datastore/sandhill crane?units=FF02RTAR00&detail=profile](http://ecos.fws.gov/ServCatServices/rest/datastore/sandhill%20crane?units=FF02RTAR00&detail=profile)
- Project: [http://ecos.fws.gov/ServCatServices/rest/datastore/sandhill crane?units=FF02RTAR00&detail=project](http://ecos.fws.gov/ServCatServices/rest/datastore/sandhill%20crane?units=FF02RTAR00&detail=project)

16.4 File Download

16.4.1 Template

File download functions entirely through REST. The standard URL is:

[https://ecos.fws.gov/ServCat/Reference/DownloadDigitalFile?code=\[HoldingCode\]&file=\[FileName\]](https://ecos.fws.gov/ServCat/Reference/DownloadDigitalFile?code=[HoldingCode]&file=[FileName])

Note that this REST call makes use of identity, even with public files, thus it can only be called through a web browser.

There is the option to download public files without using any form of identification. This makes it possible to download files from any application, including python, without being forced to authenticate through a web browser. The URL template for this is:

[http://ecos.fws.gov/ServCatFiles/Reference/Holding/\[HoldingCode\]](http://ecos.fws.gov/ServCatFiles/Reference/Holding/[HoldingCode])

The URL for the Public File Downloader Application is:

<http://ecos.fws.gov/ServCatFiles/>

16.4.2 Examples

- https://ecos.fws.gov/ServCat/Reference/DownloadDigitalFile?code=2220&file=SVN_USFWS_1991_NarrativeReport1991.pdf
- <http://ecos.fws.gov/ServCatFiles/Reference/Holding/2220>

16.5 Calling REST Services

We provide an example of how to call REST services using a MS Access DB here:

https://ecos.fws.gov/ServCat/Reference/DownloadDigitalFile?code=7825&file=REST_ExampleDB.accdb

In time, more examples will be added.

17 Quick and Advanced Search Logic

17.1 Quick Search

The quick search now utilizes a sophisticated parsing algorithm that behaves much like other search engines. For best results when searching, follow these rules:

- Individual words (without quotes) that are not a phrase, such as *Elk Monitoring*, will return records that contain words *elk* AND *monitoring*.
- Use quotes to search for records containing an exact phrase (e.g., "Elk Monitoring Protocol"). Omission of the quotes would return any records with *elk* AND *monitoring* AND *protocol* occurring somewhere in the title, abstract, brief description, authors or keywords.
- Use the operators AND (&), OR (|), NOT (-) to refine your search logic. Examples:
 - elk AND moose NOT deer
 - elk | moose
 - drought AND "climate change"
- Use parenthesis to indicate precedence (i.e., what should be evaluated first)
 - Elk and moose or fish
 - elk & (moose OR fish)
 - (elk or moose) AND (Kenai OR Togiak)
- Searches for text with '&', such as *T&E*, will be more effective if quotes and additional words are used. For example: "T&E Species"
 - In general, you can use an organization's name in the search text (thus not needing to use the organization selector tool) and get References about that organization. Be sure to put the organization name in quotes since just searching for *bear butte national wildlife refuge* without quotes would search for all Reference with *bear* AND *butte* AND *national* AND *Wildlife* AND *refuge*. Use the organization selector to discover refuge-specific information for multi-organizational searches (e.g., all refuges in a complex)

Other Search Tips

- The display citation contains the reference code as well as the reference type – so those are also searchable in the text box. Common words such as 'the' and 'of' are not indexed and therefore will not be part of the search unless they are in quotes. A search for *Natural History of Hawaii* without quotes is the same as a search for *Natural* AND *History* AND *Hawaii* and returns many more records than the specific search with quotes "*Natural History of Hawaii*". The words *and*, *or*, *not* have special meaning as logical operators. To include them in a search phrase, enclose the phrase in quotes, or use the escape character '/'. For example, to search for the title: *Why not bring back the bighorn?*
 - "Why not bring back the bighorn?"
 - Why /not bring back the bighorn?
- To use the minus sign as the NOT operator, it must appear immediately before the word to be excluded and preceded by a space (otherwise, it will be interpreted as a hyphen).
- Search results can sometimes be cached if you repeat the same search within a short period of time. If a record has been updated, but the update is not seen in the results grid, use the refresh button at the bottom left of the grid for the latest results.
- A search string copied from a Word document and pasted into the text box with "curly" quotes will not be recognized as quotes, and the search will run as if the quotes were not there.
- An error message may be displayed if the search string cannot be resolved into anything meaningful (i.e., "We are sorry. We cannot process the search at this time"). An example would be entering the text *I&M* without quotes; this will be interpreted as a search for the letter *I* AND the letter *M*, indexing that is not supported.
- A few false returns may be returned when organization names that contain common words. For example, a search for *black bear* (without quotes) will return any of the records that are linked to both *Bear Butte National Wildlife Refuge* and *Black Bayou Lake National Wildlife Refuge*.
- Do not use an asterisk (*) or question mark (?) as a wild card; this is not supported. Instead, the search automatically includes inflectional forms of a word (e.g., different tenses of a verb or both the singular and plural forms of a noun). For example, a search for *monitor* will include records with *monitoring*, and a search for *goose* will include records with *geese*.
- For possessive search terms, include an apostrophe in your search term. *Bewicks Wren* without the apostrophe will not return *Bewick's Wren*.

- Some non-alphanumeric characters work better with quotes. For example, “# 11 unnamed spring” with quotes will return 1 record, whereas # 11 unnamed spring without quotes returns no results.

17.2 Advanced Search

17.2.1 Operators

There are three operators for text:

- Containing – The field contains the word phrase (e.g., Like * phrase * - notice the spaces between the asterisks)
- Exactly Matches – The entire field matches the word phrase (e.g., Like phrase* - no space between asterisk)
- Not Containing – The field does not contain the word phrase (e.g., Not Like * phrase * - notice the spaces between the asterisks)
- Starts With – The field starts with the word phrase

Please note that logic operators cannot be embedded inside text strings (e.g., fish*, el%k). Those special characters will be treated literally.

The date operators are used whenever a field is of the date type:

- Exactly On
- Before
- After
- Between
- To present

Optionally pick from the date selector or type in a date. The only date validation, however, is to confirm ####/####. First number between 1-12, second number between 1 -31, and a four digit years.

17.2.2 Precedence When Specifying Multiple Search Criteria

In sections where a user can specify multiple rows of criteria and when three or more criteria are defined, the logic precedence will be dictated by the order in which the user created those criteria. For example

Statement A AND Statement B OR Statement C

Will be evaluated as

(A AND (B OR C))

So, if a user needs to find all References with “wolf” or “elk” in the title, that contains ‘Jones’ in the contacts (presumably the author), they should select

The screenshot shows a 'Search Fields' window with an 'Exclude' checkbox. It contains three rows of search criteria:

Operator	Field	Operator	Value	Action
	Contact Name	containing	Jones	Remove
AND	Title	containing	wolf	Remove
OR	Title	containing	elk	Remove

At the bottom left, there is an 'Add Filter' button.

The query will be constructed as follows:

'Contact' containing 'Jones' AND('Title' containing 'elk' OR 'Title' containing 'wolf')

To further clarify, imagine that the user selects

The screenshot shows a 'Search Fields' interface with an 'Exclude' checkbox. It contains three search criteria:

Operator	Field	Operator	Value	Action
	Title	containing	wolf	Remove
AND	Title	containing	elk	Remove
OR	Contact Name	containing	Jones	Remove

At the bottom, there is an 'Add Filter' button.

This will be evaluated as

```
'Title' containing 'wolf' AND( 'Title' containing 'elk' OR 'Contact' containing 'Jones')
```

This query will return all references containing 'wolf' in the title PLUS all references containing 'elk' in the title or written by Jones.

18 Using Download to EndNote

18.1 Steps

This section provides instructions on how import ServCat References into Endnote. It assumes that a user has generated a set of search results and intends to export/download these results to Endnote. Please note that this functionality is not available from the Portal Search results.

The screenshot shows the ServCat Search results page. A table of search results is displayed with columns: Reference Co..., Type, Display Citation, Title, and File Co... A dropdown menu is open over the 'Download' button, showing options: 'Excel spreadsheet (xlsx)' and 'EndNote (enw)'. A red arrow points from the 'EndNote (enw)' option to a dialog box at the bottom of the page.

Download results as:

- Excel spreadsheet (xlsx)
- EndNote (enw)

Results Table:

Reference Co...	Type	Display Citation	Title	File Co...
1705	Unpublished Report	Craven EW. 1944. Annual Report : May 1943 – April 1944 : Aransas National...	Annual Report : M...	1
1706	Unpublished Report	Craven EW. 1945. Annual Report : May 1944 – April 1945 : Aransas National...	Annual Report : May 1944 – April 1945 : Aransas Nation...	1
1966	Generic Document	Custer AR. Biological Correspondence 1938. Austwell, Texas. Generic Docu...	Biological Correspondence 1938	1
7285	Unpublished Report	Fuller NM and Bosque del Apache National Wildlife Refuge. 1981. Bosque de...	Bosque del Apache National Wildlife Refuge Narrative R...	1
1943	Unpublished Report	Giezentanner JB. 1990. Narrative Report Aransas National Wildlife Refuge 19...	Narrative Report Aransas National Wildlife Refuge 1990	1
1944	Unpublished Report	Giezentanner JB. 1991. Narrative Report Aransas National Wildlife Refuge 19...	Narrative Report Aransas National Wildlife Refuge 1991	1
1945	Unpublished Report	Giezentanner JB. 1992. Narrative Report Aransas National Wildlife Refuge 19...	Narrative Report Aransas National Wildlife Refuge 1992	1
1539	Plan	Gillund D. 2008. North Dakota National Wildlife Refuges : Comprehensive Co...	North Dakota National Wildlife Refuges : Comprehensive...	1
1538	Plan	Gillund D. 2008. North Dakota Wetland Management Districts : Comprehen...	North Dakota Wetland Management Districts : Comprehe...	1
1762	Unpublished Report	Halloran AF. 1960. 1960 Aransas Refuge biological records. Austwell, TX. Un...	1960 Aransas Refuge biological records	1
1763	Unpublished Report	Halloran AF. 1961. 1961 Aransas Refuge counts and compilations. Austwell, TX. Un...	1961 Aransas Refuge counts and compilations	1
1764	Unpublished Report	Halloran AF. 1962. 1962 Aransas Refuge biological records. Austwell, TX. Un...	1962 Aransas Refuge biological records	1
1765	Unpublished Report	Halloran AF. 1963. 1963 Aransas Refuge biological records. Austwell, TX. Un...	1963 Aransas Refuge biological records	1
1766	Unpublished Report	Halloran AF. 1964. 1964 Aransas Refuge biological records. Austwell, TX. Un...	1964 Aransas Refuge biological records	1
1767	Unpublished Report	Halloran AF. 1965. 1965 Aransas deer estimate and supplement to 1964 repo...	1965 Aransas deer estimate and supplement to 1964 rep...	1
1768	Unpublished Report	Halloran AF. 1966. 1966 Aransas deer estimate and supplement to 1964 repo...	1966 Aransas deer estimate and supplement to 1964 rep...	1
1769	Unpublished Report	Halloran AF. 1967. The first 30 years 1938-64 biological summary. Austwell, TX. Un...	The first 30 years 1938-64 biological summary	1

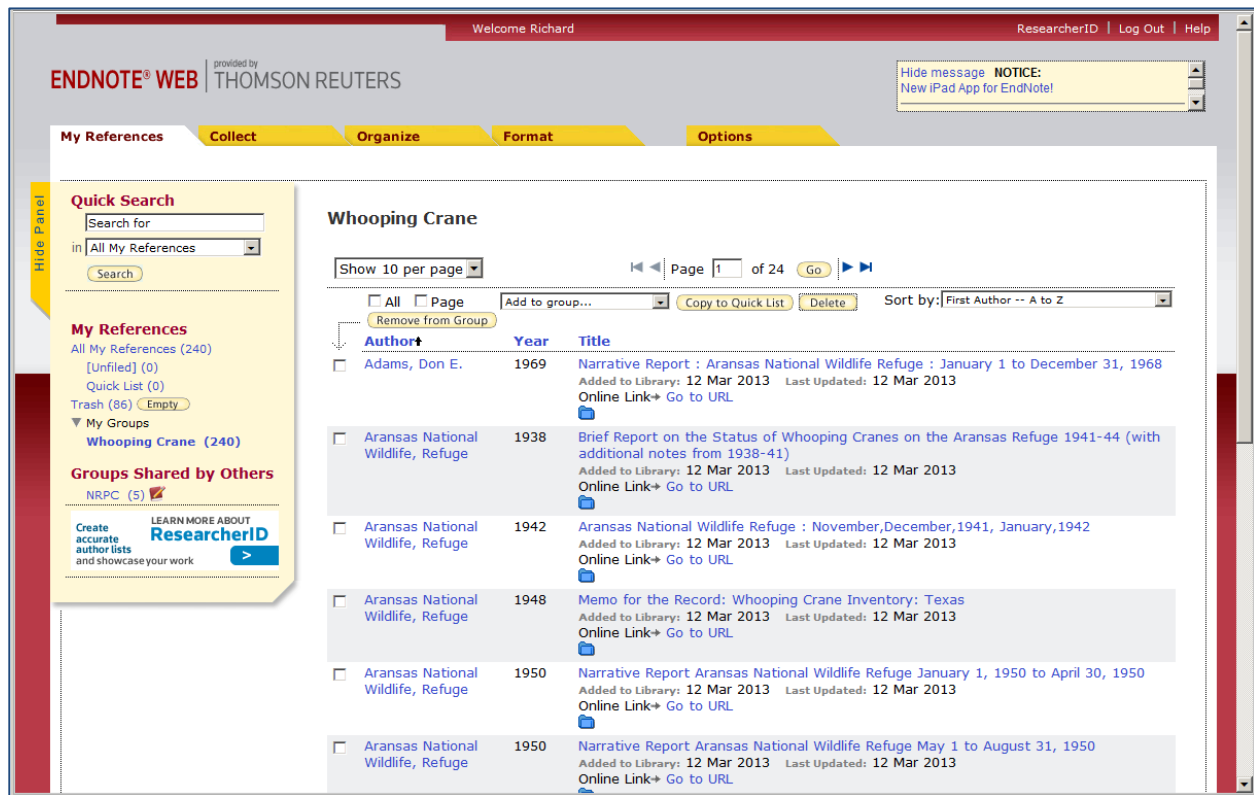
Page 2 of 5 | Per Page: 50 | Displaying 51 - 100 of 241

Do you want to open or save ReferenceSearchResults_20130312_1107AM.enw (337 KB) from ecos.fws.gov?

Open Save Cancel

Select Open if EndNote is installed locally. This will open EndNote and import the exported/downloaded References.

Select Save if EndNote is NOT installed locally and the intent is to import these results into [EndNote Web](#).



18.2 EndNote Logic

The EndNote export table is refreshed nightly.

As much as possible, ServCat conforms to the Endnote reference types. Therefore, when exporting from ServCat and importing into EndNote, the following ServCat Reference types are cross walked to Endnote reference types:

Data Store Reference Type	Endnote Reference Type
Generic Dataset	Aggregated Database
Relational Database	
Tabular Dataset	
Geodatabase	
Geospatial Dataset	
Raster Dataset	
Vector Dataset	
Book	Book
Book Chapter	Book Section
Conference Proceeding Paper	Conference Paper
Conference Proceeding	Conference Proceeding
Photograph	Online Multimedia
Aerial Photograph	
Satellite Image	
Journal Article	Journal Article
Map	Map

Data Store Reference Type	Endnote Reference Type
Newspaper Article	Newspaper Article
Email	Personal Communication
Letter	
Memorandum	Unpublished Work
Published Report	Report
Dissertation	Doctorate
Thesis	Masters
Unpublished Report	Unpublished Work
All Other Reference Types	Generic

For each Reference Type, every attempt has been made to follow EndNote's guidance on field mapping. In addition, the following are mapped:

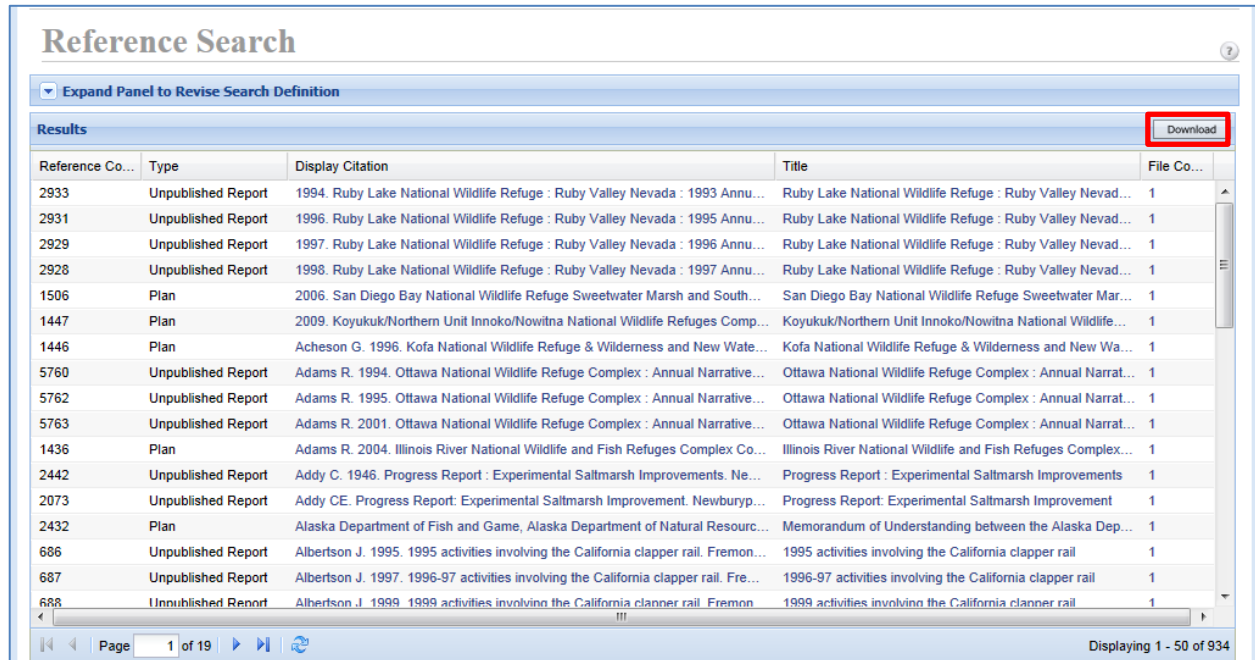
- URL – The ServCat URL for the Reference
- Custom 6 – The Reference Code as a single number
- Custom 7 – All Holding Locations for the Reference. This includes all digital and physical holding locations. Holding Locations are delimited with a '/'.
- Custom 8 - Organizations linked to the Reference. FBMS Cost Center Codes are delimited with a '/' (e.g., FF02RTAR00 / FF02RTMI00 / FF02RTAM00).

19 Export References to Desktop

You have two options to choose from if you wish to export one or more references to your desktop.

19.1 Download Your Search Results

You can download your search results from the Quick Search, Advanced Search, Search by Reference Code, Manage My Holding Locations, and OPOC Approval pages.



Reference Search

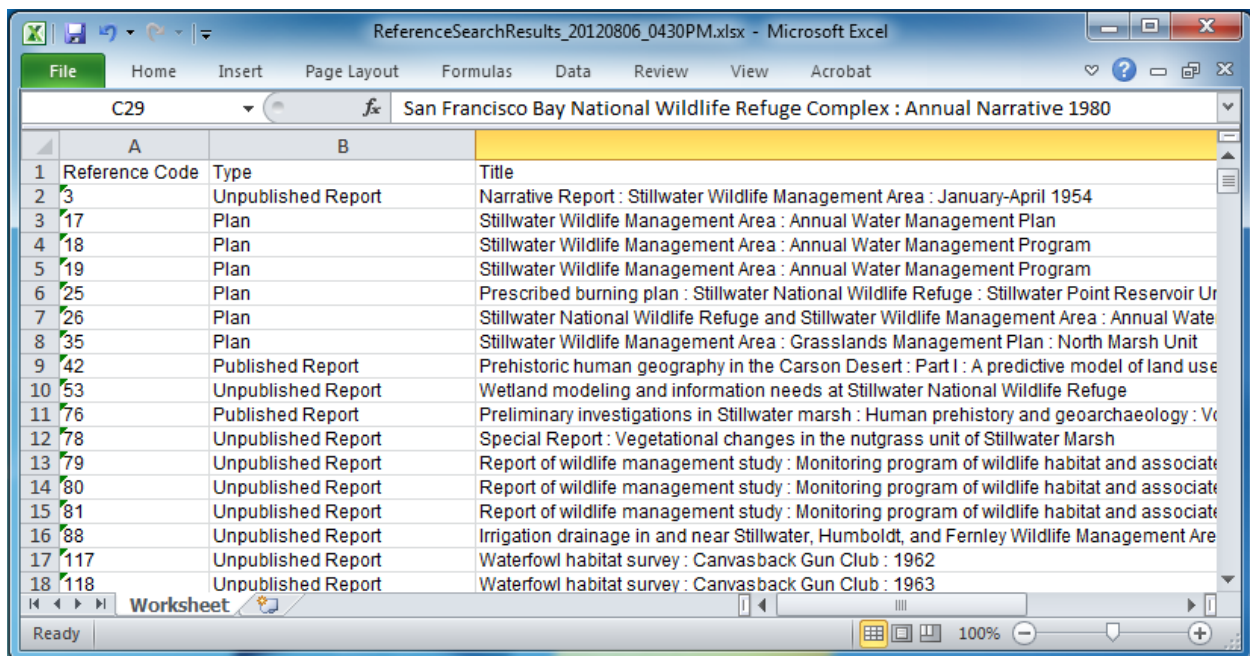
Expand Panel to Revise Search Definition

Results Download

Reference Co...	Type	Display Citation	Title	File Co...
2933	Unpublished Report	1994. Ruby Lake National Wildlife Refuge : Ruby Valley Nevada : 1993 Annu...	Ruby Lake National Wildlife Refuge : Ruby Valley Nevad...	1
2931	Unpublished Report	1996. Ruby Lake National Wildlife Refuge : Ruby Valley Nevada : 1995 Annu...	Ruby Lake National Wildlife Refuge : Ruby Valley Nevad...	1
2929	Unpublished Report	1997. Ruby Lake National Wildlife Refuge : Ruby Valley Nevada : 1996 Annu...	Ruby Lake National Wildlife Refuge : Ruby Valley Nevad...	1
2928	Unpublished Report	1998. Ruby Lake National Wildlife Refuge : Ruby Valley Nevada : 1997 Annu...	Ruby Lake National Wildlife Refuge : Ruby Valley Nevad...	1
1506	Plan	2006. San Diego Bay National Wildlife Refuge Sweetwater Marsh and South...	San Diego Bay National Wildlife Refuge Sweetwater Mar...	1
1447	Plan	2009. Koyukuk/Northern Unit Innoko/Nowitna National Wildlife Refuges Comp...	Koyukuk/Northern Unit Innoko/Nowitna National Wildlife...	1
1446	Plan	Acheson G. 1996. Kofa National Wildlife Refuge & Wilderness and New Wate...	Kofa National Wildlife Refuge & Wilderness and New Wa...	1
5760	Unpublished Report	Adams R. 1994. Ottawa National Wildlife Refuge Complex : Annual Narrative...	Ottawa National Wildlife Refuge Complex : Annual Narrat...	1
5762	Unpublished Report	Adams R. 1995. Ottawa National Wildlife Refuge Complex : Annual Narrative...	Ottawa National Wildlife Refuge Complex : Annual Narrat...	1
5763	Unpublished Report	Adams R. 2001. Ottawa National Wildlife Refuge Complex : Annual Narrative...	Ottawa National Wildlife Refuge Complex : Annual Narrat...	1
1436	Plan	Adams R. 2004. Illinois River National Wildlife and Fish Refuges Complex Co...	Illinois River National Wildlife and Fish Refuges Complex...	1
2442	Unpublished Report	Addy C. 1946. Progress Report : Experimental Saltmarsh Improvements. Ne...	Progress Report : Experimental Saltmarsh Improvements	1
2073	Unpublished Report	Addy CE. Progress Report: Experimental Saltmarsh Improvement. Newbury...	Progress Report: Experimental Saltmarsh Improvement	1
2432	Plan	Alaska Department of Fish and Game, Alaska Department of Natural Resourc...	Memorandum of Understanding between the Alaska Dep...	1
686	Unpublished Report	Albertson J. 1995. 1995 activities involving the California clapper rail. Fremon...	1995 activities involving the California clapper rail	1
687	Unpublished Report	Albertson J. 1997. 1996-97 activities involving the California clapper rail. Fre...	1996-97 activities involving the California clapper rail	1
688	Unpublished Report	Albertson J. 1999. 1999 activities involving the California clapper rail. Fremon...	1999 activities involving the California clapper rail	1

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Clicking on the 'Download' button will export the search results to an Excel spreadsheet (XLSX).



ReferenceSearchResults_20120806_0430PM.xlsx - Microsoft Excel

File Home Insert Page Layout Formulas Data Review View Acrobat

C29 San Francisco Bay National Wildlife Refuge Complex : Annual Narrative 1980

Reference Code	Type	Title
3	Unpublished Report	Narrative Report : Stillwater Wildlife Management Area : January-April 1954
17	Plan	Stillwater Wildlife Management Area : Annual Water Management Plan
18	Plan	Stillwater Wildlife Management Area : Annual Water Management Program
19	Plan	Stillwater Wildlife Management Area : Annual Water Management Program
25	Plan	Prescribed burning plan : Stillwater National Wildlife Refuge : Stillwater Point Reservoir U
26	Plan	Stillwater National Wildlife Refuge and Stillwater Wildlife Management Area : Annual Wate
35	Plan	Stillwater Wildlife Management Area : Grasslands Management Plan : North Marsh Unit
42	Published Report	Prehistoric human geography in the Carson Desert : Part I : A predictive model of land use
53	Unpublished Report	Wetland modeling and information needs at Stillwater National Wildlife Refuge
76	Published Report	Preliminary investigations in Stillwater marsh : Human prehistory and geoarchaeology : V
78	Unpublished Report	Special Report : Vegetational changes in the nutgrass unit of Stillwater Marsh
79	Unpublished Report	Report of wildlife management study : Monitoring program of wildlife habitat and associat
80	Unpublished Report	Report of wildlife management study : Monitoring program of wildlife habitat and associat
81	Unpublished Report	Report of wildlife management study : Monitoring program of wildlife habitat and associat
88	Unpublished Report	Irrigation drainage in and near Stillwater, Humboldt, and Fernley Wildlife Management Are
117	Unpublished Report	Waterfowl habitat survey : Canvasback Gun Club : 1962
118	Unpublished Report	Waterfowl habitat survey : Canvasback Gun Club : 1963

Worksheet 100%

20 Errors and Troubleshooting

This section details any known bugs or other common issues.

These steps should be similar for Firefox and Chrome.

20.1 Holding Locations are Blank for a given Reference

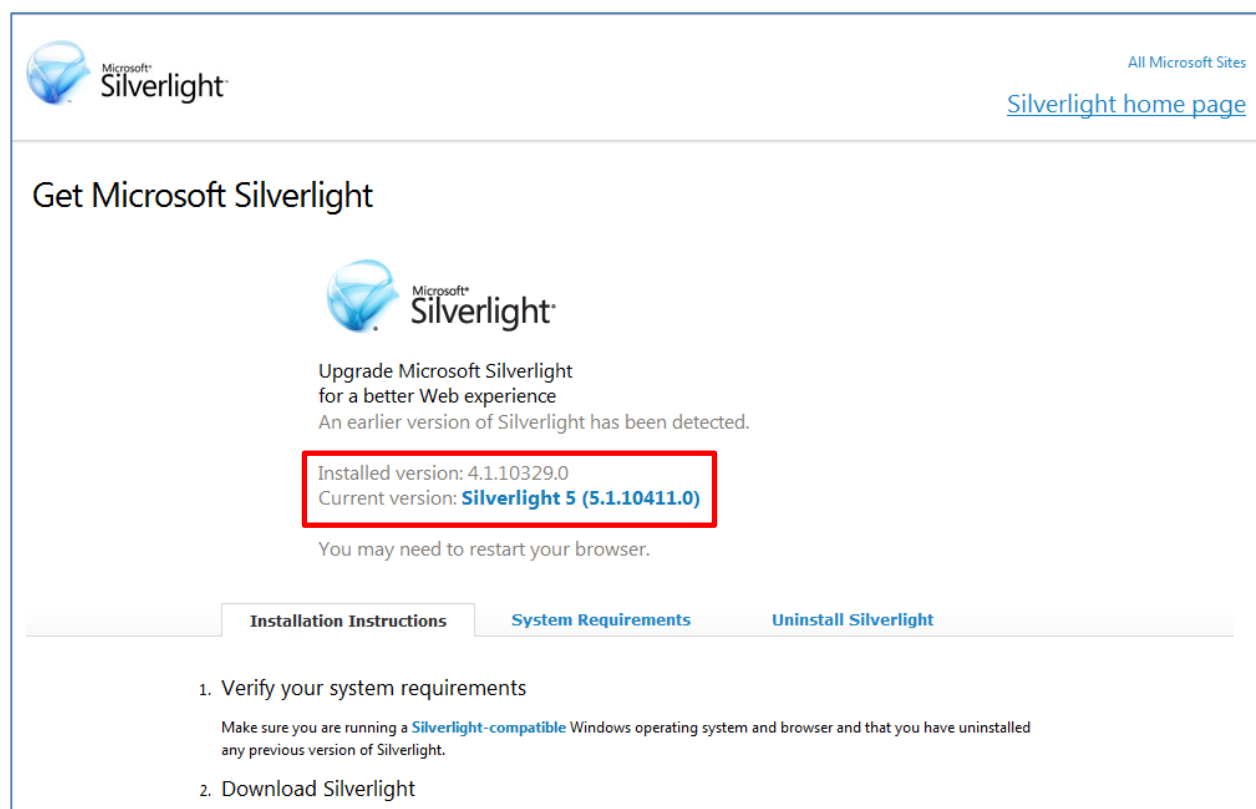
You are using an outdated internet browser (e.g., Internet Explorer 7 or older). Please update your internet browser.

20.2 I Can't Upload a Holding or XML metadata record

To successfully upload a file, you will need to get the most recent version of Microsoft Silverlight. To make sure you have it installed, click on this url:

<http://www.microsoft.com/getsilverlight/Get-Started/Install/Default.aspx>

You should get a message similar to what is shown below:



Please upgrade Silverlight if it is out-of-date, or install it if it is not installed.

The 64-bit version of Internet Explorer does not support Silverlight¹. To confirm, click on the help option for Internet Explorer and make sure you do not see the following:

¹ As to why IE doesn't support another Microsoft product is beyond the scope of this Help Manual



20.3 Don't Have Permission to Access Information

Click on the following link:

https://ecos.fws.gov/ServCat/Portal/Home/Tools_Claims

Current user information

Name: **richard_easterbrook**

UPN: **richard_easterbrook@fws.gov**

Domain: **fws**

Auth Method: **<http://schemas.microsoft.com/ws/2008/06/identity/authenticationmethod/windows>**

Auth Time: **2012-08-08T18:18:05.242Z**

Roles: **ReferencePowerUser**

ReferenceInternalReader

ReferenceSelectReader

TaxonomyPowerUser

ReferenceAdministrator

Contact the ECOS help desk at:

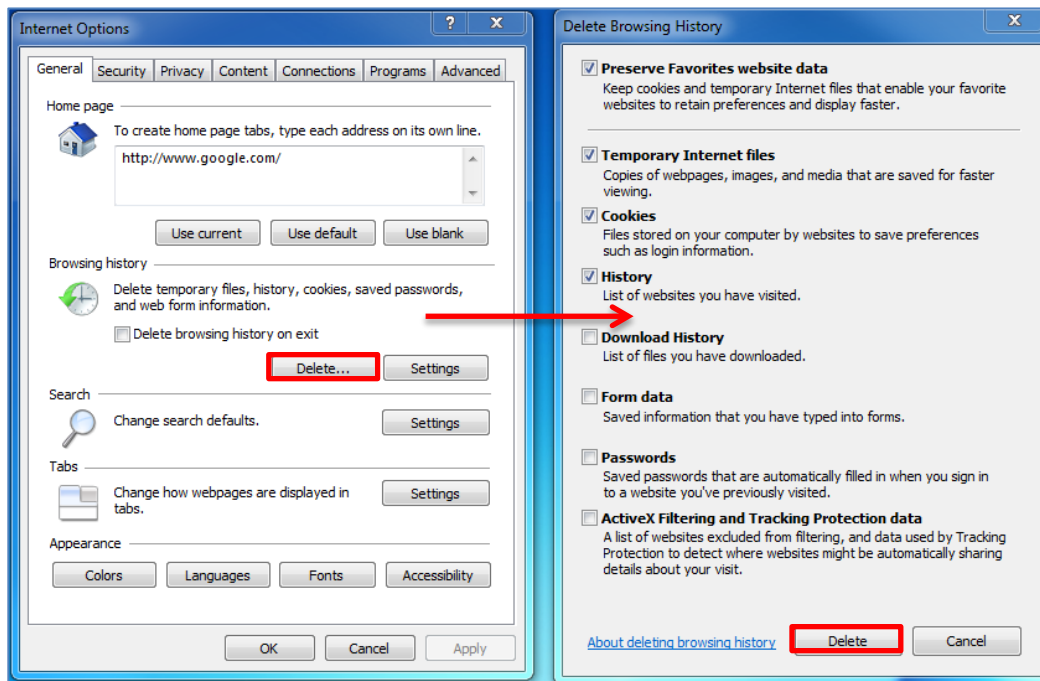
<https://ecos.fws.gov/ecos/sec/helpdesk.do>

Send a brief description of the permissions problem and the attached user claim.

20.4 ServCat Takes a Long Time to Open, Everything is Really Slow or Downloads Timeout

If the speed provided by your organization's internet service provider is slow (i.e., less than 0.85 Mbps), ServCat will not function properly. Perform the following steps to determine your internet speed:





Some FWS users may not have the proper permissions to delete their web browsing history, so it may be necessary to have an IT professional with elevated privileges perform this task.