Standard Operating Procedure (SOP) 12: Annual Reporting and Deliverable Publishing, Version 2.02

Weather and Climate Monitoring Protocol

Arctic (ARCN), Central Alaska (CAKN), and Southeast Alaska (SEAN) Inventory and Monitoring Networks

Change History

Previous Version #	Revision Date	Revised By	Changes	Justification	New Version #
1.0	12/20/2006	P. Sousanes	Changed SOP from 22 to 23	Placeholder for SOP 22 on data analysis	1.01
1.01	March 2017	P. Sousanes K. Hill S. Miller, M. Bower, B. Johnson	Update on reporting requirements with description of the process for archiving the annual deliverables.	Reporting process is simplified and corresponds to annual deliverable archive.	2.0
2.0	February 2021	P.Sousanes	Annual operations report as a PDF rather than an NRDS report. Annual resource brief option, instead of annual report. Clarifying language on trend report.	Updates to reporting requirements per 2018 memo on 'Data Anlaysis and Reporting Requirements'.	2.01
2.01	March 2022	P. Sousanes T.Ziomek	Fixed broken links to IRMA holdings	Stale links are unacceptable.	2.02

Please cite this Standard Operating Procedure as:

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Overview

This SOP describes the method for reporting on the climate monitoring protocol and the process for archiving all of the annual deliverables. Each network has a project container where all of the

scheduled deliverables, including annual data sets, metadata, and the current protocols and SOPs, are archived annually. This ensures that the metadata for each annual data download resides in one place for easy discovery and easy tractability from data collection to reporting.

The Data Store project reference codes are as follows:

Arctic Network Climate Monitoring: IRMA Project #: 2210690.

Central Alaska Network Climate Monitoring: IRMA Project #: 2218183.

Southeast Alaska Network Climate Monitoring: IRMA Project #: 2238818.

Reporting

Annual Weather and Climate Operations Report

A network-wide maintenance (or operations) report is published annually in the form of a PDF. The operations report is deliverable WC_H (SOP 1). Additional reporting may occur if staffing levels and time permit but are not required as annual deliverables. The purpose of the annual maintenance (or operations) report is to summarize the work that was accomplished during the field season. It includes a brief summary of the field season, site maintenance work, and a compilation of information taken from the site visit worksheets. The compiled site visit worksheets (WC_C) can also satisfy this reporting requirement.

Annual Reporting

If time and staffing levels allow, an annual resource brief may be produced providing a synopsis of weather events for a calendar or water year.

Synthesis or Trend Report

At least every 15 years synthesis or trend report will be produced (SOP 1, 10; Deliverable WC_J). This may be an exploratory analysis to identify or hypothesize relationships between climate variables and other vital signs in the network. Results of the analyses may have implications for resource management or may result in recommended management actions. It may include analyses to detect linear trends or non-linear changes over time. It is processed according to the formal Inventory and Monitoring Division methods currently in effect for Natural Resource Report publications or as a journal publication.

The 2021 reporting updates align with the Inventory and Monitoring Division's *Data Analysis and Reporting Requirements* memo from April 23, 2018 (K. Gallo)

Publishing and Managing the Annual Deliverables

Closeout is the part of the climate monitoring data management life cycle through which annual data collection files (deliverables, SOP 1 - Table 1) are archived in the IRMA Data Store. Specific closeout procedures to accomplish this are found in SOP 10. Closeout happens each year after the field season when data files have been collected, processed and integrated. The annual cycle is

considered complete when the IRMA Data Store holdings match the deliverable schedule (Figure 1). The references are linked to the ARCN, CAKN, and SEAN climate monitoring IRMA project references so that it becomes discoverable to the public.

The annual cycle described above will ensure that all data objects collected each year are accounted for, documented and available for perpetuity should the need arise to re-use or revisit the data.

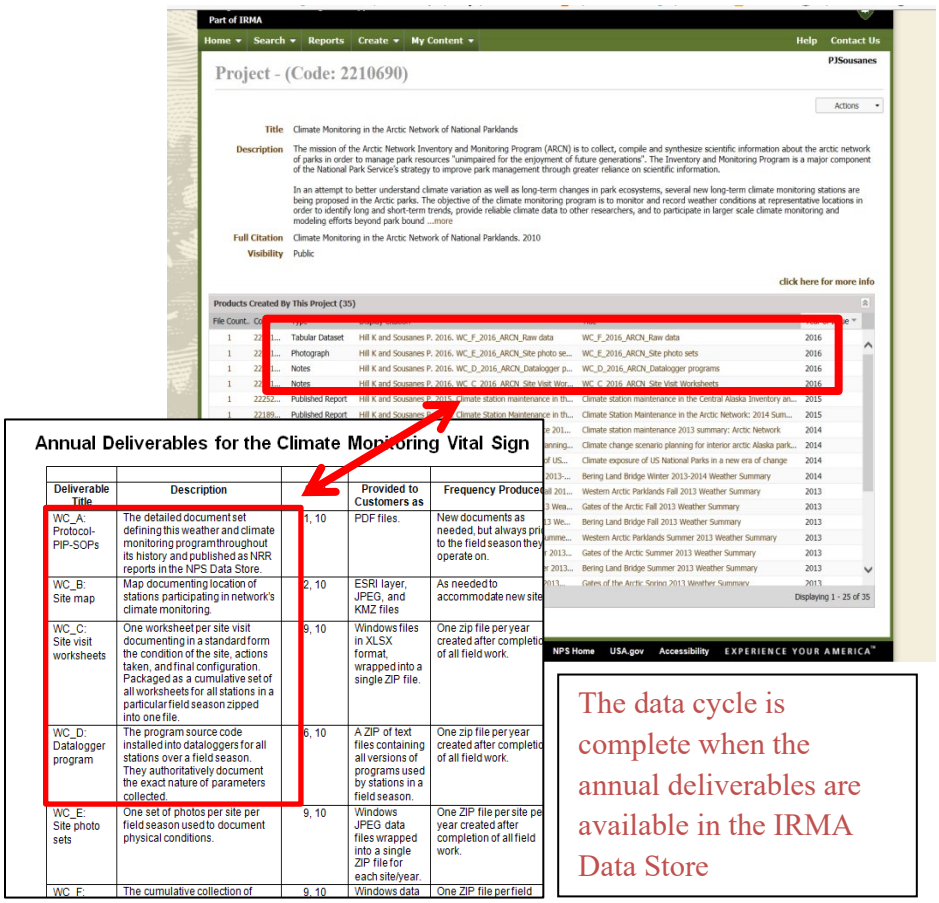


Figure SOP12-1. Data deliverables are defined in the monitoring protocol and archived in IRMA Dataset references annually.

Appendix SOP 12-A provides an example for uploading annual products into IRMA. It also describes how to drop reports and resource briefs, or the deliverables that are better suited for public consumption, into 'collections' that can then be accessed via web services by the Network web sites.

IRMA components and capabilities are evolving at a rapid pace; it is wise to contact the network data manager for updates and details before doing the final archive each year.

Appendix SOP 12-A. Uploading Deliverables to IRMA Data Store

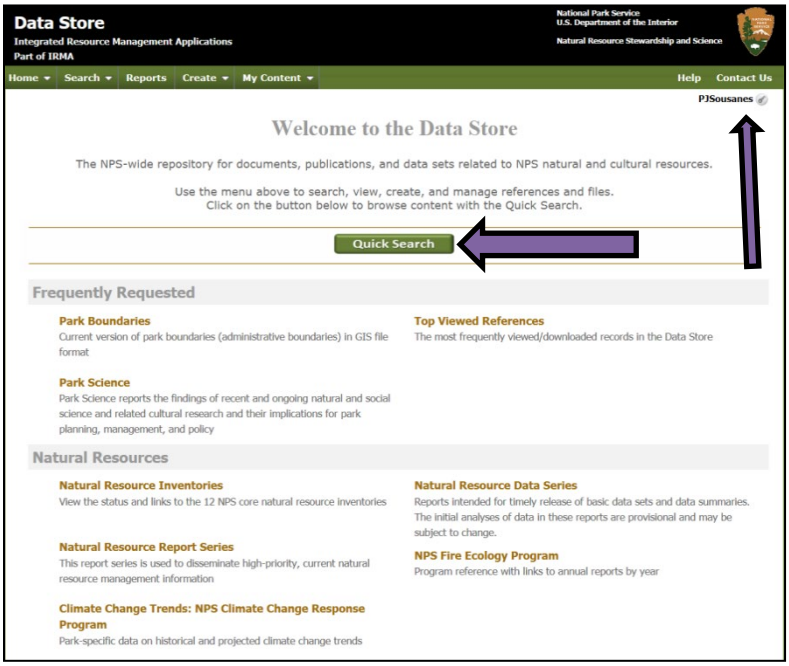
The following describes the process for uploading reports and resource briefs into the IRMA Data Store.

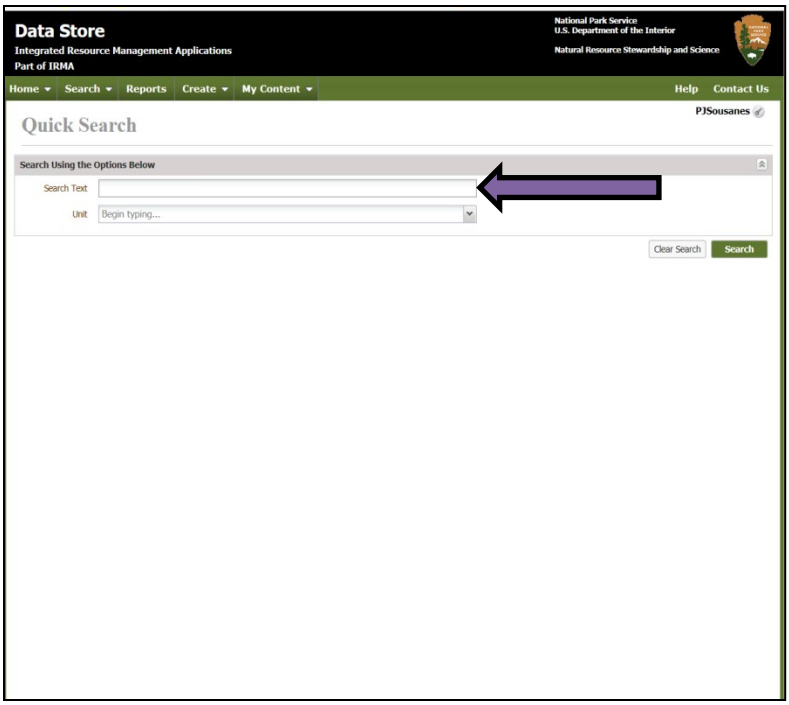
Overview

- Create an IRMA reference for an annual climate report, an annual maintenance report, or a weather summary
- Upload the document to the IRMA reference.
- Add the reference to the Climate Vital Sign Documents collection and, if it is a seasonal weather summary, the Network Weather Summaries documents collection.

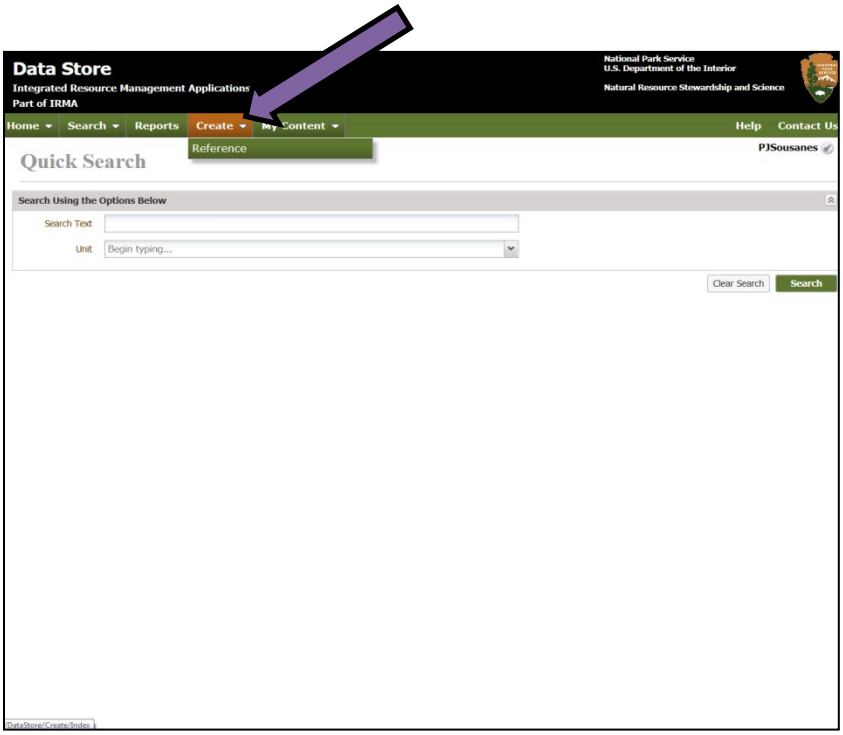
Create an IRMA reference for the annual report, the maintenance (operations) report, or the seasonal weather summary

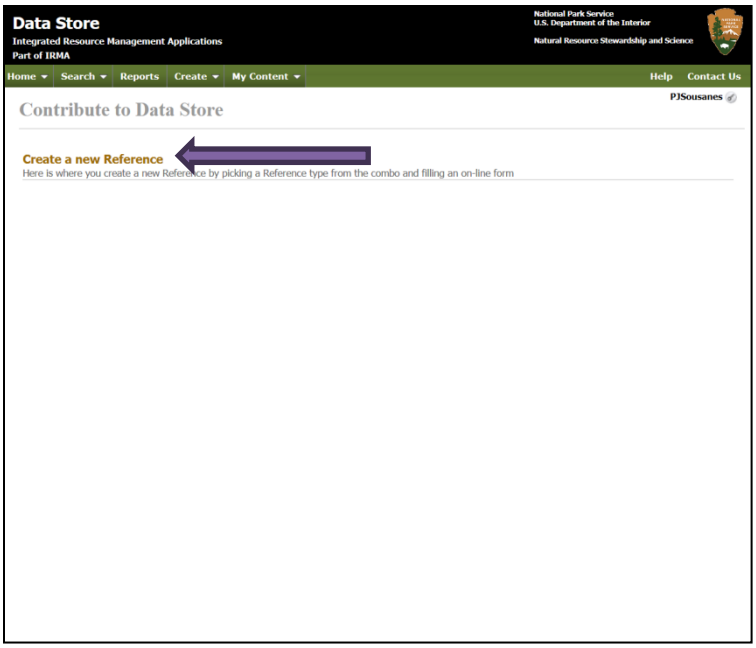
1. Navigate to https://irma.nps.gov/DataStore/ and ensure you are logged in; your username should appear in the upper right of the browser.
2. Ensure the weather summary (or other deliverable) does not already by doing a Quick Search.
3. If the record exists, acquire permission to edit if needed and ensure it follows the requirements of this SOP.



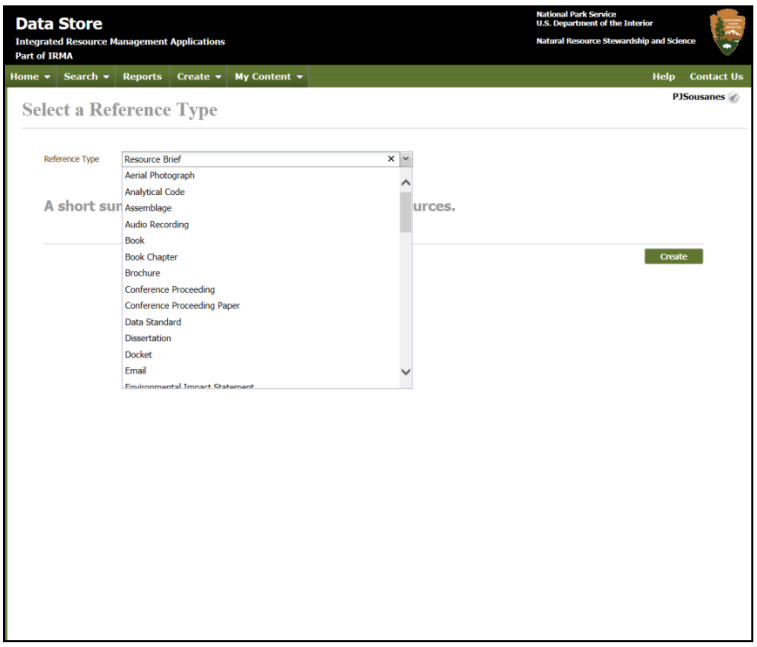


4. If the record does not exist click Create → Reference. Continue by selecting **Create a new reference on the next page**.



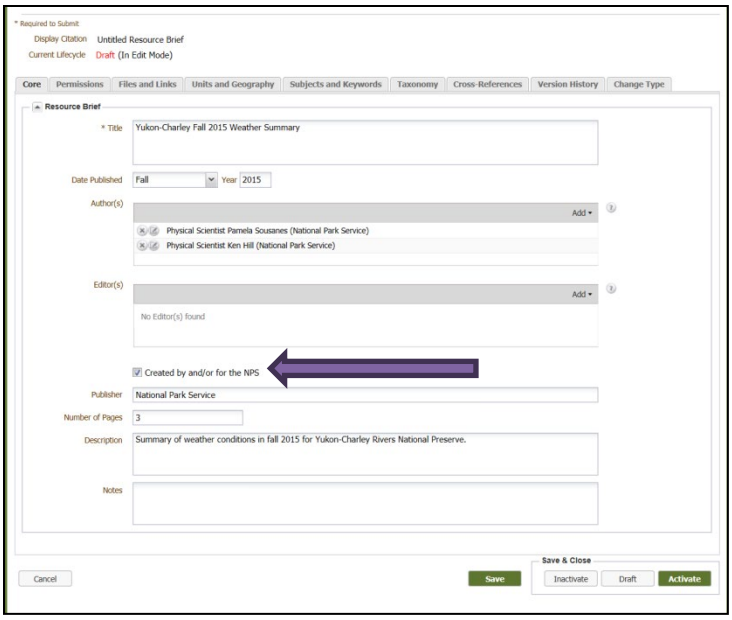


5. Select **Published Report** or **Resources Brief** in the dropdown menu under **Reference Type**.



6. Enter a Title for the reference.

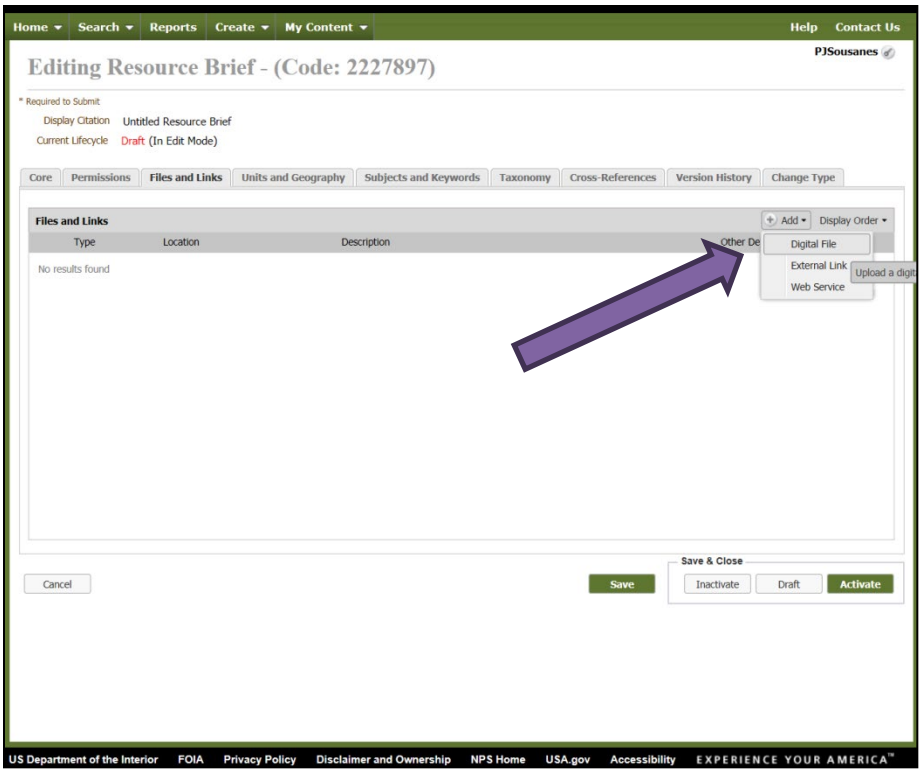
7. Populate the information required under each tab. Make sure to check the box next to Created by/and for the NPS.

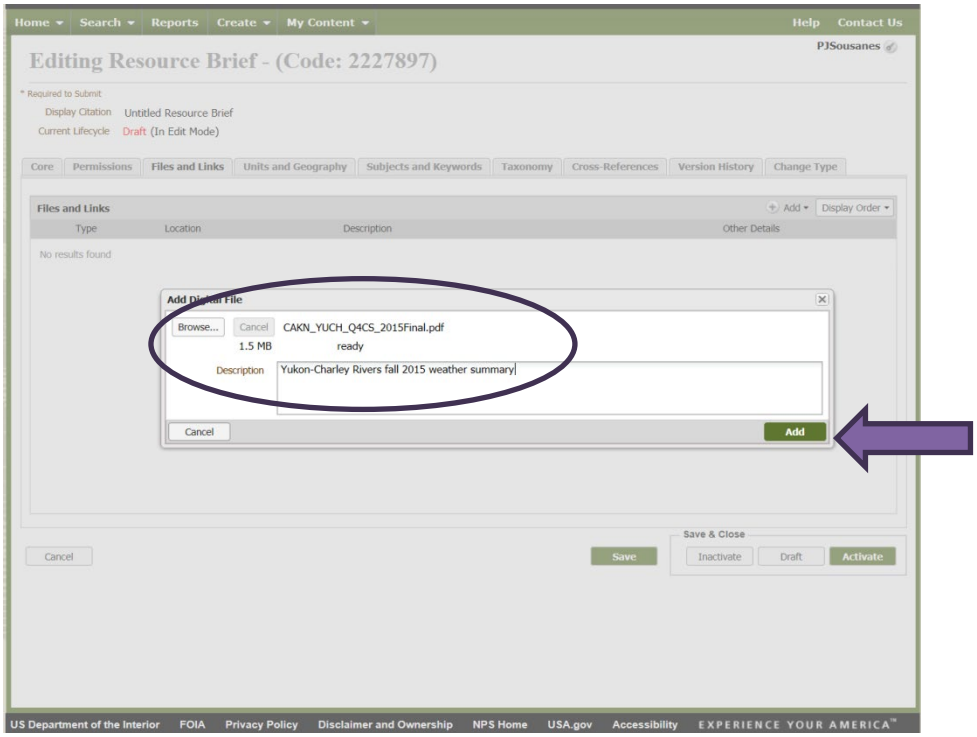


8. Fill in any remaining pertinent information for the IRMA reference under the other tabs. Important aspects include:

   - Ensuring that the park and Network are added under the **Units and Geography** tab.
   - **Permissions** are given to the Network program manager, data manager, collaborating scientists and any others who may need to edit the record.
   - Selecting 'Weather and Climate' as a subject category.
   - Under the **Cross-References** tab add the Climate Monitoring Project (ARCN: 2210690; CAKN: 2218183; SEAN: 2238818) and the Network Program code (ARCN: 2208369; CAKN: 2210836; SEAN 2170061).

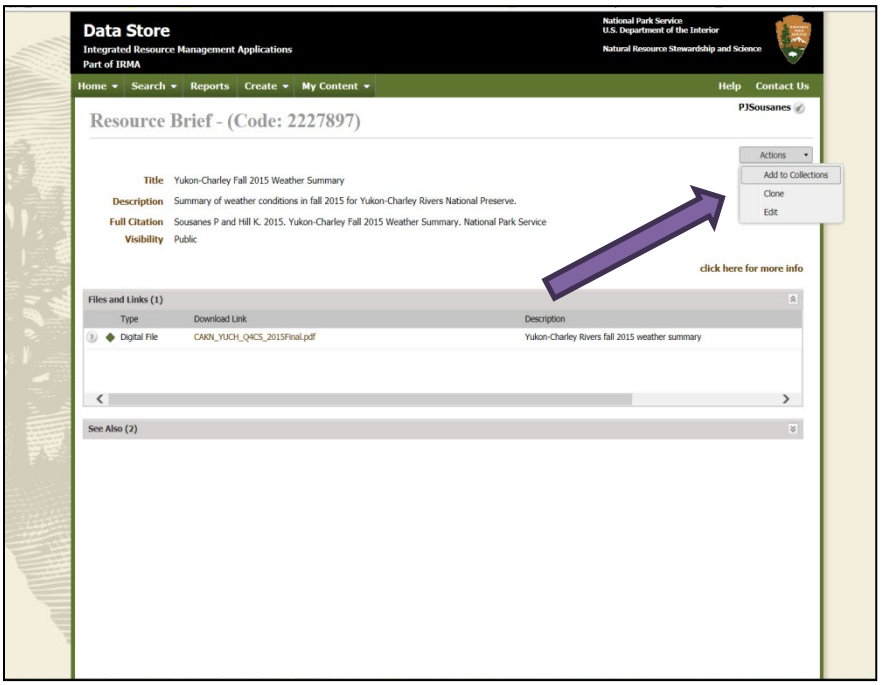
9. Under the **Files and Links** tab, select Add>Digital File. Browse for the file, add a description, and click **add**.

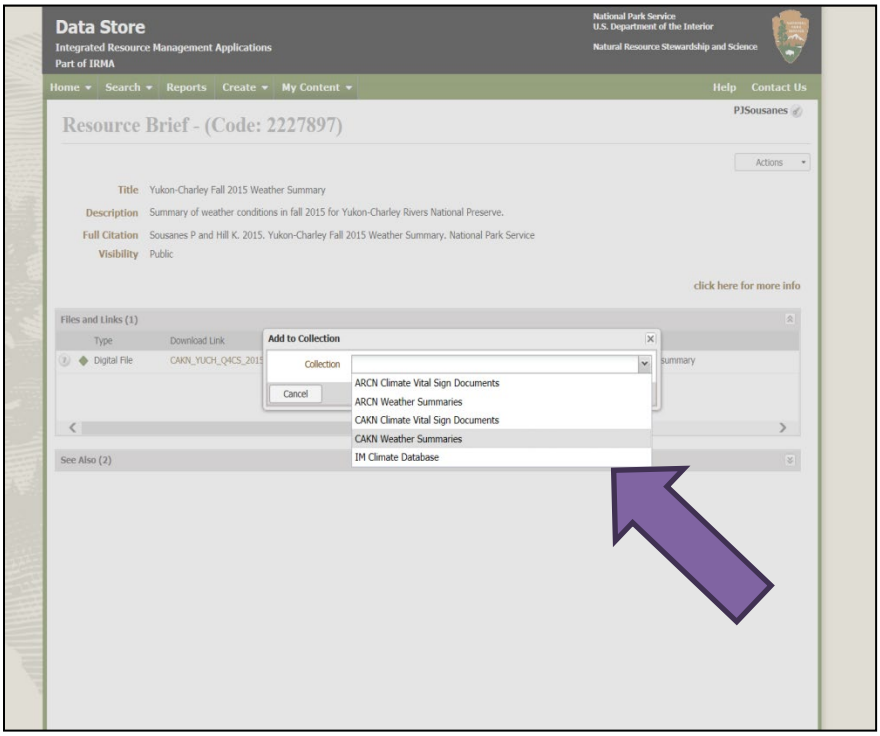


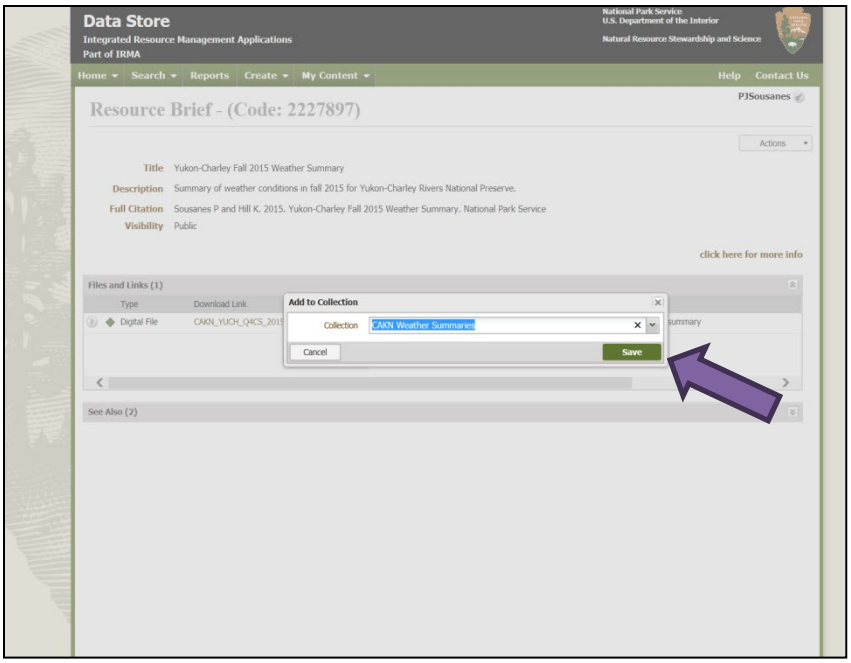


10. Review information under each tab and then click **Activate** at bottom right.

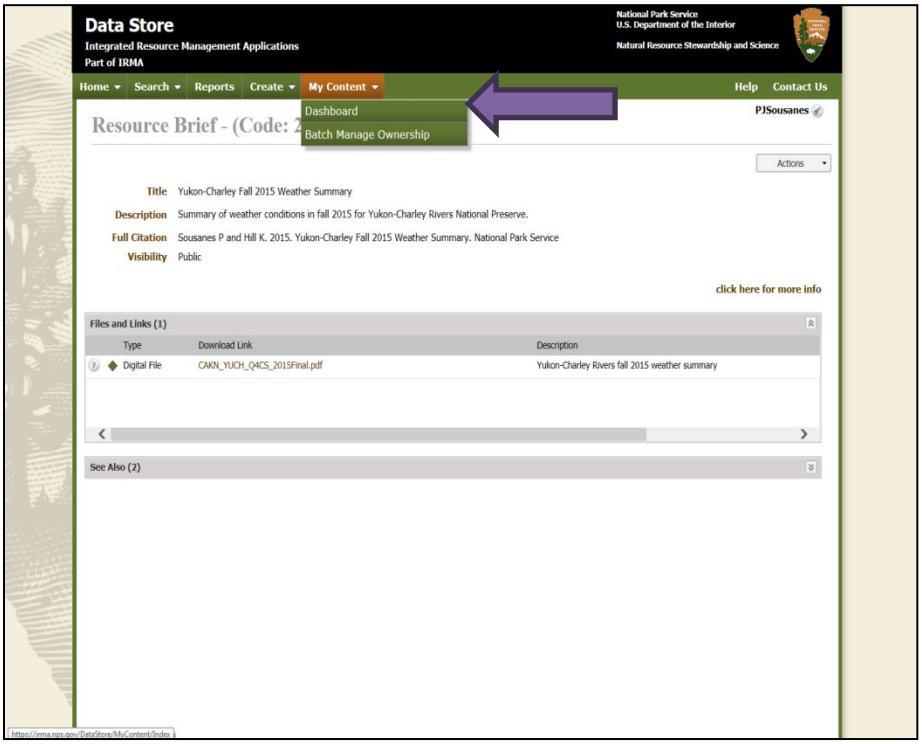
11. If adding to a specific collection: Add the reference to the appropriate collection by using the dropdown menu under **Actions** to select **Add to Collections** and click **Save**.

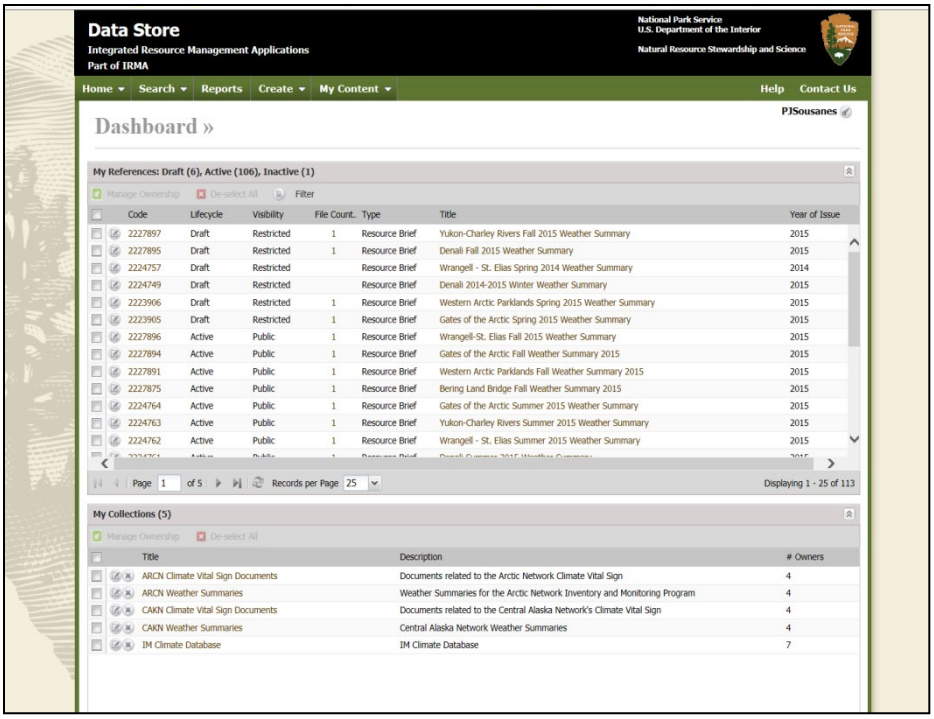




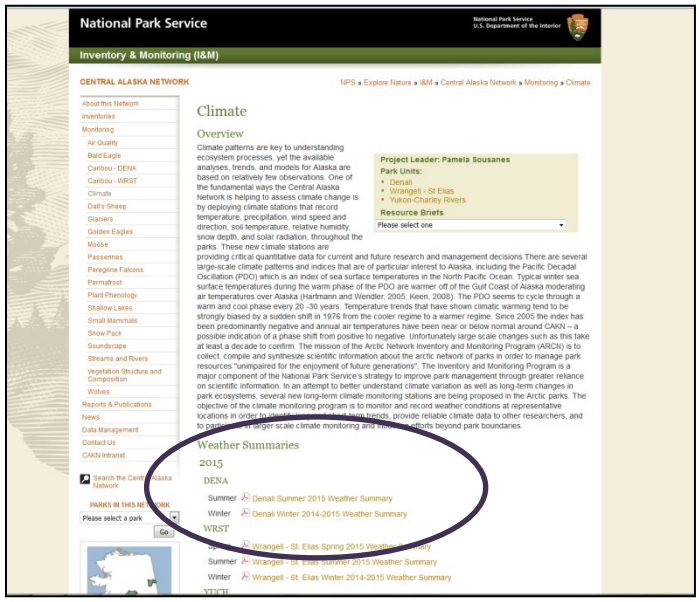


12. Verify that the reference is in the collection under My Content>Dashboard





13. Check the Climate Vital Sign profile on the Network web site to ensure the new weather summary is displayed.



Viewing and Editing Climate Vital Sign collections

IRMA allows you to view reference collections, and if given permission, to edit collection contents. It would be redundant to include detailed instructions here when there is excellent help available in the IRMA Data Store help (https://irma.nps.gov/content/help/datastore/index.aspx) document.