EROS RECORDS MANAGEMENT PLAN

Geologist Ed Harp estimates rock-fall susceptibility in American Fork Canyon, UT. 10/7/2004.

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CONTENTS

DEFINITIONS

USGS personnel should understand commonly used terms and principles employed while archiving science records. Even the terms, *archives* and *archiving* can be used in multiple ways. A practical way to achieve good archiving is to follow records management principles. Terms related to archiving and records management are listed below:

LIFECYCLE OF RECORDS

Records follow a natural evolution from creation, maintenance and use, and finally disposition.

RECORDS

n. ~ 1. A written or printed work of a legal or official nature that may be used as evidence or proof; a document. – 2. Data or information that has been fixed on some medium; that has content, context, and structure; and that is used as an extension of human memory or to demonstrate accountability. – 3. Data or information in a fixed form that is created or received in the course of individual or institutional activity and set aside (preserved) as evidence of that activity for future reference

ARCHIVES

n., – also **archive** ~ 1. Materials created or received by a person, family, or organization, public or private, in the conduct of their affairs and preserved because of the enduring value contained in the information they contain or as evidence of the functions and responsibilities of their creator, especially those materials maintained using the principles of provenance, original order, and collective control; permanent records. – 2. The division within an organization responsible for maintaining the organization s records of enduring value. – 3. An organization which collects the archives of individuals, families, or other organizations; a collecting repository. – 4. The professional discipline of administering such collections and organizations. – 5. The building (or portion thereof) housing archival collections. – 6. A published collection of scholarly papers, especially as a periodical.

PROVENANCE

n., – **provenancial**, adj. ~ 1. The origin or source of something. – 2. Information regarding the origins and custody of an item or collection.

Provenance is a fundamental principle of archives, referring to the individual, family, or organization which created or received the items in a

collection. The **principle of provenance** or the *respect des fonds* dictates that records of different origins (provenance) be kept separate to preserve their context.

BACKUP

n. ~ 1. A copy of all or portions of software or data files on a system kept on storage media, such as tape or disk, or on a separate system so that the files can be restored if the original data is deleted or damaged. – 2. Equipment held in reserve that can be substituted in case equipment in regular use fails. – v. ~ 3. To create such copies of data.

LONG-TERM

A period of time long enough for there to be concern about the impacts of changing technologies, including support for new media and data formats, and of a changing user community, on the information being held in a repository. This period extends into the indefinite future."

APPRAISAL

n. ~ 1. The process of determining if materials have sufficient value to be accessioned into a repository. – 2. The process of determining the length of time records should be retained, based on legal requirements and on their current and potential usefulness. – 3. Determining the market value of an item; monetary appraisal.

ACCESSION

n. ~ 1. Materials physically and legally transferred to a repository as a unit at a single time; an acquisition.

v. ~ 2. To take legal and physical custody of a group of records or other materials and to formally document their receipt. – 3. To document the transfer of records or materials in a register, database, or other log of the repository s holdings.

ARRANGEMENT

n. ~ 1. The process of organizing materials with respect to their provenance and original order, to protect their context and to achieve physical or intellectual control over the materials. – 2. The organization and sequence of items within a collection.

ACCESS

> n. ~ 1. The ability to locate relevant information through the use of catalogs, indexes, finding aids, or other tools. – 2. The permission to locate and retrieve information for use (consultation or reference) within legally established restrictions of privacy, confidentiality, and security clearance. – 3. COMPUTING · The physical processes of retrieving information from storage media.

PRESERVATION

> n. ~ 1. The process of protecting materials from deterioration or damage; the non-invasive treatment of fragile documents. – 2. To keep from harm, injury, decay, or destruction. – 3. LAW · An order issued by a court designed to prevent the spoliation of materials potentially relevant to litigation and subject to discovery.

> v. ~ 4. To keep for some period of time; to set aside for future use. – 5. CONSERVATION · To take action to prevent deterioration or loss.

DISPOSITION

> n., – also **final disposition** ~ 1. Materials   final destruction or transfer to an archives as determined by their appraisal. – 2. DIPLOMATICS · That portion of a record that expresses the will or judgment of the author.

Sources

"A Glossary of Archival and Records Terminology," Society of American Archivists 2004. (All definitions minus *Long-Term*)

Consultative Committee for Space Data Systems (*Long-Term*)

APPRAISAL

The EROS Scientific Records Appraisal Process is required to be applied towards all existing long-term science records, those offered to us, and those we pursue. The steps in the process include:

1. USGS Program Coordinator, Project Manager, or outside entity proposes to the EROS Archivist a collection for review.
2. Appraisal Team assembled including:
    a. Archive staff
    b. Science staff
    c. Project manager
    d. Archivist
3. Archive staff documents what is known about the collection.
4. Science team members review the documentation and provide their comments and opinions.
5. Archive staff documents the collection using the online appraisal tool.
    a. http://eros.usgs.gov/government/RAT/tool.php
6. Archive staff briefs Archivist and Project Manager
7. Archivist sends recommendation memo to USGS Program Coordinator and EROS Senior Managers for review.
    a. Archivist memo recommends:
        i. Retain / Accept   or
        ii. Dispose / Reject
8. The USGS Program Coordinator and EROS Senior Managers pass their comments to the EROS Director.
9. EROS Director accepts or rejects the recommendation.
    a. EROS Director informs Archivist and Project Manager of his decision via memo.
    b. Purge recommendations result in a search for a new home. Destruction is the last resort.

All collections offered to or maintained at EROS are reviewed through the EROS scientific records appraisal process. This process is used to ensure that EROS maintains collections aligning to our mission allowing us to best serve the land remote sensing research community.

Collections considered for National Satellite Land Remote Sensing Data Archive (NSLRSDA) inclusion go through an additional appraisal step to ensure that elements of Public Law 102-555 are addressed. See NSLRSDA Selection Criteria for details.

Contact the EROS Archivist to initiate an appraisal (John Faundeen 605-594-6092, faundeen@usgs.gov).
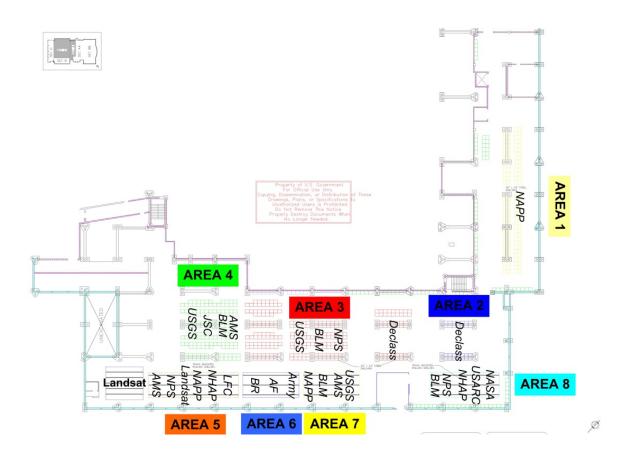
ACCESSION

The process of transferring or accepting a collection into EROS follows the formal appraisal process. Accession requires that all documentation from the entity offering the collection be received prior to the physical transfer. MOUs, LOAs, and formal sunset date agreements are documentation examples. Shipping documents also need to be received prior to acceptance of a transfer to ensure that EROS is properly prepared for the shipment. It is preferred to receive all metadata and supplemental information such as logbooks and processing histories prior to the transfer as well. Having the metadata pre-loaded into a database can greatly assist the processing of the collection and helps to locate discrepancies in connections to the records being processed. Changes in the legal title of records ownership must be received in written form by USGS before the physical transfer is started.

Collections that leave EROS go through the reverse process known as deaccession, often referred to as *purging* by EROS staff. All of the documentation and shipping summaries expected upon transfer to EROS are part of deaccessions.

The EROS Archivist will coordinate collection transfers to and from EROS.

ARRANGEMENT

How collections are physically organized is more important to analog records and electronic media stored off-line. Records stored on-line or near-line are often arranged logically. The EROS Archive uses schemes to keep collections stored together for management efficiencies. The Archivist coordinates physical changes to the Archive. The figure below describes the Archive arrangement layout:

DESCRIPTION

EROS traditionally documents a collection as it receives and processes the records. Metadata is created in databases either dynamically through ingest routines, manually by archive staff, or by a combination of the two. Often, two levels of description are created. The first has commonly been called the collection or series-level and the second is the unit or record-level. Collection level documentation summarizes the collection and provides overall context. Unit or record-level documentation provides detail information at the lowest level and directly supports our public finding aids. EROS places great emphasis upon accessibility of collections underscoring the need for complete, reliable, electronic metadata.

ACCESS

EROS has always felt committed to providing researchers with efficient and intuitive finding-aid tools. Historical examples of this commitment include the TTY connections offered in the 1980s and the release of the Global Land Information System (GLIS) in 1991. GLIS was the first system anywhere to combine collection- and record-level descriptions with graphic ground footprints and quicklook preview images. More recent examples of the value we place upon accessibility of science records are found in the Earth Explorer, GloVis, and Seamless finding aids.

The ability to provide usable, web-based access tools is directly related to the completeness of the description phase. Without adequate and complete metadata, records are often less visible and thus less exploited by researchers.

EROS is examining its multitude of public finding aids to determine the next generation of tools to field for researchers. The International Standards Organization Technical Committee 211 offers the recommended spatial metadata specification. It supercedes the Federal Geographic Data Committee previous specifications.

REFERENCE

In general, EROS provides reference services through its Customer Services staff and through the collection- and record-level documentation created during processing. One-on-one support is provided during weekday work hours, but more commonly, researcher needs are addressed directly through our extensive public finding aids.

PRESERVATION

Because EROS was established to acquire and preserve remotely sensed data, the passion to preserve these records has persisted. The first large-scale effort was the Thematic Mapper and Multispectral Scanner Archive Conversion System (TMACS). This system took Landsat data from aging High Density Tapes (HDT) and converted them to Digital Cassette Tapes (DCT). The design, build and operations phases spanned more than five years. Additional large-scale records migration and transcription efforts have included the early Landsat Wide-Band Video Tapes, SPOT HDTs, and AVHRR 9-track and Digital Linear Tapes. The Landsat Archive Conversion System (LACS) was completed in 2007 and involved converting the TMACS tapes to the next generation media.

The EROS archive preservation recommendation is to maintain three complete copies of all the electronic records to be preserved long-term. A typical implementation of this approach is to have one copy residing online or in a near-line environment. The second copy would either be online or in a near-line environment or off-line, and the third copy would be offsite. All pertinent metadata and associated browse should have at least two total copies with the second stored off-site.

Archival electronic media need to be refreshed within a 3 to 5 year window. Guidance on the appropriate media is provided in the EROS Archival Media Trade Studies published at http://igskmncngs030.cr.usgs.gov/government/records/tools.asp

All projects anticipating transcription, migration or off-site storage need to create plans for these activities and have them reviewed by the EROS Archivist prior to preservation efforts starting.

DISPOSITION

Often referred to as *purging* by the staff at EROS, disposing of records is considered to be part of the lifecycle of records. Disposing does not automatically mean destroying, in fact that step is considered to be a last resort. It does mean that the records will no longer reside at EROS. Through the EROS scientific records appraisal process records are recommended to be retained or disposed based upon many factors including mission alignment, cost to make accessible, and projected science utility. Collections to be disposed are advertised using the CEOS Purge Alert bulletin board system (http://wgiss.ceos.org/purgealert/). Organizations whose missions match the type of records being disposed, and who are willing to take on the responsibility for the collection, are sought. As an example, the University of New Mexico agreed on two separate occasions to take collections (Apollo and Shuttle Hand-Held) that EROS had deemed to not match our current mission.

The EROS Archivist will coordinate all planned dispositions to ensure that all Geography, USGS and NARA regulations and policies are addressed.

OUTREACH

EROS typically does outreach through participation in workshops, conferences, papers and symposiums. Formal outreach is done through the Outreach Project, but many projects supplement this through their external participation already noted. The Earth as Art exhibit is a good example of an outreach effort. The NSLRSDA brochures are also examples of seeking to inform or educate researchers and the public of our scientific holdings.

ADVOCACY

Building advocacy is done through our interactions with the Program Leads, the Geography Discipline, our agency, our Department, other Federal agencies, researchers and the public. Directly or indirectly, we have expanded our advocates through committees such as the NSLRSDA Advisory Committee and the LPDAAC Science Working Group for the AM Platform.

VITAL RECORDS

People, financial resources, facilities, scientific records, and information are the lifeblood of an organization. Entities that experience major disasters often struggle when trying to reconstitute themselves. Administrative and scientific records are valuable resources and it the responsibility of every agency to protect its records and information from loss. Saving a facility may not ensure we can resume operations if the necessary records are not protected. Not having your vital records available will affect how fast we can resume operations, provide services and return to a post-disaster state. The Security Manager is responsible for the EROS Continuity of Operations Plan of which the Archivist contributes administration and scientific records recommendations and information.

ADDITIONAL SOURCES

EROS Records Management
> Policy documents, archival media trade studies, appraisal tool, newsletters.
> http://igskmncngs030.cr.usgs.gov/government/records/rm.asp

USGS Records Management (Internal)
> Files management, records schedules, guidelines
> http://internal.usgs.gov/gio/irm/files.html

National Archives and Records Administration (NARA)
> Training, policies, guidance.
> http://www.archives.gov/records-mgmt/