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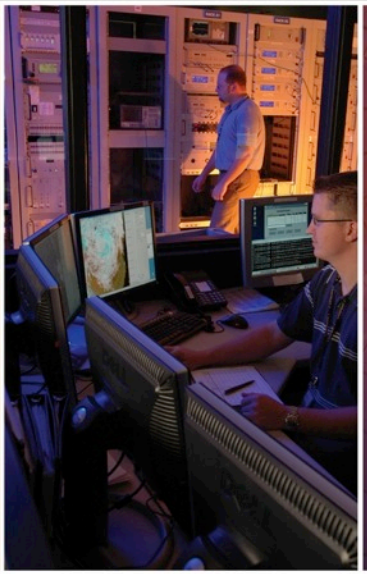
Ensuring Proper Storage for Earth Science Data: The USGS Process to Certify *Trusted Digital Repositories*



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Outline

- Drivers
- Certification Bodies
- Review Criteria
- A Twist
- Outcomes

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What is a *Trusted Digital Repository?*

A trusted digital repository **is one whose mission is to provide reliable, long-term access to managed digital resources to its designated community, now and in the future.**

(source: https://www.oclc.org/content/dam/research/activities/trustedrep/repositories.pdf)

So What? - Ensuring the long-term viability of the data we're collecting will give us a greater return on the investment we've put into our research.

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Drivers

- Consistent with New USGS Preservation Policy
- Complies with 2013 OSTP Objectives
  - Increasing Access to the Results of Federally Funded Scientific Research
- Addresses requirements from 2013 EO 13642
  - Making Open and Machine Readable the New Default for Government Information
- Supports 2013 OMB Memorandum
  - Open Data Policy—Managing Data as an Asset

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Certification Bodies

- International Standards Organization
  - Cadillac
- Data Seal of Approval (DSA)
  - Internationally Recognized
  - USGS EROS in 2014
- World Data System (WDS)
  - Internationally Recognized
- DSA-WDS Combined in 2016

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Review Criteria

1. The repository has an explicit **MISSION** to provide access to and preserve data in its domain.
2. The repository maintains all applicable **LICENSES** covering data access and use and monitors compliance.
3. The repository has a **CONTINUITY PLAN** to ensure ongoing access to and preservation of its holdings.
4. The repository ensures, to the extent possible, that data are created, curated, accessed, and used in compliance with **DISCIPLINARY AND ETHICAL NORMS**.
5. The repository has adequate **FUNDING** and sufficient numbers of qualified staff managed through a clear system of governance to effectively carry out the mission.
6. The repository adopts mechanism(s) to secure ongoing **EXPERT GUIDANCE** and feedback (either in-house, or external, including scientific guidance, if relevant).
7. The repository guarantees the **INTEGRITY AND AUTHENTICITY** of the data.
8. The repository accepts data and metadata based on **DEFINED CRITERIA** to ensure relevance and understandability for data users.

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Review Criteria

9. The repository applies **DOCUMENTED PROCESSES** and procedures in managing archival storage of the data.
10. The repository assumes responsibility for **LONG-TERM PRESERVATION** and manages this function in a planned and documented way.
11. The repository has appropriate expertise to address technical **DATA AND METADATA QUALITY** and ensures that sufficient information is available for end users to make quality-related evaluations.
12. Archiving takes place according to **DEFINED WORKFLOWS** from ingest to dissemination.
13. The repository enables users to **DISCOVER THE DATA** and refer to them in a persistent way through proper citation.
14. The repository enables **REUSE** of the data over time, ensuring that appropriate metadata are available to support the understanding and use of the data.
15. The repository functions on well-supported operating systems and other **CORE INFRASTRUCTAL** software and is using hardware and software technologies appropriate to the services it provides to its Designated Community.
16. The **TECHNICAL INFRASTRUCTURE** of the repository provides for protection of the facility and its data, products, services, and users.

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A Twist

- Typical Process
  - Apply Directly w/Criteria Responses
  - Blind Review
  - Pass/Fail
- USGS Process
  - Apply w/Criteria Responses to USGS
  - USGS Review Panel
  - More Iterative
  - Plan to Migrate to International Approach

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Outcomes

- ScienceBase
  - Pilot
  - Spring 2017
- Alaska Science Center
  - Fall 2017
- EROS
  - 2014 – Data Seal of Approval
  - Recertification
- Future Steps
  - More In-reach, Reluctant Centers, External Use

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Questions

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