Open Data Resources and Strategies - Efficient Discovery and Use of Global to Local Open Data

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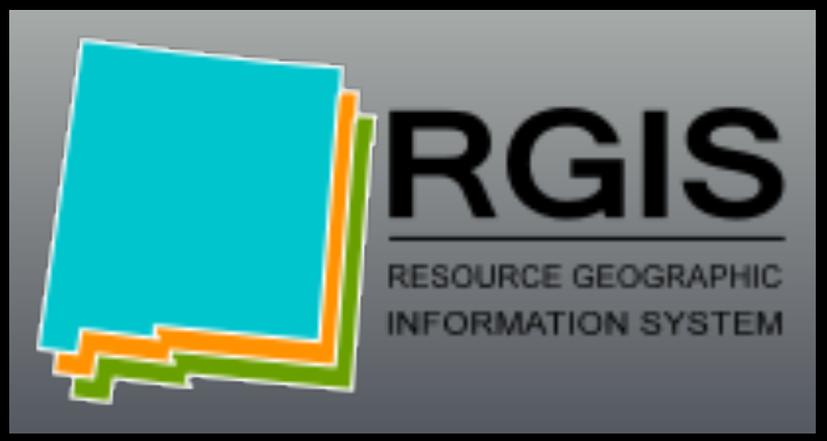
http://goo.gl/wbhPKx

Presentation Outline

- Introduction
- Current Context
- Where & How You Can Get Stuff
- Interlude - Where Your Stuff Can Go
- Demonstrations of Search Interfaces and Automated Interactions via Web Services

The geospatial data community has a long tradition of Open Data and Data Sharing



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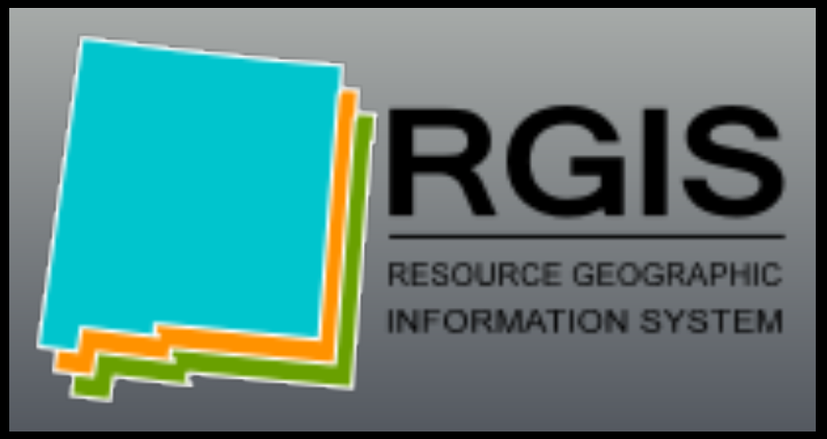

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RGIS
RESOURCE GEOGRAPHIC INFORMATION SYSTEM

FederalGeographicDataCommittee fgdc

geodata.gov
U.S. Maps & Data
your one stop for federal, state & local geographic data

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Open Geospatial Consortium

- Web Map Services (visualization)
- Web Feature Services (WFS - data access, vector)
- Web Coverage Services (WCS - data access, raster)

… and many others

The rest of the Open Data community is playing catch up - quickly

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Driver's

US Government Photo

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- data.gov - Announced in Mar 2009, went live in May 2009
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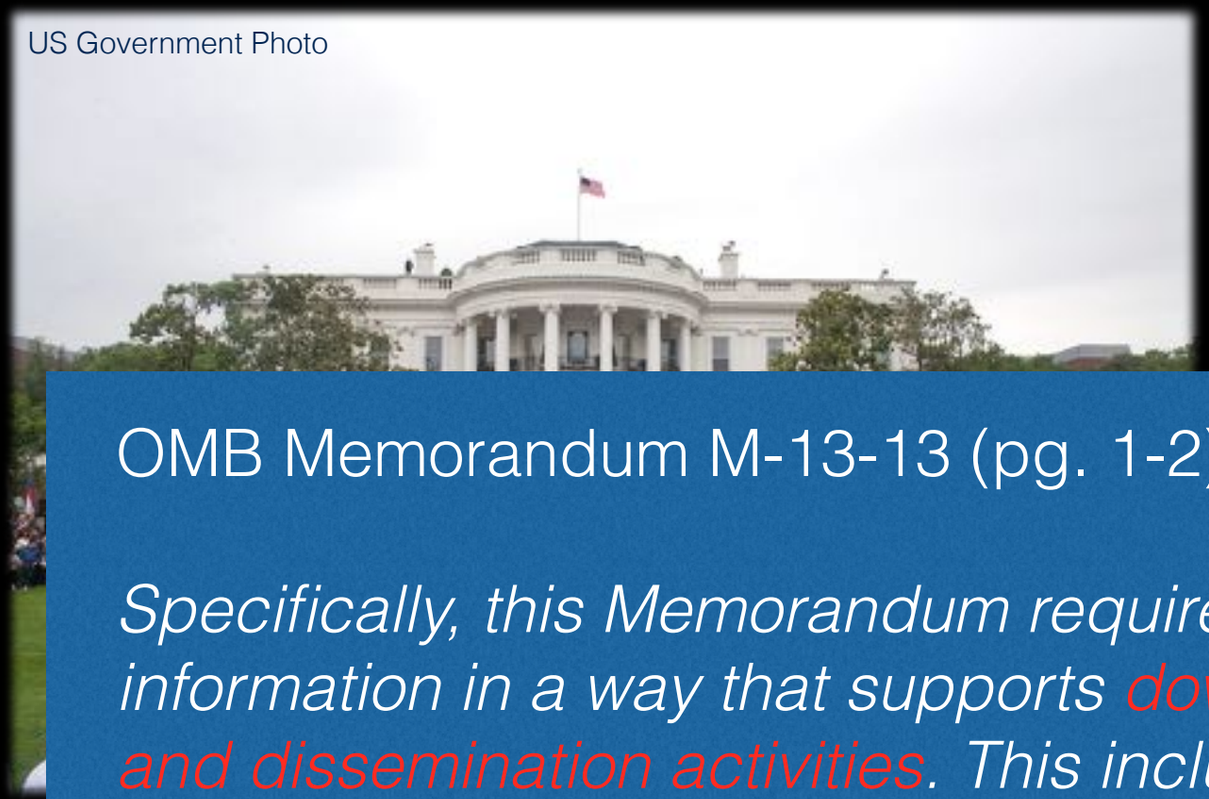
- OMB - *Digital Government: Building a 21st Century Platform to Better Serve the American People* (May 23, 2012) ➪
- Executive Order 13642 - *Making Open and Machine Readable the New Default for Government Information* (May 9, 2013) ➪
- OMB Memorandum M-13-13 - *Open Data Policy - Managing Information as an Asset* (May 9, 2015) ➪

Drive



The rest of the Open Data community is

OMB Memorandum M-13-13 (pg. 1-2)

Specifically, this Memorandum requires agencies to collect or create information in a way that supports downstream information processing and dissemination activities. This includes using machine readable and open formats, data standards, and common core and extensible metadata for all new information creation and collection efforts. It also includes agencies ensuring information stewardship through the use of open licenses and review of information for privacy, confidentiality, security, or other restrictions to release. Additionally, it involves agencies building or modernizing information systems in a way that maximizes interoperability and information accessibility, maintains internal and external data asset inventories, enhances information safeguards, and clarifies information management responsibilities.

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Specific Outcomes

- Data Management Planning/Plan requirements
- Proliferation of general and domain specific data repositories
- Increased focus on *basic* documentation
- Increased focus on machine access to data and metadata

Additional Drivers

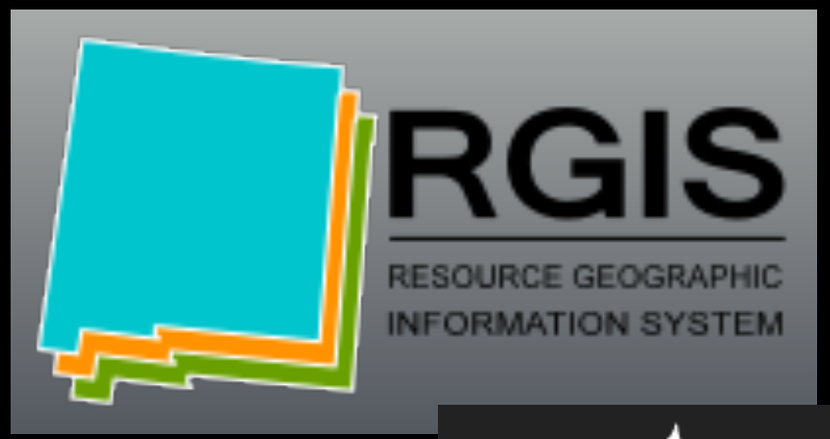
- Publisher requirements for verifiable data access statements - examples
  - Nature ➪
  - PLOS | ONE ➪
- General increased recognition of value and benefits of adopting Open Data Principles

Drivers

Where and How You Can Get Stuff

Full-service Geospatial Data Repositories (examples)

- New Mexico Resource Geographic Information System ➪



- Texas Natural Resources Information System ➪

- The National Map Small Scale Data Collection ➪ (web services ➪)

- Global Land Cover Facility ➪

General and Domain-Specific Data Repositories (examples)

- Find one for yourself: re3data.org ➪
- Figshare ➪
- Dryad ➪
- Zenodo ➪
- American FactFinder ➪, FTP server ➪, CSV Files ➪
- DataZoa (commercial) ➪

dataZoa™

Metadata Focused Data Discovery/Access

- data.gov ➪ (data catalog ➪)
- GEOPLATFORM.gov ➪
- DataONE ➪
- Global Earth Observation System of Systems (GEOSS) ➪

GEOPLATFORM.gov

GROUP ON EARTH OBSERVATIONS | GEOSS Portal
Discover, Access, Contribute
Earth Observations Information and Services

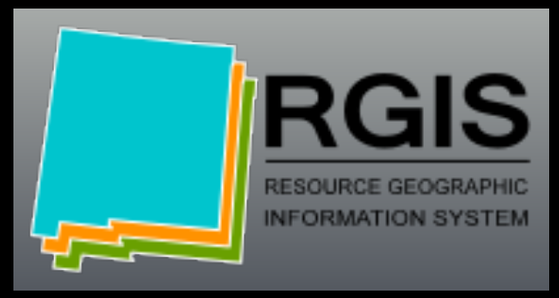
DataONE
Data Observation Network for Earth

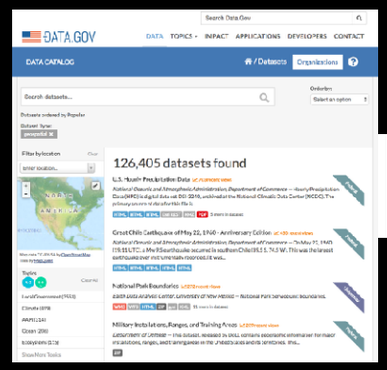
(interlude)

Where Your Stuff Can Go

Many of the Same Players

- NM RGIS
- A wide variety of the increasingly popular data sharing platforms
- Metadata publication/ registration through data.gov or GEOSS





Interacting with Remote Data Sources

Some Concepts

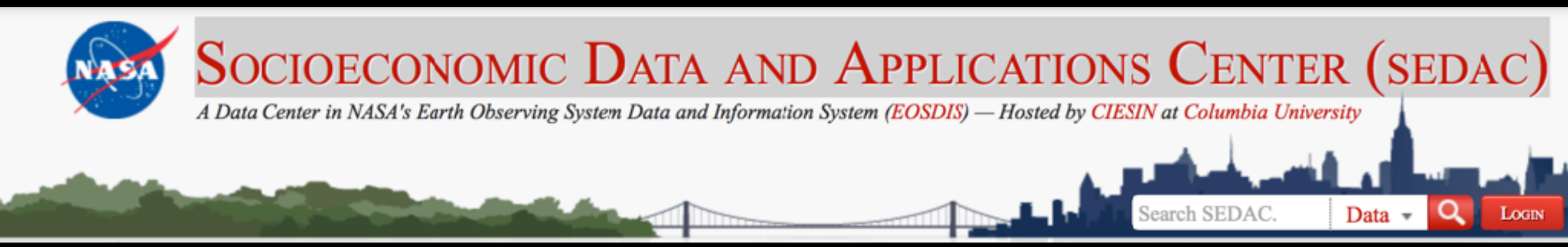
- Open Standards
- Web Services
- Application Programming Interface (API)

Searching and Using data.gov

Open Geospatial Consortium Web Services

http://sedac.ciesin.columbia.edu/maps/services#U.S.%20Census%20Grids

in Quantum GIS



US Census API

http://www.census.gov/developers/

in iPython Notebook

http://goo.gl/cfMY7X

Questions?