Earth Data Analysis Center (EDAC) was established at the University of New Mexico (UNM) in 1964 to transfer NASA space-based technology to the private and public sectors. As geospatial technology has progressed EDAC has developed skills to meet those changing requirements. In 1968 EDAC expanded to include a library clearinghouse and in 1992 became a digital data clearinghouse. As remote sensing technology evolved EDAC began processing remote sensing data in 1973 and started image processing in 1979. EDAC acquired GIS software in 1983 and became one of the first ESRI users in New Mexico. In 1990, EDAC began collecting and processing GPS data and in 1999 created an information technologies program within the organization.
New Mexico Resource Geographic Information System (RGIS) Program

- RGIS serves as a repository for New Mexico geospatial data. These data are publicly available for download from the RGIS Web site.

- Support public service programs, policy development and implementation, resource and assets management, and strategic planning within the state.

Data & Tools
- Geospatial Data
- Web Services
- Browse Data
- Spatial Search
- Metadata

http://rgis.unm.edu
RGIS History

- 1988 – New Mexico State agencies surveyed by four UNM units to assess the feasibility for developing a statewide computer mapping and geographic information system. (RGIS)
- 1989 – House Bill 218 requested funds for establishing a GIS clearinghouse
- 1990 – RGIS became a member of the New Mexico Geographic Information Systems Advisory Committee (GISAC)
- 1992 – RGIS clearinghouse opened and provided digital data via 4mm and 8 mm tapes
- 1993 – Catalog of digital geographic data in New Mexico published. (cost $40.00)
- 1994 – EDAC received FGDC Cooperative Agreement Program award to develop FGDC compliant metadata
- 1996 – RGIS website inaugurated. Provided information on the program and metadata. Data not available yet via the website. CD-ROM set of clearinghouse data released. Cost per CD was $150.00.
RGIS History

- 1997 – RGIS Clearinghouse upgraded to a National Spatial Data Infrastructure (NSDI) compliant node. Metadata could be searched by keywords and/or geographic coordinates.
- 1998 – Version 2 of the Resource Data CD released. First metadata training workshops supported by FGDC and RGIS were held.
- 2001 – RGIS website redesigned to provide online access to digital data. Data available at no cost!
- 2002 – Road centerline data collected by New Mexico Counties were made available.
- 2008 – RGIS website redesigned.
- 2013 - The RGIS website was redesigned to accommodate more sophisticated capabilities such as data discovery, access, and web mapping services.
- 2013 - RGIS designated State Digital Geospatial Data Clearinghouse by the NM Legislature and Governor (2013, HB493)
Metadata Training
NM EPSCoR
Experimental Program to Stimulate Competitive Research

Data Management
Data Access and Discovery
Data Visualization
Collaborative Tools
Virtual Models
Web Services

http://nmepscor.org
NM EPSCoR & WC WAVE - Virtual Watershed Platform

The Virtual Watershed will allow researchers from around the world to upload watershed data, run models and export results within one integrated platform.

1) Project Goals
This NSF EPSCoR Track 2 project is advancing watershed science, workforce development and education with cyber-infrastructure (C)-enabled discovery and innovation.
- Improve understanding of hydrologic interactions and impact on ecosystem services
- Accelerate interdisciplinary watershed research through innovative visualization and streamlined data management
- Engage faculty and create student participation in STEM through modeling and visualization

2) Tri-State Collaboration

3) Project Watersheds
Lehman Creek, NV
Caldera, NM
Reynolds Creek, ID
Dry Creek, ID

4) Project Research Components and Linkages

5) Data Analysis and Visualization
Example of model run variable comparisons
Integration of multi-scale model outputs: reconstruct WVP

6) Workforce Development Efforts
Grad Student Field Training
Snow Camp organizer Jim McKernan (Boise State University) demonstrates collection equipment operation to participants.
Undergraduate-Carnegie Hatch Certificate
Building a digital sandbox to demonstrate hydrological flow.
Curriculum Development
Interdisciplinary modeling course for graduate students

7) Acknowledgements
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RGIS/APOLLO

http://rgis-data.unm.edu
Early Metadata

http://rgis.unm.edu
FGDC Metadata Validation

MP / CNS – DOS Command Line

http://geo-nsdi.er.usgs.gov/validation/

http://rgis.unm.edu
Oxygen Metadata Validation

http://www.oxygenxml.com/

http://rgis.unm.edu


http://www.oxygenxml.com/
Oxygen Metadata Transformation

Online schemas to validate against:
ISO
http://www.ngdc.noaa.gov/metadata/published/xsd/schema.xsd

FGDC

FGDC to GSTORE
http://rgis.unm.edu

GSTORE to ISO
To get Apollo ready metadata from GStoRE replace "UUID" in the URLs below with the UUID of the dataset you are working on:

ISO  

FGDC  
Solving Errors

Dates
Validation URL
Case
Unknown
Useful Tools

- NOAA ISO Training Classes
- FGDC-CSDGM v2 Summary
- ISO-FGDC Metadata Crosswalk
- Early FGDC training workbooks
- Templates
Lessons Learned

- Patience!!
- Validation processes are not created equal
- ISO metadata does not contain attribute information
  - Serving both FGDC and ISO metadata
- APOLLO doesn’t like folders with more than 500 items
- APOLLO uses International ISO standard
- Use scripts whenever possible

http://rgis.unm.edu
RGIS/APOLLO Knowledge Base

http://rgis-data.unm.edu

https://github.com/edac
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