The BLM Organization

- Over 10,000 employees (not including contractors)
- 400-500 concurrent GIS users daily
- Approximately 5,000 total GIS users
- Local, District, State, and National Offices
What Type of Data?

- 17 National Datasets
  - In addition to the 3 foundational

- Each dataset has:
  - National Data Standard
  - Implementation Guideline
  - Robust National QA/QC

Example Datasets:
- Areas of Critical Environmental Concern
- Administrative Units
- Fire Perimeters
- Grazing Allotments and Pastures
- Ground Transportation Linear Features
- Land Use Planning Areas
- NLCS (Conservation Areas, Scenic Trails, Wild and Scenic Rivers, Wilderness Areas)
- Recreation Sites
- Visual Resources Inventory
- Vegetation Treatments
- Wild Horse and Burro Herd/Management Areas
The BLM Enterprise

• All data comes from the field
  • Managed locally

• SDE’s distributed in states
  • NOC Citrix vs State Managed
How Data Moves at the BLM

No editing done at national level

Each state manages their own SDE

Goal is to preform editing at the District & Local level
The Need for National Data

Data Beyond A-16

What was the issue?

Why?
The Geospatial Sprint Project

To significantly augment the agencies national data holdings, BLM kicked off a project called the Geospatial Sprint.

- Initiated in 2016 with 3 legs

- Data milestones
  - 3 foundational datasets
  - Improve number of national datasets
Addressing Data Challenges

Because of the large national ask, a team was deployed to provide augmented capacity to state & local office.

- 15 GIS Specialists
- 1 Project Manager
- Staff Deployed to States
- Funded and Tasked Nationally
The Design

- Implement new national datasets
- Clean and maintain existing layers
- Document workflows
- Populate metadata
Our Approach

• Orientation
• Weekly Team Huddles / 1 on 1’s
• Weekly Updates to COR and State Leads
• Monthly Tasking Check-Ins
• In-Progress Review
### Improving Data Quality

**BLM Data Standards**

**Robust Monthly QC Process (Python)**

**Standard ESRI Tools**

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<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
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Mean Attribute Accuracy For Feature Class

AK does not have any features in vri_lgp_dt
Results of Geospatial Sprint

- Increased national attribute compliance by 12%
- Stood up 10 missing datasets
  - 62 feature classes
  - 52 tables
- Nationally migrated 2 data standards
- Increased quality and quantity of data
- Helped States with individual priorities
Lessons Learned

Needed to gain trust before improving data

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<thead>
<tr>
<th>Process Step</th>
<th>Process Definition</th>
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<tr>
<td>Step 1</td>
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<td>Step 2</td>
<td>FGDC Compliant Metadata Creation</td>
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<td>Step 3</td>
<td>Gathering &amp; Consolidation of State, District and/or Field office data</td>
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<td>Step 4</td>
<td>Compare and Contrast all known data stores for SO, FO and DO to AZ SDE</td>
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<td>Step 5</td>
<td>Verify if State data should be added with Dana</td>
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<td>Step 6</td>
<td>Verify if any other DO or FO data should be added with GIS Specialist</td>
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<td>Data Reviewer Documentation of Geometric and Attribution Discrepancies specific to SME</td>
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<td>Meeting Set with Subject Matter Expert for Data Reviewer Session</td>
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<td>Updating data with SME Changes</td>
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<td>Update Process Section of Metadata</td>
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<td>Request to Post to SDE</td>
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<td>Step 12</td>
<td>Archival of Data Sources and Copies</td>
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- Preliminary Review
- Content Review
- Final Reconciliation
Lessons Learned

Give a little, get a lot – State Assistance
Assisted on the greater sage-grouse planning effort for NV
- Updated maps
- Analyzed data
- Calculated acreages
- Compiled maps and data into EIS
Lessons Learned - What Worked?

• The approach
  • Communication plan
  • Connecting team members
  • Flexible within each state

• Standing up missing data

• Pointing out and correcting glitches
  • QAQC
  • Replication
  • Schema

• Owning data at different levels
Challenges

- Ability to display progress
- BLM Subject matter experts availability
- Getting programs interested in our help
- Getting subject matter experts to fix issues themselves
The Future of BLM Data

• Additional Dimensions of Data Quality
  • More National Datasets
  • Better Datasets
  • Improved QAQC checks

• Improved data flow
  • Single data stream for using and editing
  • Evaluating new data management infrastructure

• Web App Editing for Subject Matter Experts

• Training
  • Process/System Training
  • Stewards owning their data
Questions?