

Building National Geospatial Features

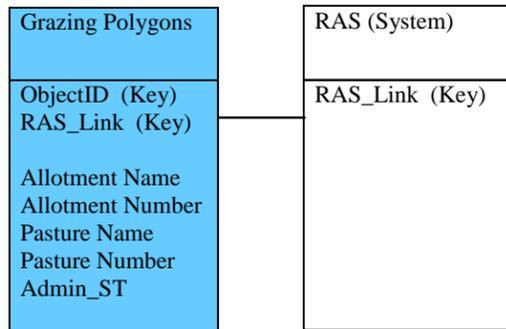
1- DEVELOP FEATURE DATA MODEL

The normal results of the data modeling process fully integrate the spatial and non-spatial data during this process so that the physical data model can be implemented.

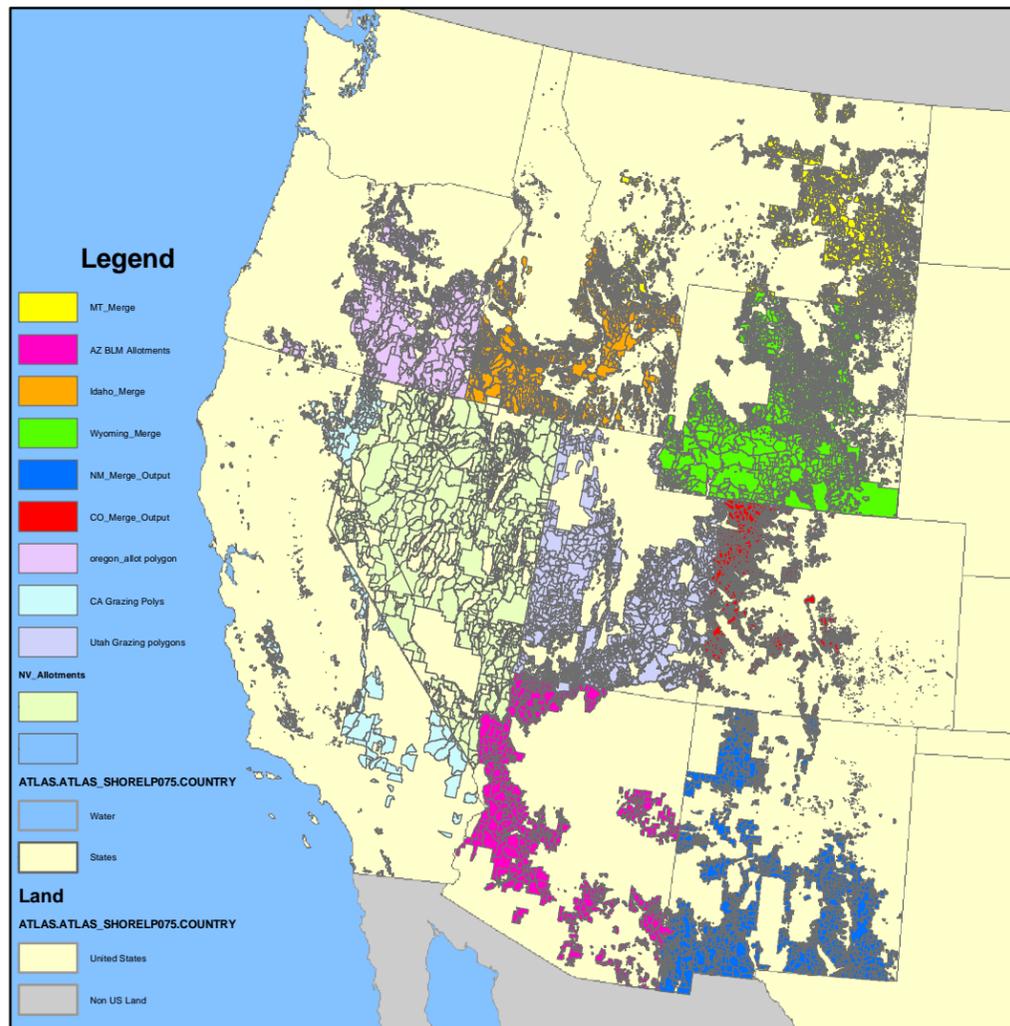
Another method for developing the feature data model is to perform analysis of the existing data and systems, along with discussions including subject matter experts.

This feature data model is currently a proposed data model that has been developed to allow the linkage between a National Geospatial Feature dataset and an existing BLM system (RAS).

The Attribute RAS_Link represents the concatenation of three existing attributes to form a unique identifier: the Administrative State, the Allotment Number, and the Pasture Number. Both Allotment Numbers and Pasture Numbers have been identified as repeating within states and between states so only by adding the Administrative State value do they become unique.



2- INVENTORY AND ANALYZE EXISTING DATA



- 1) A portion of the analysis process is to identify which data attributes exist in the current BLM non-spatial data system to use to uniquely identify the proposed features (GIS points, lines or polygons)
- 2) Analysis includes viewing and examining the current existing geospatial data to see where data duplication exists within the attributes of the geospatial data and the non-geospatial data.
- 3) Analysis also examines the actual feature data to see how much duplication actually exists. Feature duplication can occur as overlaps of features between different data sets or as errors within a single dataset. The other errors needing to be identified for correction are feature gaps. Gaps can occur where the data does not come together seamlessly between data sets and sometimes can occur within a single dataset.

In order to perform the analysis of the current grazing data spatial features, the data first had to be compiled into state-wide data sets for those areas that still had a feature data set (polygons) for each field office. While the data from several states were already in statewide feature layers, most were not. As expected, issues of projections, datums, and units of measure all had to be dealt with.

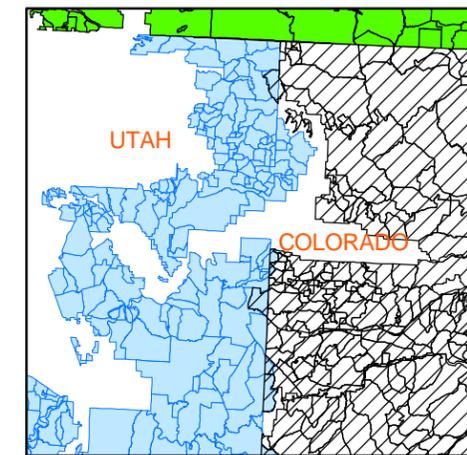
3- MAP EXISTING DATA ATTRIBUTES TO NEW STANDARDS

The existing data needs to be mapped to the new standards by having the required attribute fields all renamed to the new standardized names and all field types changed to standard types and widths.

4- EDIT AND UPDATE ALL FEATURE POSITIONAL ERRORS FOUND DURING MERGE PROCESS

Identify all data overlaps and gaps for editing and verification by Subject Matter Experts and local GIS personnel. Identify correct data layers for coincident features (lines and polygons) and edit the non-conforming data. Create business rules for any exceptions such as a grazing allotment boundary that is not coincident with BLM land ownership boundary.

State to State Data Overlap Errors



Legend

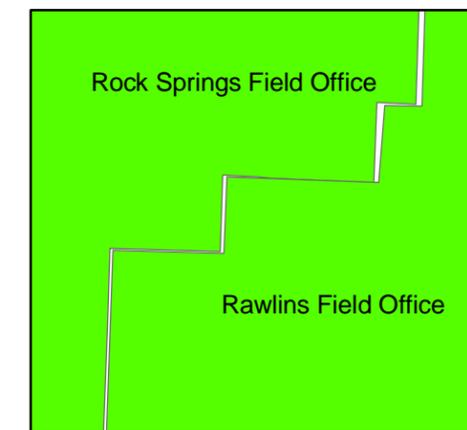
- State Boundaries (Orange line)
- WY_Merge_Allot (Green hatched)
- CO_Merge_Allot (Blue hatched)
- UT Allotments (Light Blue)

In the example to the left, the data for Colorado and Utah both cross over the state line. Which in some cases may be appropriate but needs to be verified. In some of those areas of overlap, both states show allotments in the same area.

The example to the lower left shows the gaps between data from two field offices. These gaps should be verified and removed if they are the result of poor digitization.

The map below shows the overlap or lack of overlap between data layers of grazing allotments and BLM Lands. This may not be appropriate in all instances

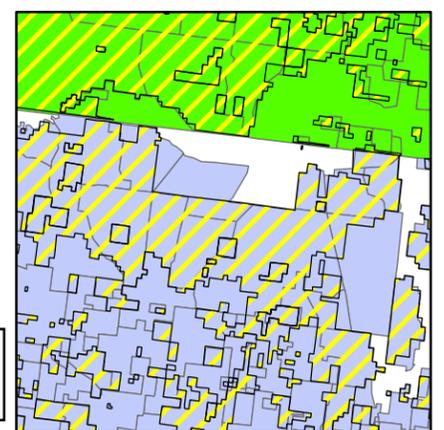
Field Office to Field Office Data Gaps



Legend

- WY_Merge_Allot (Green hatched)

Data Coincidence



Legend

- BLM_lands (Yellow hatched)
- Wyoming_Merge_Allot (Green hatched)
- Wyoming_Merge_Allot (Green hatched)

5- THE NEW ESRI GEODATABASE WILL BE PUBLISHED ONLINE FOR USE BY ALL OF BLM WHILE ALLOWING EACH STATE TO MAINTAIN AND EDIT ITS OWN PORTION OF THE FEATURES.

Data to be placed on "Regional Data Server" in Denver for Intranet access and use. ArcSDE and GeoDatabase to be used for serving and storing data.



Contact Information

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