
Cadastral Data Workflow for Arizona Agencies - DRAFT

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Background

Arizona State level agencies have turned to AGIC for guidance in development and use of Public Cadastral data to support their Geographic Information Systems (GIS) mapping activities. Agencies should rely upon publicly available Public Lands Survey Systems (PLSS) Cadastral data at the state level, and or augmented with individual County level Cadastral data when applicable.

Authoritative Cadastral Data

AGIC and the Bureau of Land Management (BLM) host and distribute The Public Lands Survey Systems (PLSS) Cadastral data (BLM_PLSS_CadNSDI) on the AGIC AZGEO Data Hub. This PLSS data is the authoritative Cadastral dataset for Arizona. This authoritative data is managed and maintained by the BLM and serves as the foundation of the PLSS at the Township, Range, and Section level.

Agencies should rely upon this authoritative PLSS data when there is a desire for referencing an agency's specific data to a common PLSS framework. The PLSS framework has the required breakdown of GIS layers into Townships, Range, and Sections polygons with supporting attributes and Indexes. At the PLSS Section level there are 16th of Section breakdowns with GIS features for PLSS Lots, Mineral Claims, and Land Grants. This level of detail can support further PLSS aliquot part legal description parcel breakdowns.

Basic Statewide Cadastral Workflow

This Statewide PLSS Framework can be consumed as an ArcGIS Server (AGS) Map Service from either BLM website <https://www.blm.gov> or AZGEO <https://azgeo-data-hub-agic.hub.arcgis.com/>. This PLSS data could be downloaded from either website if there is a need to extract, transact, and load (ETL) the data for agency specific use. These two use options (AGS Map Service or Downloads) should be evaluated as to which will meet that agency's specific needs.

Agency level project data could be referenced either geospatially using PLSS GIS layers or using attribution rules for visual representation against other agency GIS data layers. PLSS attribute

tables and section indexes may conform to, or need to be appended to accommodate agency specific indexes that support legacy data, public records research, retrieval, and business needs. This level of detailed attribute analysis is a necessary step to insure that the BLM PLSS data is the right fit for the agency. Given the authoritative nature of this BLM PLSS data it should be considered the best source of available Cadastral data. The other alternative would be to seek out County level Cadastral data as an additional source.

GIS Basemaps like aeriels and street networks are widely available in GIS open data formats from ESRI and ArcGIS Online. When basemaps are combined with Cadastral data in Agency GIS applications the viewing and spatial confirmation of agency specific data is greatly enhanced. Basemaps provide a rich user experience and often support both agency and public end users, while building confidence in agency datasets. GIS data is an excellent research and visualization tool, but absolute registration and visual correlation are subject to manmade discrepancies. Public end users should be informed about these limitations of GIS data.

Basic County Cadastral Workflow

The BLM PLSS Cadastral data can be extracted to use at the county level. The alternative is to use County level Cadastral data in the same PLSS Townships, Range, and Sections format. In some cases this can be acquired from individual Arizona counties. County Level Cadastral data may also breakdown to the individual parcel level. Where parcels are represented as aliquot parts of a section or subdivision lots in the Cadastral data. AGIC's has a list of Arizona Counties that maintain Cadastral Parcel data and some details about the availability can be found on the [AGIC website](#).

Arizona Counties have the responsibility of mapping parcel level data in a digital format along with mass appraisal system (MAS) data and providing that data to the Arizona Department of Revenue on an annual basis. In many cases it's also available to the general public either in a digital or paper format to track ownership. Each County has different rules regarding the distribution of digital data, please contact individuals listed in the Cadastral resources table on the AGIC website for availability.

Given the complexity and difference in parcel level database schemas for each individual County it would be very difficult to use multiple county datasets at the state wide level.

However, if your agencies extents is limited to a specific county consider a workflow that supports not only the Townships, Range, and Sections data, along with County level Parcel data as an additional GIS reference layer. The PLSS and parcel attributes and indexes may conform to, or need to be appended to accommodate Agency specific indexes that support legacy data and public records research, retrieval, and business needs. This level of detailed attribute analysis is a necessary step to insure that the BLM PLSS and, or Parcel level data is the right fit for the Agency.

County parcel level data can contain many additional attributes that may support an agencies business needs. References to legal ownership, addresses, and recorded parcel documents can

be beneficial to research and analysis. These types of attributes should be investigated and confirm their apparent use by the source County. It's suggested that end user contact the GIS departments or Managers of County parcel data to confirm their use and any limitations.

Cadastral Data Workflow Diagram

