
Guidance for FGDC Data Standards - 2004 Version 1

The Bureau of Land Management (BLM) Cadastral Survey program has been assigned the lead responsibility for facilitating the cadastral component of the National Spatial Data Infrastructure (NSDI) (OMB Circular A-16). The NSDI includes the level of cadastral data that is needed to support activities across government and private industry and reduce or eliminate redundant data collection across organizations. The FGDC Subcommittee for Cadastral Data articulated the characteristics of the Cadastral NSDI at the October 2003 meeting in Portland Oregon. These characteristics are:

Data Publication

- Freely available

Data Standardization

- Reflects the Cadastral Core Data Standard
- Provides linkages to additional source information
- Can be integrated across jurisdictional boundaries
- Built from common and agreed to spatial definitions of common boundaries and common features

Data Documentation

- Metadata documentation is current

Data Integrity (quality and currency)

- Maintained and kept current by the data provider
- Shared stewardship approach to data maintenance
- Allows for “merge on demand” which is the ability to combine information on an as needed basis from multiple sources

The Cadastral Core Data Standard identifies an essential minimum data content that needs to be shared and standardized across organizations. Any projects that use federal funding, such as the BLM's Geographic Coordinate Database (GCDB), are required to comply with these standards. In concert with data standards compliance, projects will also be required to honor any and all proprietary data to protect the privacy of individuals and honor the sovereignty of Tribal Nations. Specific guidance is provided below.

Data Publication

The portion of the data that is collected and published for use by all government agencies and private industry will basically conform to the level of parcels that reflect the Public Land Survey System (PLSS) and federal surveys including township boundaries, sections and section subdivisions, special surveys, mineral surveys, land grants and other boundaries that are used to portray the level of federal conveyance, and withheld or acquired rights and interests. The publishing of data that portrays individual property rights and interests will not be included in the scope of data that is made available to the public.

Data Standardization (Content and Positional)

Content - The level of content standardization should conform, at a minimum, to the FGDC “Core Data Standard” which is a subset of the Cadastral Data Content Standard (see Website for this publication www.nationalcad.org). Beyond the Core Data Standard the Cadastral Data Content Standard provides definitions and relationships for boundary, corner and transaction information.

Positional - In addition, to data content standards, steps must be taken to standardize on the positions of boundaries and corners. Compliance with the agreed upon positions will allow data from multiple sources to be “merged on demand” independent of administrative or jurisdictional boundaries. Efforts should be taken to collaborate and reach mutual agreement on geographical positions among all affected parties. It is understood, however, that this may not always be possible without a field survey. In these instances, conflicts should be highlighted in the data to make users aware of the issue prior to publication and subsequent use. If a custodian has been identified for a particular corner or boundary, positional updates need to be posted to the steward to assure that all systems that rely on this information will benefit from improved positional information. The FGDC Subcommittee for Cadastral Data is developing data steward guidelines that will be posted to the web site.

Data Documentation

Data characteristics such as accuracy and vintage shall be documented in accordance with the minimum FGDC Spatial Meta Data Standards. One of the advantages of adopting the data standards is that documentation related to data elements is provided by the standard. Examples of the other metadata that is included in the metadata standards are found at <http://www.fgdc.gov/metadata/contstan.html>

Data Integrity

Data integrity describes the currency of the data and the level of maintenance. Data integrity will be retained through the transfer and reformatting of data into the standards. Data shall not be recollected, recreated or changed unless its quality can be improved and the results reported and agreed upon by the data steward. Data errors or problems will be reported to the data steward for resolution. If there is not a formal data steward arrangement in place, the steward is presumed to be the data provider. Cadastral data should reflect as accurately as possible the position of monumentation on the ground and reflect the content and position of boundaries as documented in legal cadastral survey records.

Data Models

Cadastral data models reflect the content of the data standards and are formulated to operate with commercial software. The FGDC Subcommittee for Cadastral Data works with software providers to assure that data models reflect the standard. Linkages to these models are provided on the web site.