

Idaho Technology Authority (ITA)

ENTERPRISE STANDARDS – S4000 – INFORMATION AND DATA

Category: S4XXX Idaho Legislative and Congressional Districts Standard

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I. DEFINITION

See ITA Guideline [G105](#) (ITA Glossary of Terms) for definitions.

II. RATIONALE

Statewide Idaho Legislative and Congressional District layers are a critical source of information for State and Local Government as well as Citizens for determining their representative. Many private sector and local, state, and federal government agencies have business needs for Idaho Congressional and Legislative District Framework layers.

III. APPROVED STANDARD(S)

See Attachment

IV. APPROVED PRODUCTS(S)

Any GIS Software, either desktop or online, capable of ingesting and displaying Open Geospatial Consortium (OGC) Web Map Standard (WMS) services.

V. JUSTIFICATION

A statewide Idaho Congressional and Legislative Districts Framework is a critical source of information for many private and public sector entities.

VI. TECHNICAL AND IMPLEMENTATION CONSIDERATIONS

Any GIS Software, either desktop or online, capable of ingesting and displaying Open Geospatial Consortium (OGC) Web Map Standard (WMS) services.

VII. EMERGING TRENDS AND ARCHITECTURAL DIRECTIONS

Data will be shared in accordance with ITA Standard [4250](#) – Enterprise Geographic Information System (GIS) Data Sharing Standards.

VIII. PROCEDURE REFERENCE

The format, content and development of this standard adheres to ITA Policy [P5030](#) for Framework Standards Development, ITA Standard [S4250](#) Data Sharing Standards and ITA Standard [S4220](#) Geospatial Metadata.

IX. REVIEW CYCLE

Review will occur at least annually.

X. CONTACT INFORMATION

For more information, contact the ITA Staff at (208) 605-4064.

REVISION HISTORY

02/15/2023 – Standard made available for public review and comment.



STATE OF IDAHO

Idaho Congressional and Legislative Districts Data Standard

Part of the Boundary Theme

Version 1
Effective 2023

Developed by the Boundary Technical Working Group

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1. Introduction to the Idaho Congressional and Legislative Districts Data Standard

Statewide Idaho Legislative and Congressional District layers are a critical source of information for State and Local Government as well as Citizens for determining their representative. Many private sector and local, state, and federal government agencies have business needs for Idaho Congressional and Legislative District Framework layers.

The Idaho Congressional and Legislative Districts Standard is intended to facilitate integration and sharing of up-to-date Idaho Congressional and Legislative District data and enhance the dissemination of this information. This standard does not instruct on how Idaho Congressional or Legislative District databases are designed for internal use.

Congressional and Legislative boundary data is developed by the Idaho Legislative Office and a Contactor from RDI based on the decennial census conducted by the U.S. Census Bureau. The standard was further developed in coordination with the Boundary Technical Working Group, a subgroup of the Idaho Geospatial Council – Executive Committee (IGC-EC). This standard will be reviewed on an annual basis and updated as needed.

1.1. Mission and Goals of the Standard

The Idaho Congressional and Legislative Districts Standard supports a statewide dataset that is consistent with applicable state and national standards. It establishes the minimum attributes and geospatial database schema for the Idaho Congressional and Legislative Districts Framework.

The Idaho Congressional and Legislative Districts Framework will be appropriately shared for the benefit of all. The fields in the Idaho Congressional and Legislative Districts Data Standard will be general enough to incorporate basic information without requiring major changes the internal data models. This standard allows for expansion to a more complex data structure and schema.

The goal of the standard is to encourage the use of the authoritative dataset created by the Idaho Legislative Office and to promote the delivery of this data in a consistent, predictable, and standardized format.

1.2. Relationship to Existing Standards

This Idaho Congressional and Legislative Districts Standard relates to existing standards as follows: Metadata is provided in accordance with ITA Standard [S4220](#) Geospatial Metadata. Census tracts, block groups and blocks along with 2020 Census population numbers underlying the Idaho Congressional and Legislative Districts have been collected using standards established by the U.S. Census Bureau.

1.3. Description of the Standard

This standard describes the spatial and tabular data structure of the two datasets describing Idaho Congressional and Legislative Districts respectively.

This standard is devised to be:

- Simple, easy to understand, and logical.
- Uniformly applicable, whenever possible.
- Flexible and capable of accommodating future expansions.
- Dynamic in terms of continuous review.

1.4. Applicability and Intended Uses

This standard applies to the Idaho Congressional and Legislative Districts element of the Boundary theme of The Idaho Map (TIM).

When implemented, it will enable access to geometry and attribute information about Idaho Congressional and Legislative Districts. It will increase interoperability between automated geographic information systems and enable sharing and efficient transfer of information for aggregation. Further, it will encourage partnerships between government, the private sector, and the public in order to avoid duplication of effort and ensure effective management of information resources. It will help improve Idaho Congressional and Legislative Districts Data quality as errors are identified and resolved.

This standard does not consider data sharing agreements, contracts, transactions, privacy concerns, or any other issues relating to the acquisition and dissemination of Idaho Congressional and Legislative Districts Data.

1.5. Standard Development Process

Both the Congressional and Legislative District layers were developed by the Idaho Commission for Reapportionment using the process described in their [Final Report dated](#)

[November 10, 2021.](#)

Once the data and report were completed, the Data Standard Creation tool was used to generate a first draft of the standard. This draft was then further edited by the contractor supporting redistricting mapping for the Idaho Legislative Office and the Boundary Technical Working Group.

After initial development the draft standard document was shared with the Idaho Geospatial Council Executive Committee (IGC-EC) and the Idaho Geospatial Council (IGC) in accordance with the review and approval process described in ITA Policy [P5030](#) Framework Standards Development.

1.6. Maintenance of the Standard

This standard will be revised on an annual basis and in accordance with the ITA Policy [P5030](#) Framework Standards Development.

2. Body of the Standard

2.1. Scope and Content

The scope of the Idaho Congressional and Legislative Districts Data Standard is to describe two statewide layers which identifies the physical locations and attributes of Idaho Congressional and Legislative Districts in Idaho respectively.

2.2. Need

Statewide Idaho Legislative and Congressional District layers are a critical source of information for State and Local Government as well as Citizens for determining their representative. Many private sector and local, state, and federal government agencies have business needs for Idaho Congressional and Legislative District Framework layers.

This standard provides the foundation to aggregate Idaho Congressional and Legislative Districts Data for centralized access and stewardship information.

2.3. Participation in the Standard Development

The development of the Idaho Congressional and Legislative Districts Data Standard adheres to the ITA Policy [P5030](#) Framework Standards Development. The standard is reviewed in accordance with ITA Policy [P5030](#) requirements, there was opportunity for broad participation and input by stakeholders in the development of this standard. The process will be equally broad for input on updates and enhancements to the standard. As with all Idaho Framework standards, public review, and comments on the Idaho Congressional and Legislative Districts Data Standard is encouraged.

2.4. Integration with Other Standards

The Idaho Congressional and Legislative Districts Data Standard follows the same format as other Idaho geospatial framework data standards. The Idaho Congressional and Legislative Districts Standard may contain some of the same attributes as other framework standards and may adopt the field name, definition, and domain from the other standards to promote consistency.

Redistricting plans, and thus the resulting geographic dataset, need to follow a number of Federal and State Constitutional requirements. Those requirements are detailed in the metadata associated with the spatial layers, as well as in the online [redistricting criteria chart](#).

2.5. Technical and Operation Context

2.5.1. Data Environment

The data environment is a digital vector polygon with a specific, standardized set of attributes pertinent to the Idaho Congressional and Legislative Districts Framework. Idaho Congressional and Legislative Districts Data shared under this standard must be in a format supporting vector polygon.

2.5.2. Reference Systems

The Idaho Congressional and Legislative Districts Framework will be published in the Idaho Transverse Mercator (IDTM) NAD83 coordinate system, which is the State of Idaho's single zone coordinate system. Data is not required to be submitted in the ITDM coordinate system but must have a defined coordinate system clearly described in the metadata.

2.5.3. Global Positioning Systems (GPS)

Some data provided might contain geometry from GPS methods, and the provided metadata should describe this, if applicable. However, geometry from a GPS is not required to meet this standard.

2.5.4. Interdependence of Themes

Idaho Congressional and Legislative Districts geometry may be coincident with other framework data, such as Geometry coincident with census 2020 block layer. At this time there is no enforcement of coincidence or topology relationships between Idaho Congressional and Legislative Districts Framework and other Idaho Framework elements.

2.5.5. Encoding

When data is imported into, and exported from, the Idaho Congressional and Legislative Districts Framework, encoding will take place to convert data formats and attributes.

2.5.6. Resolution

No specific requirements for resolution are specified in this standard. Resolution will be documented in the metadata.

2.5.7. Accuracy

Data is based on 2020 Census Block level data and follows the accuracy standards laid out for that dataset.

2.5.8. Edge Matching

No edge matching is required between jurisdictions, or between this and other framework layers.

2.5.9. Unique Identifier

The DISTRICT attribute which represents the legislative district number or the congressional district number in the Legislative District and Congressional District, respectively.

2.5.10. Attributes

Attributes for public and intergovernmental distribution are described in Section 3 of this standard.

2.5.11. Stewardship

Perpetual maintenance and other aspects of lifecycle management are essential to Idaho Congressional and Legislative Districts Framework. Details of stewards, their roles and responsibilities, and processes, are set forth in a Idaho Congressional and Legislative Districts Framework Stewardship Plan and related documents.

2.5.12. Records Management and Archiving

Congressional districts boundary lines are drawn every ten years based on the Census block data.

2.5.13. Metadata

The Idaho Congressional and Legislative Districts Framework metadata will describe the methods used to update and aggregate the individual Idaho Congressional and Legislative Districts data contributions, processes or crosswalks performed, definition of attributes, and other required information. This metadata will conform to the metadata standards as set out in ITA Standard [S4220](#) Geospatial Metadata.

3. Data Characteristics

3.1. Minimum Graphic Data Elements

The geometry of the features in Idaho Congressional and Legislative Districts Framework is vector polygon.

3.2. Optional Graphic Data Elements

Not applicable.

3.3. Standard Attribute Schema

Congressional and Legislative Districts both use the same Schema.

| Field Name | Alias | Data Type | Length | Description | Examples |
|------------|--|--------------|-------------------------|---|-----------|
| DISTRICT | District Number | Text | 12 | Legislative or Congressional District Number | 1 |
| POPULATION | Total Population | Long Integer | | Census 2020 Population of Idaho used in determining district boundaries | 919,553 |
| NH_WHT | Non-Hispanic White | Long Integer | | Size of Non-Hispanic White population from 2020 Census | 735,930 |
| AP_BLK | Black or African American | Long Integer | | Size of Black or African American population from 2020 Census | 11,407 |
| AP_IND | American Indian and Alaska Native | Long Integer | | Size of American Indian and Alaska Native population from 2020 Census | 35,261 |
| AP_ASN | Asian | Long Integer | | Size of Asian population from 2020 Census | 21,566 |
| AP_HWN | Native Hawaiian and Other Pacific Islander | Long Integer | | Size of Native Hawaiian and Other Pacific Islander population from 2020 Census | 4,623 |
| HISPANIC_O | Hispanic or Latino | Long Integer | | Size of Hispanic or Latino population from 2020 Census | 108,783 |
| AP_OTH | Other Race | Long Integer | | Size of population belonging to any race not included in any other attribute in this table from 2020 Census | 87,880 |
| IDEAL_VALU | Ideal Population Value | Double | Precision: 7 Scale 1 | Ideal population size calculated as Idaho's total population divided by the number of districts | 919,553 |
| DEVIATION | Deviation from Ideal Value | Double | Precision: 7 Scale 1 | Difference between actual population in a district and the ideal population value | 0 |
| F_DEVIATIO | Percent Deviation from Ideal Value | Double | Precision: 4 Scale 2 | Percent deviation from the ideal value | 0.00% |
| AREA | Square Miles | Double | Precision: 7 Scale 2 | Number of square miles contained in a Legislative or Congressional District | 39,813.30 |

3.4. Data Quality

Data quality considerations for Idaho Congressional and Legislative Districts need to conform to Federal and Idaho Constitutional Criteria as highlighted in the [Redistricting Criteria Chart](#) published by the Idaho Legislative Services Office and The Idaho Commission for Reapportionment.

1. Congressional Plan:

- a. U.S. Constitutional Requirements (must be satisfied above all other criteria):
 - i. Districts must have a population that is as nearly equal as practicable.
- b. Statutory Requirements (mandatory – must be satisfied above advisory criteria. Must be balanced out with each other.)
 - i. Determine district population using U.S. census date exclusively.
 - ii. Avoid county division.
 - iii. Include contiguous counties in a district containing more than one county.
 - iv. Don't divide counties to protect political parties or incumbents.
 - v. Preserve traditional neighborhoods and communities of interest.
 - vi. Retain precinct boundaries.
- c. Statutory Criteria – advisory. Satisfy as possible.
 - i. Avoid oddly shaped districts.
 - ii. Keep divisions per county to a minimum.

2. Legislative Plan:

- a. U.S. Constitutional Requirements (must be satisfied above all other criteria):
 - i. Districts must have substantially equal population.
- b. Idaho Constitutional Criteria (must be satisfied above all statutory criteria)
 - i. Include contiguous counties in a district containing more than one county.
 - ii. Don't divide counties, except as necessary to comply with U.S. Constitution
 - iii. A county may be divided into more than one district when the districts are wholly contained within that county.
- c. Statutory Criteria – Mandatory. Must be satisfied above advisory criteria. Must be balanced with each other.
 - i. Determine district population using U.S. census data exclusively.
 - ii. Avoid county division.
 - iii. Include contiguous counties in a district containing more than one county.
 - iv. Don't divide counties to protect political parties or incumbents.
 - v. Preserve traditional neighborhoods and communities of interest.
 - vi. Retain precinct boundaries.

- vii. Ensure that districts containing more than one county, or a portion of the county are connected by interstate or by U.S. or state highway.
- d. Statutory Criteria – advisory. Satisfy as possible.
 - i. Avoid oddly shaped districts.
 - ii. Keep divisions per county to a minimum.

Appendix A: References

Idaho Technology Authority (ITA). *Information and Data Policy P5000, Category: P5030 Framework Standards Development Policy*. <https://ita.idaho.gov/psg/p5030.pdf>

Idaho Technology Authority (ITA). *Enterprise Standards S4000 Geographic Information Systems (GIS) Data, Category: S4220 Geospatial Metadata*. <https://ita.idaho.gov/psg/s4220.pdf>

Idaho Commission for Reapportionment, *Final Report*. November 10, 2021. https://sos.idaho.gov/elections/data/redistricting/2021/Final_Report.pdf

Idaho Commission for Reapportionment, 2021. *Legal Criteria for Redistricting Plans*. https://legislature.idaho.gov/wp-content/uploads/redistricting/2021/Redistricting_Criteria_Chart.pdf

Appendix B: Glossary

See ITA Guideline [G105](#) (ITA Glossary of Terms) for definitions.