

Idaho Technology Authority (ITA)

ENTERPRISE STANDARDS – S4000 INFORMATION AND DATA

Category: S4245 – Idaho Trails Data Standard

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I. DEFINITION

See ITA Guideline G105 (ITA Glossary of Terms) for definitions

II. RATIONALE

A statewide Trail data layer is a critical source of information for Recreation, Tourism and more. Many private sector and local, state, and federal government agencies have business needs for a Trails Framework.

A Trail Standard is intended to facilitate integration and sharing of up to date Trail data and enhance the dissemination and use of Trail information.

III. APPROVED STANDARD(S)

See attachment, included in this document

IV. APPROVED PRODUCTS(S)

GIS Software used in Idaho can generate and consume the specified file format.

V. JUSTIFICATION

GIS Data Standardization is an important component of the Idaho Spatial Data Infrastructure. This Trail Standard will help facilitate integration, consumption and sharing of spatial and tabular trail information in Idaho.

VI. TECHNICAL AND IMPLEMENTATION CONSIDERATIONS

This standard requires a minimum of information to share and integrate trail information with existing Geographic Information Systems. Because Trail data is provided in different formats, including as a web service the ability to downloadable this data in different GIS formats, few jurisdictions will have difficulty implementing the standard. Additionally, standardized trail information is also available on ready-to-view web mapping applications hosted by the Idaho Department of Parks and Recreation.

VII. EMERGING TRENDS AND ARCHITECTURAL DIRECTIONS

The data is, among other formats, also provided as a REST service which is consistent with the latest trends in GIS technology.

VIII. PROCEDURE REFERENCE

The format, content and development of this standard adhere to Policy P5030 for Framework Standards.

IX. REVIEW CYCLE

Review will occur as needed

X. CONTACT INFORMATION

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

REVISION HISTORY

Effective Date: March 18, 2021



STATE OF IDAHO

Idaho Trails Data Exchange Standard

Part of the Trails to the Transportation Framework Theme

Version 1

Effective Month Day, 2021

Revision History

First draft generated by Idaho Parks and Recreation and Chair IGC-EC

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1. **Introduction to the Trail Data Exchange Standard**

A statewide Trail data layer is a critical source of information for Recreation, Tourism and more. Many private sector and local, state, and federal government agencies have business needs for a Trails Framework.

A Trail Standard is intended to facilitate integration and sharing of up to date Trail data and enhance the dissemination and use of Trail information. This standard does not instruct on how Trail databases are designed for internal use.

This standard was developed by the Idaho Department of Parks and Recreation in collaboration with the Chair of the IGC-EC. This standard will be reviewed on a regular basis and updated as needed.

1.1. **Mission and Goals of the Standard**

The Trail 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 Trail Framework. The Standard will communicate with and may have similar attributes to other Idaho Framework data standards. It encourages all Idaho-based agencies with geospatial Trail data to contribute to Trail Framework.

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

1.2. **Relationship to Existing Standards**

a. This Trail Exchange Standard relates to existing standards as follows: The Idaho Trails Standard relates to the standard following FGDC Guidelines.

1.3. **Description of the Standard**

This standard describes the vision and geospatial data structure of a Trail Framework in the state of Idaho. 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 Trail element of the Transportation Framework theme of The Idaho Map (TIM).

When implemented, it will enable access to geometry and attribute information about Idaho Trails. 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 Trail 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 Trail data.

1.5. Standard Development Process

The Trail Workgroup, a subgroup of the Transportation Framework TWG, is a voluntary group of private, city, county, tribal, state, and federal representatives. In 2020 the Trail Lead at the Idaho Department of Parks and Recreation used the Survey123 developed by the IGC-EC to develop the first draft of this standard. This standard was then reviewed and edited by the Authoritative Source of the Trails data in Idaho, i.e. the GIS Analyst at the Idaho Department of Parks and Recreation.

After initial the development the draft standard document was shared with the IGC-EC and IGC in accordance with the review and approval process described in ITA's Framework Standards Development Policy (P5030).

The standard was presented to the IGC-EC in January 2021 and approved by the IGC-EC in March 2021.

1.6. Maintenance of the Standard

This standard will be revised as needed and in accordance with the ITA Framework Standards Development Policy (P5030).

2. Body of the Standard

2.1. Scope and Content

The scope of the Trail Data Exchange Standard is to describe a statewide layer which identifies the physical locations and attributes of Trails in Idaho.

2.2. Need

Trails are a key dataset needed for Recreation, Tourism. This standard provides the foundation to aggregate Trail data for centralized access and stewardship information.

2.3. Participation in the Standard Development

The development of the Trail Data Exchange Standard adheres to the IGC-EC Framework Standards Development Policy (P5030). The Trail Standard Team tasked with developing this standard represents a State Organization. As the standard is reviewed in accordance with Policy P5030 requirements, there will be 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 Trail Data Exchange Standard is encouraged.

2.4. Integration with Other Standards

The Trail Data Exchange Standard follows the same format as other Idaho geospatial framework data standards. The Trail 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.

2.5. Technical and Operation Context

2.5.1. Data Environment

The data environment is a digital Map/App with a specific, standardized set of attributes pertinent to the Trail Framework. Trail data shared under this standard must be in a format supporting digital Map/App.

2.5.2. Reference Systems

The Trail 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

Trail geometry may be coincident with other framework data, such as roads. Currently there is no enforcement of coincidence or topology relationships between Trail Framework and other Idaho Framework elements.

2.5.5. Encoding

When data is imported into and exported from the Trail 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

It is essential that all aspects of the data be completely documented. Spatial products which conform to the National Standard for Spatial Data Accuracy should be used for source material in digital data capture if available and appropriate.

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 unique identifier is the OBJECTID in combination of the name of the layer.

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 Trail Framework. Details of stewards, their roles and responsibilities, and processes are set forth in a Trail Framework Stewardship Plan and related documents.

2.5.12. Records Management and Archiving

The dataset is published to the State of Idaho GIS Server at https://gis2.idaho.gov/arcgis/rest/services/DPR/Idaho_Trails_Map/MapServer. There is also a frequently maintain a map package of the app on ArcGIS Online at <https://idaho.maps.arcgis.com/home/item.html?id=27b6c7f418ff4881abb9854d3fb9412d>. The application designed to display the Trail data is located at <https://idaho.maps.arcgis.com/home/item.html?id=ec451196747346558c999bc7cdf1a728>

2.5.13. Metadata

The Trail Framework metadata will describe the methods used to update and aggregate the individual Trail 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 S4220 – GEOSPATIAL METADATA.

3. Data Characteristics

3.1. Minimum Graphic Data Elements

The geometry of the features in Trail Framework is digital Map/App

3.2. Optional Graphic Data Elements

Not applicable.

3.3. Standard Attribute Schema

The trails data is organized as a collection of the following datasets:

3.3.1: Trailheads (Point Layer)

Field Name	Data Type	Length	Description	Examples
OBJECTID	OID		System Generated ID	25
SITE_NAME	Text	254	Name of the trail connected to the trailhead	Bear Basin, Hard Creek
SITE_TYPE	Text	254	Type of marker	Trailhead

3.3.2: Emergency Closures (Line)

Field Name	Data Type	Length	Description	Examples
OBJECTID	OID		System Generated ID	25
ID	Text	30	Identification number for....	7868
NAME	Text	254	Name assigned to the emergency closure	Buttars Springs
SYMBOL	Double		Number associated with symbol type	7.00
JURISDICTION		40	Management Agency	FS – Forest Service
OFFICE		35	Office within Agency responsible	Minidoka Ranger Distr.
OFFICE_PHONE		15	Phone number of agency office responsible	(208) 678-0430
OFFICE_URL		100	Website of the office responsible	https://www.fs.usda.gov/sawtooth
Alerts		200	URL to a more information about the alert	https://www.fs.usda.gov/alerts/sawtooth/alerts-notices
SHERIFF_PHONE		15	Phone number of the local Sheriff	(208) 878-9327
MILES	Double		Length of trail closure in Miles	0.30

3.3.3: Highway Legal, Highway Legal Seasonal, Automobile Seasonal, Jeep, Jeep Seasonal, Special Vehicle Designations, ATV, ATV Seasonal, Non-Motorized and Other Roads (Line)

Field Name	Data Type	Length	Description	Examples
OBJECTID	OID		System Generated ID	25
ID	Text	30	Identification associated with the trail	568
NAME	Text	254	Name of the Trail	Snake Ridge
SYMBOL	Double		Number associated with symbol type	7.00
JURISDICTION	Text	40	Management Agency	FS – Forest Service
SEASONAL	Text	30	Seasonal Closure of the Trail	Yearlong, Dates Open
AUTOMOBILE	Text	254	Dates between which the Trail is Open for Automobiles	01/01 – 09/30
JEEP	Text	254	Dates between which the Trail is Open for Jeeps	01/01 – 09/30
UTV	Text	254	Dates between which the Trail is Open for UTVs	01/01 – 09/30
ATV	Text	254	Dates between which the Trail is Open for ATVs	01/01 – 09/30
MOTORCYCLE	Text	254	Dates between which the Trail is Open for Motorcycles	01/01 – 09/30
OFFICE	Text	50	Office within Agency responsible	Minidoka Ranger Distr.
OFFICE_PHONE	Text	15	Phone number of agency office responsible	(208) 678-0430
OFFICE_URL	Text	100	Website of the office responsible	https://www.fs.usda.gov/sawtooth
Alerts	Text	200	URL to a more information about the alert	https://www.fs.usda.gov/alerts/sawtooth/alerts-notices
SHERIFF_PHONE	Text	15	Phone number of the local Sheriff	(208) 878-9327
SHERIFF_URL	Text	100	Website of the local Sherriff	
MILES	Double		Length of the Trail in Miles	21.54
HUNTING UNIT	Text	3	Idaho Fish and Game Designated Hunting Unit (see https://idfg.idaho.gov/ifwis/huntplanner/mapcenter/)	36A

3.4. Data Quality

Data quality considerations for Trails include:

- b. Inclusion of a trail name, if such a name exists
- c. the trail should identify which uses the trail is open to (i.e. ATV, motorcycle, jeep, UTV/RTV, and non-motorized.
- d. All trails also need Jurisdiction which identifies the management agency in charge of trail management.

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>

Appendix B: Glossary

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