

FTDS Overview

Introduction

Objective of Standard

Trails of all kinds, including Congressionally and secretarially-designated trails, are strongly recognized by the public and governmental agencies as important recreational and cultural resource corridors. The National Park Service (NPS), the Bureau of Land Management (BLM), the United States Fish and Wildlife Service (FWS), and the United States Forest Service (USFS) have worked for many years with each other and with States, local governments and trail organizations to promote and develop trails for the benefit of the public.

Universal trail data standards will enable national, regional, state, and trail-level managers and the public to use mutually understood terminology for recording, retrieving and applying spatial and tabular information. Data standards will make it easier for trail information to be accessed, exchanged and used by more than one individual, agency or group. Ease in sharing data increases the capability for enhanced and consistent mapping, inventory, monitoring, condition assessment, maintenance, costing, budgeting, information retrieval, and summary reporting for most internal and external needs.

The collection, storage, and management of trail-related data are important components of everyday business activities in many Federal and State land-managing agencies, trail organizations, and businesses. From a management perspective, trails data must often mesh closely with other types of infrastructure, resource, and facility enterprise data. For the public using paper maps, the internet, GPS or other instrumentation, standard data formats enable users to consistently and predictably identify specific trails and a core set of corresponding information. Today, digital trail data are a necessity throughout a trail data management life-cycle, from trail planning through design, construction, operation, and maintenance. Automating, sharing, and leveraging trail data through a widely-accepted standard can provide a variety of important benefits:

- **Efficiency** – creating and gathering trail data that are standardized and readily usable.
- **Compatibility** – compiling data from one project or discipline that can be compatible with other applications;
- **Consistency** – using the same standards, meshing data produced by one organization with that developed by another;
- **Speed** – hastening the availability of data through a reduction in duplicative efforts and lowered production costs (Applications can be developed more quickly and with more interoperability by using existing standards-compliant data);
- **Conflict resolution** – resolving conflicting trail data more easily if compliant to the same standards;
- **Reliability** – improving the quality of shared trail data by increasing the number of individuals who find and correct errors; and
- **Reusability** – allow maximum reuse across agencies and support objectives of E-Government (E-Gov) initiatives and enterprise architecture.

1.1 Scope of Standard

The functional scope of the standard includes the definition of a core set of trail data attributes, corresponding values, and definitions. These standards reflect tabular and spatial trail data applicable only to trails within the United States, including all U.S. territories and outlying possessions.

1.2 Applicability

Trail data are used for many purposes including planning and management, mapping and condition assessment, routing and navigation, public information, emergency response, and research. These standards cover the core set of questions and data attributes identified in the Federal Trail Data Standards (FTDS) Version 1 and are applicable to trails of all kinds, including National Historic Trails and National Scenic Trails. They do not cover all possible trail data or agency-specific data needs, but concentrate on a core set of inter-jurisdictional management and administrative trail data needs.

1.3 Related Standards

Basic Federal trail authorities are found in the National Trails System Act of 1968, as amended (16 USC 1241-1251). Heretofore, there have been no universal standards within the United States for trail terminology and data attributes. However, inter-jurisdictional trails, management and corresponding public information all suggest the need for universal data standards.

1.4 Standard Development Procedures

In 2001, the Federal Interagency Council on Trails, based on a provision in the January, 2001, *Memorandum of Understanding for the Administration and Management of National Historic and National Scenic Trails*, set in motion the development of national-level interagency trail data standards. This action stemmed from a collective need to inventory, assess and map trail locations and trail resources across multiple jurisdictions throughout the United States. An interagency team of trail, data, and subject-matter specialists was assembled. Over the following six years, the team developed the Interagency Trail Data Standards (ITDS) for trails of all kinds. The ITDS Version 1 underwent internal and external review in 2003 and 2004, followed by refinement and development of FTDS Version 1 which includes: Standards Working Group (SWG) review and evaluation of the draft, FGDC Coordination Group reviews SWG recommendation; announcement for public comment in Federal Register, Public review, Standards Development Group (SDG) reviews public comments, prepares revisions to the draft standard, and produces the Public Response Document.

The FTDS Team is responsible for the subsequent validation, revision and refinement of the FTDS to reflect current and potentially expanded interagency data needs (e.g. additional National Scenic Trail-specific data, visitor information, etc.). Any revisions proposed by the FTDS Team will be subject to review, comment and publication through the FGDC data standard publication process.

1.5 Maintenance Authority

The maintenance authority for this standard has been defined by the Federal Interagency Council on Trails (FICT) as a shared authority by the National Park Service and U.S.D.A. Forest Service.

2 Rationale for the Design

2.1 Key Points

- The Federal Trail Data Standards (FTDS) identify a common set of standardized terminology that can be consistently applied to a core set of trails information.
- The FTDS are not a database.
- The FTDS can be incorporated into existing databases and/or used to crosswalk existing agency data to provide combined or shared information at an Federal/multi-jurisdictional level.
- The FTDS are the foundation for these FGDC-published Trail Data Standards.
- This is one step in the Federal Government's ongoing process of data standards definition and adoption.

2.2 Legal Underpinnings of the Federal Trail Data Standards Project

The following mandates and directives recognize the need for the development of data standards. These are relevant for the FGDC standards as well.

- The Paperwork Reduction Act of 1995 (P. L. 104-13)
- The Government Performance and Results Act of 1993 (GPRA) (P. L. 103-62)
- The Presidential E-Government Initiatives (including Recreation One-Stop)
- The National Trails System Memorandum of Understanding (for 2006-2016)
- Executive Order 13195, *Trails for America in the 21st Century*
- "GIS for the National Trails System - An Action Plan", NPS, 2001, as requested by Congress

2.3 Underlying Premises for Development of Trail Data Standards

2.3.1 Federal Definition of a Trail

Before attempting to identify and apply Federal Trail Data Standards, it is essential to have a clear definition of the term "trail" as used in this Federal context.

Trail: A linear route managed for human-powered, stock, or off-highway vehicle (OHV) forms of transportation or for historic or heritage values.

Trails provide public access to opportunities for outdoor recreation as well as access to many significant prehistoric and historic sites.

Some portions of historic trails are accessible today, and provide recreational and other benefits, while others, more "virtual" in nature, provide a cultural and/or historic experience, but are not physically capable of being traversed or accessed. Historic trails can consist of a path, a route, a corridor, a road, a river/stream, etc.

See Appendix B for more details.

(Refer to individual agency trail definitions for further agency-specific guidance or direction on defining a trail.)

The Federal definition is based on and encompasses individual agency definitions of a trail. This includes “standard” trails, National Scenic Trails (NSTs) and National Historic Trails (NHTs). The definition was adopted by the Interagency Trail Data Standards Team in July 2002.

2.3.2 Which Trails?

The FTDS core questions (Section 3 below) and FTDS data attributes (Section 2.3.5 below) can be applied to trails of all kinds, including National Scenic Trails and National Historic Trails. However, not every core question and attribute is applicable in every situation. The following trail categories have been incorporated in FTDS documentation to help clarify which core questions and data attributes are potentially applicable in various situations:

<u>Trail Code</u>	<u>Trail Category</u>
Reg. Trail	Regular Trail: any agency-managed trail not designated NST or NHT
NST	National Scenic Trail (Congressionally Designated)
NHT ¹ (Desig)	Route(s) congressionally designated as the National Historic Trail
NHT ² (HR)	NHT associated heritage resources (routes and/or sites)
NHT ³ (Rec)	NHT associated recreation or interpretive route and/or site

2.3.3 Factors Considered

Listed below are a few of the basic premises that were incorporated into development of the FTDS. They are also relevant for review of the FTDS as FGDC standards.

- **Federal Core Data Set:** Represents the minimum set of data that the agencies agree to provide for all agency-managed or administered trails (i.e. System Trails and/or Designated Trails).
- **Data Collection and Management:** Data are not cheap! Each piece of data that is collected and recorded represents a cost in terms of time, database capability and available space. The subsequent and ongoing need to update certain data attributes represents an additional expense. The decision to collect, record and manage specific data should always be done considering the benefits and value of the data versus the initial and future cost.
- **Standardized Terminology:** Strive to establish and/or use the same terminology among agencies for Federal trail data standards. When this is not possible, provide crosswalk translation between the FTDS attribute terminology and definitions and those of the individual agency.
- **Existing Data Attributes:** If an identified FTDS attribute already exists as a standard attribute within one agency, but is not yet standardized and/or used by other agencies, consider adopting the attribute terminology and/or definition that is already in use to maximize efficiencies and minimize confusion or data re-work.
- **Field Verification:** To the extent possible, and when applicable, trail data should be based on field verification/inventory. Formal trail inventory and condition assessments should be performed, if they do not already exist.
- **Implementation:** The core standards will be implemented and data provided based on current agency priorities and budgets.

2.3.4 FTDS Selection Criteria

To focus on the most common trail data needs, eight criteria were used to choose the core set of questions and data attributes that are in the Federal Trail Data Standards.

Does the Question or Data Attribute...

1. Apply to all affected agencies?
2. Directly relate to a FTDS Core Question (data output)?
3. Have national, regional or state-wide significance?
4. Contribute to the minimum data needed to provide a programmatic (heritage, maintenance, natural resources) snapshot of the trail (i.e. inventory, public information)?
5. Include the minimum data needed to comply with and reflect applicable laws, regulations, and/or policies?
6. Addresses key Congressional, Office of Management and Budget (OMB), and department-wide reporting requirements?
7. (Is the Data Attribute...) Currently available or obtainable?
8. Include those attributes that would set national precedence or affect nation-wide trail management?