

## Federal Trail Data Standards (FTDS) Version 1 Trail Fundamentals

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Trail Type ▪ Trail Class ▪ Managed Use ▪ Designed Use

10/16/2008

*Note: The management concepts incorporated in the FTDS Trail Fundamentals are currently undergoing public notice and comment via the Federal Register under the leadership of the US Forest Service. Once this is complete and the final version published in the Federal Register, the FTDS Fundamentals will be revised as needed to reflect the final published version of these management concepts. (June, 2010)*

The Federal Trail Fundamentals include four concepts that are the cornerstones of effective trail planning and management:

- Trail Type
- Trail Class
- Managed Use
- Designed Use

Identify the four Trail Fundamentals for each trail or trail segment based on applicable land management plan direction, travel management decisions, trail-specific decisions, and other related direction.

Trail Fundamentals provide an integrated means to consistently record and communicate the intended design and management guidelines for trail design, construction, maintenance and use.

### Trail Type

*A category that reflects the predominant trail surface and general mode of travel accommodated by a trail*

There are three Trails Types:

**Standard/Terra Trail:** *A trail that has a surface consisting predominantly of the ground and that is designed and managed to accommodate use on that surface.*

**Snow Trail:** *A trail that has a surface consisting predominantly of snow or ice and that is designed and managed to accommodate use on that surface.*

**Water Trail:** *A trail that has a surface consisting predominantly of water (but may include land-based portages) and that is designed and managed to accommodate use on that surface.*

This management concept allows managers to identify trail-specific Design Parameters or technical specifications, management needs, and the cost of managing the trail for particular uses and/or seasons by trail or trail segment.

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1. Inventory trails and identify the appropriate Design Parameters or technical specifications, management needs, and management costs for trail using the Trail Types.
2. Identify only one Trail Type per trail.
3. Identify the Trail Type for each trail based on applicable land management plan direction, travel management decisions, trail-specific decisions, and other related direction.
4. Inventory both trails and Trail Types when two trails overlap, for example, when a Snow Trail overlaps a Standard Terra Trail.

### **Trail Class**

*The prescribed scale of development for a trail, representing its intended design and management standards.*

Trail Classes are general categories reflecting trail development scale, arranged along a continuum.

There are five Trail Classes, ranging from the least developed (Trail Class 1) to the most developed (Trail Class 5):

- Trail Class 1: Minimally Developed
- Trail Class 2: Moderately Developed
- Trail Class 3: Developed
- Trail Class 4: Highly Developed
- Trail Class 5: Fully Developed

Use Trail Classes to inventory trails and to identify the applicable Design Parameters or technical specifications and the costs for meeting trail management standards.

1. Identify only one Trail Class per trail or trail segment.
2. Trail Class descriptors reflect typical attributes of trails in each class. Local deviations from any Trail Class descriptor may be established based on trail-specific conditions, topography, or other factors, provided that the deviations are consistent with the general intent of the applicable Trail Class.
3. There is a direct relationship between Trail Class and Managed Uses: generally, one cannot be determined without consideration of the other.
4. Identify the appropriate Trail Class for each trail or trail segment based on the management intent in the applicable land management plan, travel management decisions, trail-specific decisions, and other related direction. Apply the Trail Class that most closely reflects the management intent for the trail or trail segment, which may or may not reflect the current condition of the trail.

For specifics on each Trail Class, refer to the National Trail Management Class matrix.

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### Managed Use

*A mode of travel that is actively managed and appropriate on a trail, based on its design and management.*

1. Managed Use indicates management intent to accommodate a specific use.
2. There can be more than one Managed Use per trail or trail segment.
3. The Managed Uses for a trail are usually a small subset of all the allowed uses on the trail, that is, uses that are allowed unless specifically prohibited. For example, on a trail that is closed to all motorized use but open to all non-motorized use, the Managed Uses could be Hiker/Pedestrian and Pack and Saddle. The allowed uses, however, would also include bicycles and all other non-motorized uses.
4. Identify the Managed Uses for each trail or trail segment based on applicable land management plan direction, travel management decisions, trail-specific decisions, and other related direction.
5. There is a direct relationship between Managed Use and Trail Class: generally, one cannot be determined without consideration of the other. Not all Trail Classes are appropriate for all Managed Uses. For guidance on the potential appropriateness of each Trail Class to each Managed Use, refer to agency-specific guidelines and reference material.

### Designed Use

*The Managed Use of a trail that requires the most demanding design, construction, and maintenance parameters and that, in conjunction with the applicable Trail Class, determines which Design Parameters or technical specifications will apply to a trail.*

1. There is only one Designed Use per trail or trail segment. Although a trail or trail segment may have more than one Managed Use and numerous uses may be allowed, only one Managed Use is identified as the design driver or Designed Use.
2. Determine the Designed Use for a trail or trail segment from the Managed Uses identified for that trail. When making this determination, consider all Managed Uses that occur during all seasons of use of the trail or trail segment. Assess any essential or limiting geometry for the Managed Uses of the trail or trail segment to determine whether any trail-specific adjustments are necessary to the applicable Design Parameters or technical specifications.
  - a. In some situations, when there is more than one Managed Use identified for a trail, the Designed Use may be readily apparent. For example, on a trail with Managed Uses of all-terrain vehicle and Motorcycle, all-terrain vehicle use would be the Designed Use because this use requires wider tread widths and has lower tolerances for surface obstacles and maximum trail grades.
  - b. In other situations involving more than one Managed Use, the Designed Use may not be readily apparent, as is often the case when there are fewer differences between the applicable sets of Design Parameters than in the example above. For example, on a trail that is actively managed for hiker and pedestrian, pack and saddle, and bicycle use, pack and saddle use would likely be the Designed Use because of the three Managed

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Uses, pack and saddle use generally has the most limiting design requirements. While the Bicycle Design Parameters are very similar to the Pack and Saddle Design Parameters, the Design Parameters or technical specifications for this trail may need to be adjusted to accommodate bicycles.

### **Designed Use / Managed Use Types\***

Hiker / Pedestrian  
Pack and Saddle  
Bicycle  
Motorcycle  
All Terrain Vehicle  
Four-Wheel Drive Vehicle > 50" in Width  
  
Cross-Country Ski  
Dog Sled  
Snowshoe  
Snowmobile  
  
Motorized Watercraft  
Non-Motorized Watercraft

\* Refer to agency-specific guidance regarding which of the Designed Uses and Managed Uses listed above are being used by a particular agency.

## Appendix A

# Federal Trail Data Standards (FTDS) Version 1 National Trail Management Classes

10/16/2008

*Note: The National Trail Management Classes are currently undergoing public notice and comment via the Federal Register under the leadership of the US Forest Service. Once this is complete and the final version published in the Federal Register, the Trail Classes incorporated in the Federal Trail Data Standards will be revised as needed to reflect the final published version of these management concepts. (June, 2010)*

Trail Classes are general categories reflecting trail development scale, arranged along a continuum. The Trail Class identified for a trail prescribes its development scale, representing its intended design and management standards.<sup>1</sup> Local deviations from any Trail Class descriptor may be established based on trail-specific conditions, topography, or other factors, provided that the deviations do not undermine the general intent of the applicable Trail Class.

Identify the appropriate Trail Class for each trail or trail segment based on the management intent in the applicable land management plan, travel management direction, trail-specific decisions, and other related direction. Apply the Trail Class that most closely matches the management intent for the trail or trail segment, which may or may not reflect the current condition of the trail.

Trail Attributes	Trail Class 1 Minimally Developed	Trail Class 2 Moderately Developed	Trail Class 3 Developed	Trail Class 4 Highly Developed	Trail Class 5 Fully Developed
<b>Tread &amp; Traffic Flow</b>	<ul style="list-style-type: none"> <li>♦ Tread intermittent and often indistinct.</li> <li>♦ May require route finding.</li> <li>♦ Single lane , with no allowances constructed for passing.</li> <li>♦ Predominantly native materials.</li> </ul>	<ul style="list-style-type: none"> <li>♦ Tread continuous and discernible, but narrow and rough.</li> <li>♦ Single lane, with minor allowances constructed for passing.</li> <li>♦ Typically native materials.</li> </ul>	<ul style="list-style-type: none"> <li>♦ Tread continuous and obvious.</li> <li>♦ Single lane, with allowances constructed for passing where required by traffic volumes in places where there is no reasonable opportunity to pass.</li> <li>♦ Native or imported materials.</li> </ul>	<ul style="list-style-type: none"> <li>♦ Tread wide and relatively smooth , with few irregularities.</li> <li>♦ Single lane, with allowances constructed for passing where required by traffic volumes in places where there is no reasonable opportunity to pass.</li> <li>♦ Double lane where traffic volumes are high and passing is frequent.</li> <li>♦ Native or imported materials.</li> <li>♦ May be hardened.</li> </ul>	<ul style="list-style-type: none"> <li>♦ Tread wide, firm, stable, and generally uniform</li> <li>♦ Single lane, with frequent turnouts where traffic volumes are low to moderate.</li> <li>♦ Double lane where traffic volumes are moderate to high.</li> <li>♦ Commonly hardened with asphalt or other imported material.</li> </ul>
<b>Obstacles</b>	<ul style="list-style-type: none"> <li>♦ Obstacles common, naturally occurring, often substantial , and intended to provide increased challenge.</li> <li>♦ Narrow passages; brush, steep grades, rocks and logs present.</li> </ul>	<ul style="list-style-type: none"> <li>♦ Obstacles may be common, substantial, and intended to provide increased challenge.</li> <li>♦ Blockages cleared to define route and protect resources.</li> <li>♦ Vegetation may encroach into trailway.</li> </ul>	<ul style="list-style-type: none"> <li>♦ Obstacles may be common, but not substantial or intended to provide challenge.</li> <li>♦ Vegetation cleared outside of trailway.</li> </ul>	<ul style="list-style-type: none"> <li>♦ Obstacles infrequent and insubstantial .</li> <li>♦ Vegetation cleared outside of trailway.</li> </ul>	<ul style="list-style-type: none"> <li>♦ Obstacles not present</li> <li>♦ Grades typically &lt; 8%</li> </ul>

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Trail Attributes	Trail Class 1 Minimally Developed	Trail Class 2 Moderately Developed	Trail Class 3 Developed	Trail Class 4 Highly Developed	Trail Class 5 Fully Developed
<b>Constructed Features &amp; Trail Elements</b>	<ul style="list-style-type: none"> <li>◆ Structures minimal to non-existent.</li> <li>◆ Drainage typically provided without structures.</li> <li>◆ Natural fords.</li> <li>◆ Typically no bridges.</li> </ul>	<ul style="list-style-type: none"> <li>◆ Structures of limited size, scale, and quantity; typically constructed of native materials.</li> <li>◆ Structures adequate to protect trail infrastructure and resources.</li> <li>◆ Natural fords .</li> <li>◆ Bridges as needed for resource protection and appropriate access.</li> </ul>	<ul style="list-style-type: none"> <li>◆ Structures may be common and substantial; constructed of imported or native materials.</li> <li>◆ Natural or constructed fords.</li> <li>◆ Bridges as needed for resource protection and appropriate access.</li> </ul>	<ul style="list-style-type: none"> <li>◆ Structures frequent and substantial; typically constructed of imported materials.</li> <li>◆ Constructed or natural fords.</li> <li>◆ Bridges as needed for resource protection and user convenience.</li> <li>◆ Trailside amenities may be present.</li> </ul>	<ul style="list-style-type: none"> <li>◆ Structures frequent or continuous; typically constructed of imported materials.</li> <li>◆ May include bridges, boardwalks, curbs, handrails, trailside amenities, and similar features.</li> </ul>
<b>Signs<sup>2</sup></b>	<ul style="list-style-type: none"> <li>◆ Route identification signing limited to junctions.</li> <li>◆ Route markers present when trail location is not evident.</li> <li>◆ Regulatory and resource protection signing infrequent.</li> <li>◆ Destination signing, unless required, generally not present .</li> <li>◆ Information and interpretive signing generally not present.</li> </ul>	<ul style="list-style-type: none"> <li>◆ Route identification signing limited to junctions.</li> <li>◆ Route markers present when trail location is not evident.</li> <li>◆ Regulatory and resource protection signing infrequent .</li> <li>◆ Destination signing typically infrequent outside of wilderness; generally not present in wilderness areas.</li> <li>◆ Information and interpretive signing uncommon.</li> </ul>	<ul style="list-style-type: none"> <li>◆ Route identification signing at junctions and as needed for user reassurance.</li> <li>◆ Route markers as needed for user reassurance .</li> <li>◆ Regulatory and resource protection signing may be common.</li> <li>◆ Destination signing likely outside of wilderness; generally not present in wilderness areas .</li> <li>◆ Information and interpretive signs may be present outside of wilderness .</li> </ul>	<ul style="list-style-type: none"> <li>◆ Route identification signing at junctions and as needed for user reassurance.</li> <li>◆ Route markers as needed for user reassurance.</li> <li>◆ Regulatory and resource protection signing common.</li> <li>◆ Destination signing common outside of wilderness; generally not present in wilderness areas.</li> <li>◆ Information and interpretive signs may be common outside wilderness areas.</li> <li>◆ Accessibility information likely displayed at trailhead.</li> </ul>	<ul style="list-style-type: none"> <li>◆ Route identification signing at junctions and for user reassurance.</li> <li>◆ Route markers as needed for user reassurance.</li> <li>◆ Regulatory and resource protection signing common.</li> <li>◆ Destination signing common.</li> <li>◆ Information and interpretive signs common.</li> <li>◆ Accessibility information likely displayed at trailhead.</li> </ul>
<b>Typical Recreation Environments &amp; Experience<sup>3</sup></b>	<ul style="list-style-type: none"> <li>◆ Natural and unmodified.</li> <li>◆ ROS: Typically Primitive to Roded Natural .</li> <li>◆ WROS: Typically Primitive to Semi-Primitive .</li> </ul>	<ul style="list-style-type: none"> <li>◆ Natural and essentially unmodified.</li> <li>◆ ROS: Typically Primitive to Roded Natural .</li> <li>◆ WROS: Typically Primitive to Semi-Primitive.</li> </ul>	<ul style="list-style-type: none"> <li>◆ Natural and primarily unmodified.</li> <li>◆ ROS: Typically Primitive to Roded Natural.</li> <li>◆ WROS: Typically Semi-Primitive to Transition.</li> </ul>	<ul style="list-style-type: none"> <li>◆ May be modified.</li> <li>◆ ROS: Typically Semi-Primitive to Rural .</li> <li>◆ WROS: Typically Portal or Transition .</li> </ul>	<ul style="list-style-type: none"> <li>◆ May be highly modified.</li> <li>◆ Commonly associated with visitor centers or high-use recreation sites.</li> <li>◆ ROS: Typically Roded Natural to Urban.</li> <li>◆ Generally not present in wilderness areas.</li> </ul>

<sup>1</sup> For management standards, potential appropriateness of Trail Classes for Managed Uses, technical specifications by Trail Class and Designed Use, and other related guidance, refer to agency-specific guidelines and reference material.

<sup>2</sup> For standards and guidelines for the use of signs and posters along trails, refer to agency-specific guidelines.

<sup>3</sup> The National Trail Management Class matrix shows the combinations of Trail Class and Recreation Opportunity Spectrum (ROS) or Wilderness Recreation Opportunity Spectrum (WROS) settings that commonly occur, although trails in all Trail Classes may and do occur in all settings. For guidance on the application of the ROS and WROS, refer to agency-specific guidelines.