

# National Trail Management Classes

Updated 1/31/2005

Trail prescriptions describe the desired management of each trail, based on Forest Plan direction. These prescriptions take into account user preferences, setting, protection of sensitive resources, and other management activities. To meet prescription, each trail is assigned an appropriate Trail Class. These general categories are used to identify applicable Trail Design Parameters and to identify basic indicators used for determining the cost to meet national quality standards.<sup>1</sup>

The General Criteria below define each Trail Class and are applicable to all system trails. Subsequent sections provide Additional Criteria specific to Motorized Trails, Pack and Saddle Trails, Snow Trails, and Water Trails.

Trail Class descriptions define “typical” attributes, and exceptions may occur for any attribute. Apply the Trail Class that most closely matches the managed objective of the trail.

Trail Attributes	Trail Class 1 Minimal/Undeveloped Trail	Trail Class 2 Simple/Minor Development Trail	Trail Class 3 Developed/Improved Trail	Trail Class 4 Highly Developed Trail	Trail Class 5 Fully Developed Trail
<b>General Criteria</b> Physical Characteristics to be Applied to All National Forest System Trails					
<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>♦ Native materials only</li> </ul>	<ul style="list-style-type: none"> <li>♦ Tread discernible and continuous, but narrow and rough</li> <li>♦ Few or no allowances constructed for passing</li> <li>♦ Native materials</li> </ul>	<ul style="list-style-type: none"> <li>♦ Tread obvious and continuous</li> <li>♦ Width accommodates unhindered one-lane travel (occasional allowances constructed for passing)</li> <li>♦ Typically native materials</li> </ul>	<ul style="list-style-type: none"> <li>♦ Tread wide and relatively smooth with few irregularities</li> <li>♦ Width may consistently accommodate two-lane travel</li> <li>♦ Native or imported materials</li> <li>♦ May be hardened</li> </ul>	<ul style="list-style-type: none"> <li>♦ Width generally accommodates two-lane and two-directional travel, or provides frequent passing turnouts</li> <li>♦ Commonly hardened with asphalt or other imported material</li> </ul>
<b>Obstacles</b>	<ul style="list-style-type: none"> <li>♦ Obstacles common</li> <li>♦ Narrow passages; brush, steep grades, rocks and logs present</li> </ul>	<ul style="list-style-type: none"> <li>♦ Obstacles occasionally present</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 infrequent</li> <li>♦ Vegetation cleared outside of trailway</li> </ul>	<ul style="list-style-type: none"> <li>♦ Few or no obstacles exist</li> <li>♦ Grades typically &lt;12%</li> <li>♦ Vegetation cleared outside of trailway</li> </ul>	<ul style="list-style-type: none"> <li>♦ No obstacles</li> <li>♦ Grades typically &lt;8%</li> </ul>
<b>Constructed Features &amp; Trail Elements</b>	<ul style="list-style-type: none"> <li>♦ Minimal to non-existent</li> <li>♦ Drainage is functional</li> <li>♦ No constructed bridges or foot crossings</li> </ul>	<ul style="list-style-type: none"> <li>♦ Structures are of limited size, scale, and number</li> <li>♦ Drainage functional</li> <li>♦ Structures adequate to protect trail infrastructure and resources</li> <li>♦ Primitive foot crossings and fords</li> </ul>	<ul style="list-style-type: none"> <li>♦ Trail structures (walls, steps, drainage, raised trail) may be common and substantial</li> <li>♦ Trail bridges as needed for resource protection and appropriate access</li> <li>♦ Generally native materials used in Wilderness</li> </ul>	<ul style="list-style-type: none"> <li>♦ Structures frequent and substantial</li> <li>♦ Substantial trail bridges are appropriate at water crossings</li> <li>♦ Trailside amenities may be present</li> </ul>	<ul style="list-style-type: none"> <li>♦ Structures frequent or continuous; may include curbs, handrails, trailside amenities, and boardwalks</li> <li>♦ Drainage structures frequent; may include culverts and road-like designs</li> </ul>

<b>Trail Attributes</b>	<b>Trail Class 1 Minimal/Undeveloped Trail</b>	<b>Trail Class 2 Simple/Minor Development Trail</b>	<b>Trail Class 3 Developed/Improved Trail</b>	<b>Trail Class 4 Highly Developed Trail</b>	<b>Trail Class 5 Fully Developed Trail</b>
<b>General Criteria</b> Physical Characteristics to be Applied to All National Forest System Trails					
<b>Signs</b>	<ul style="list-style-type: none"> <li>Minimum required</li> <li>Generally limited to regulation and resource protection</li> <li>No destination signs present</li> </ul>	<ul style="list-style-type: none"> <li>Minimum required for basic direction</li> <li>Generally limited to regulation and resource protection</li> <li>Typically very few or no destination signs present</li> </ul>	<ul style="list-style-type: none"> <li>Regulation, resource protection, user reassurance</li> <li>Directional signs at junctions, or when confusion is likely</li> <li>Destination signs typically present</li> <li>Informational and interpretive signs may be present outside of Wilderness</li> </ul>	<ul style="list-style-type: none"> <li>Wide variety of signs likely present</li> <li>Informational signs likely (outside of Wilderness)</li> <li>Interpretive signs possible (outside of Wilderness)</li> <li>Trail Universal Access information likely displayed at trailhead</li> </ul>	<ul style="list-style-type: none"> <li>Wide variety of signage is present</li> <li>Information and interpretive signs likely</li> <li>Trail Universal Access information is typically displayed at trailhead</li> <li></li> </ul>
<b>Typical Recreation Environments &amp; Experience<sup>2</sup></b>	<ul style="list-style-type: none"> <li>Natural, unmodified</li> <li>ROS: Often Primitive setting, but may occur in other ROS settings</li> <li>WROS: Primitive</li> </ul>	<ul style="list-style-type: none"> <li>Natural, essentially unmodified</li> <li>ROS: Typically Primitive to Semi-Primitive setting</li> <li>WROS: Primitive to Semi-Primitive</li> </ul>	<ul style="list-style-type: none"> <li>Natural, primarily unmodified</li> <li>ROS: Typically Semi-Primitive to Roded Natural setting</li> <li>WROS: Semi-Primitive to Transition</li> </ul>	<ul style="list-style-type: none"> <li>May be modified</li> <li>ROS: Typically Roded Natural to Rural setting</li> <li>WROS: Transition (rarely present in Wilderness)</li> </ul>	<ul style="list-style-type: none"> <li>Can be highly modified</li> <li>ROS: Typically Rural to Urban setting</li> <li>Commonly associated with Visitor Centers or high-use recreation sites</li> <li>Not present in Wilderness</li> </ul>

<sup>1</sup> For user-specific design criteria and specifications, refer to Forest Service Handbook and other applicable agency references.

<sup>2</sup> Typical Recreation Environment & Experience descriptors are provided to assist with understanding Trail Classes. They represent typical or commonly occurring Trail Class and ROS or WROS setting combinations, but are not intended to indicate combinations that are “allowed” or “not allowed”. The appropriate Trail Class should be determined by local managers at the trail-specific level, based on Forest Plan direction and other considerations. While less developed trails may occur in any ROS setting, they typically occur in less developed ROS settings. Similarly, more highly developed trails tend to occur in more highly developed ROS settings, but may occur in less developed ROS settings (with the exception of Trail Class 5 which is not consistent with Primitive settings).

## Additional Criteria

The following sections provide Additional Criteria specific to Pack and Saddle Trails, Motorized Trails, Snow Trails and Water Trails. These criteria are to be applied in addition to the General Criteria above, which are applicable to all system trails.

Trail Attributes	Trail Class 1 Minimal/Undeveloped Trail	Trail Class 2 Simple/Minor Development Trail	Trail Class 3 Developed/Improved Trail	Trail Class 4 Highly Developed Trail	Trail Class 5 Fully Developed Trail
<b>Additional Criteria for Pack and Saddle Trails</b> Apply in <u>addition</u> to Trail Class General Criteria					
<b>Pack and Saddle Trails</b>	<ul style="list-style-type: none"> <li>♦ Typically, not managed for pack and saddle stock traffic</li> <li>♦ Maintenance and availability likely intermittent</li> </ul>	<ul style="list-style-type: none"> <li>♦ Trailway narrow. Some brush encroachment may exist, though bump* trees are generally removed</li> <li>♦ Tread surface rough, with frequent protrusions and obstacles that limit speed and maneuverability of pack and saddle stock</li> <li>♦ Tread rarely or not graded. Obstacles cleared if they substantially restrict the managed use and difficulty level</li> <li>♦ Tread surface commonly loose native material, such as sand, mud, rock etc.</li> <li>♦ Switchbacks and turns accommodate pack stock though may require slower speeds</li> <li>♦ Crossings may be wet fords if base material is stable; possibly with simple hardening or armoring for resource protection. Simple bridges present if required for resource protection.</li> <li>♦ Trails have infrequent markers or route identifiers, located primarily at junctions.</li> <li>♦ Signing size and type appropriate for managed speeds and use.</li> </ul>	<ul style="list-style-type: none"> <li>♦ Trail wide and suitable for pack and saddle stock to pass periodically.</li> <li>♦ Occasional moderate tread protrusions and short awkward sections, which require speed adjustments</li> <li>♦ Tread infrequently graded. Obstacles cleared if they substantially hinder the managed use and difficulty level.</li> <li>♦ Tread surface generally native materials, with occasional on-site fill or imported materials, if more stable surface is desired.</li> <li>♦ Crossings may be wet fords; likely with hardening and armoring or simple bridges for resource protection and to ensure appropriate access.</li> <li>♦ Trails have frequent markers and are readily followed</li> <li>♦ Signing size and type appropriate for managed uses.</li> </ul>	<ul style="list-style-type: none"> <li>♦ Trail wide and suitable for the managed use type, and may consistently accommodate two-way passage.</li> <li>♦ Tread surface generally smooth with only small protrusions, which moderately affect speed and ease of travel.</li> <li>♦ Tread graded as needed.</li> <li>♦ Tread surface may include imported aggregate</li> <li>♦ Crossings are typically either hardened or armored or a substantial bridge.</li> <li>♦ Trails have frequent markers and are easily followed</li> <li>♦ Signing size and type appropriate for managed uses</li> </ul>	<p>Not managed for Pack and Saddle Stock.</p>

\* "Bump trees" are any trees located closely enough to the trail that they may be hit or bumped by standard-sized pack boxes carried by packstock travelling the route.

Trail Attributes	Trail Class 1 Minimal/Undeveloped Trail	Trail Class 2 Simple/Minor Development Trail	Trail Class 3 Developed/Improved Trail	Trail Class 4 Highly Developed Trail	Trail Class 5 Fully Developed Trail
<b>Additional Criteria for Motorized Trails</b> Apply in <u>addition</u> to Trail Class General Criteria					
<b>Motorized Trails</b> Motorcycle/ATV (etc.)	<ul style="list-style-type: none"> <li>♦ Typically, not managed for motorized public traffic</li> <li>♦ Typically, open only to administrative motorized use or non-motorized public access.</li> <li>♦ Maintenance and availability likely intermittent.</li> <li>♦ Barriers, signs and gates are maintained to restrict use.</li> </ul>	<ul style="list-style-type: none"> <li>♦ Trailway narrow. Provides one-lane passage for managed use type.</li> <li>♦ Tread surface rough, with frequent protrusions and obstacles that limit speed and maneuverability of vehicle.</li> <li>♦ Tread rarely or not graded. Obstacles cleared if they substantially restrict the managed use and difficulty level.</li> <li>♦ Tread surface commonly loose native material, such as sand, mud, rock etc.</li> <li>♦ Frequent tight turns that may require speed adjustments or backing</li> <li>♦ Crossings may be wet fords if base material is stable; possibly with simple hardening or armoring for resource protection. Simple bridges present if required for resource protection.</li> <li>♦ Trails have infrequent markers or route identifiers, located primarily at junctions.</li> <li>♦ Signing size and type appropriate for managed speeds and use.</li> </ul>	<ul style="list-style-type: none"> <li>♦ Trail wide and suitable for one lane and occasional two-lane passage for managed use types.</li> <li>♦ Occasional moderate tread protrusions and short awkward sections, which require speed and maneuvering adjustments.</li> <li>♦ Tread infrequently graded. Obstacles cleared if they substantially hinder the managed use and difficulty level.</li> <li>♦ Tread surface generally native materials, with occasional on-site fill or imported materials, if more stable surface is desired.</li> <li>♦ Crossings may be wet fords; likely with hardening and armoring or simple bridges for resource protection and to ensure appropriate access.</li> <li>♦ Trails have frequent markers and are readily followed.</li> <li>♦ Signing size and type appropriate for managed speeds and potential nighttime use (signs likely reflectorized).</li> </ul>	<ul style="list-style-type: none"> <li>♦ Trail wide and suitable for the managed use type, and may consistently accommodate two-way passage.</li> <li>♦ Tread surface generally smooth with only small protrusions, which moderately affect speed and ease of travel. (Some roughness may be desired and incorporated to control/limit speed.)</li> <li>♦ Tread graded as needed.</li> <li>♦ Tread surface may include imported aggregate or intermittent paved sections if more stable surface is desired.</li> <li>♦ Crossings are typically either hardened or armored or a substantial bridge.</li> <li>♦ Recommended speeds or speed limits may be posted.</li> <li>♦ Trails have frequent markers and are easily followed.</li> <li>♦ Signing size and type appropriate for managed speeds and potential nighttime use (signs reflectorized).</li> </ul>	Not managed for motorized trail vehicles.

Trail Attributes	Trail Class 1 Minimal/Undeveloped Trail	Trail Class 2 Simple/Minor Development Trail	Trail Class 3 Developed/Improved Trail	Trail Class 4 Highly Developed Trail	Trail Class 5 Fully Developed Trail
<b>Additional Criteria for Snow Trails</b> Apply in <u>addition</u> to Trail Class General Criteria					
<b>Snow Trails</b> <b>OSV/Ski</b>	Not managed for OSV or skiers as primary use type.	<ul style="list-style-type: none"> <li>♦ Periodic reassurance markers.</li> <li>♦ Infrequently compacted, if ever.</li> <li>♦ Typically, small roadside or road-end trailheads with minimal facilities. Trailhead plowed when access is substantially limited, but not necessarily after every snowfall.</li> <li>♦ Trailway is narrow; provides one-lane passage and infrequent two-lane passage for managed use types.</li> <li>♦ Winter-specific signs may be present as described in General Criteria (above).</li> </ul>	<ul style="list-style-type: none"> <li>♦ Periodic reassurance markers, or readily followed corridor.</li> <li>♦ Periodic compaction or grooming.</li> <li>♦ Typically, basic roadside parking or road-end trailheads with simple facilities. Trailhead plowed to ensure reasonable access by trail users shortly after heavy snowfalls. Simple shelters may be present.</li> <li>♦ Trailway provides unhindered one-lane passage and commonly two-lane passage, for managed use types.</li> <li>♦ Winter-specific signs may be present as described in General Criteria (above). Additionally, simple maps or directional information may be present at trail junctions and prominent points along the trail.</li> </ul>	<ul style="list-style-type: none"> <li>♦ Intervisible reassurance markers or easily followed corridor.</li> <li>♦ Frequent regular grooming.</li> <li>♦ Typically, substantial trailheads with toilets and other facilities for winter users. Trailhead regularly plowed to ensure access for most vehicles during and immediately after snowfall.</li> <li>♦ Shelters likely present.</li> <li>♦ Trailway is wide and may consistently provide two-way passage for managed use types.</li> <li>♦ Winter-specific signs may be present as described in General Criteria (above). Additionally, maps and directional information are likely posted at junctions and other points along trail.</li> </ul>	Not managed for OSV or skiers as primary use type.

Trail Attributes	Trail Class 1 Minimal/Undeveloped Trail	Trail Class 2 Simple/Minor Development Trail	Trail Class 3 Developed/Improved Trail	Trail Class 4 Highly Developed Trail	Trail Class 5 Fully Developed Trail
<b>Additional Criteria for Water Trails</b> Apply in <u>addition</u> to Trail Class General Criteria					
<p><b>Water Trails</b></p> <p>For Portage sections of Water Trails, see "General Criteria" above.</p> <p>Note: Many facilities and features described in this row are commonly associated with hiking/portage trails, Concentrated Use Areas or Developed Sites (as compared to the Water Trail itself), and are described here primarily for guidance in applying appropriate Trail Class.</p>	<ul style="list-style-type: none"> <li>♦ Designated water route, shown on maps and used to access other trails or portages, but with no trail structures, facilities, signs, or recurring maintenance needs along the route.</li> <li>♦ Maintenance consists of occasional patrols and resource protection.</li> <li>♦ Signs and/or parking facilities at initial access points only, and likely associated with other trails or sites.</li> <li>♦ In densely vegetated areas, users will commonly need to lift vessel over logs, shoals, or matted vegetation.</li> </ul>	<ul style="list-style-type: none"> <li>♦ Very few markers or route designators, and likely none in wilderness.</li> <li>♦ Low profile structures or facilities occasionally present; primarily to reduce beach and bank impacts. Structures typically consist of native material hardening of portage/water entry points.</li> <li>♦ Signs or parking facilities at initial access point only, and may be associated with another trail or site.</li> <li>♦ On water trails where dense vegetation and obstructions occur, path is typically narrow, shallow, and may occasionally require user to lift over obstacles or break path through some vegetation and duck under overhanging branches.</li> </ul>	<ul style="list-style-type: none"> <li>♦ Buoys or markers possible to identify route</li> <li>♦ Typically, facilities on motorized or non-wilderness trails to provide improved access and to reduce beach and bank impacts.</li> <li>♦ Well-developed parking and launch facilities at primary access points, but facilities and structures rare along trail.</li> <li>♦ Interpretive and informational displays typically present at primary access points.</li> <li>♦ On water trails where dense vegetation and obstructions occur (swamps), path is typically cleared wide enough for ready passage and maneuvering of at least one vessel, and usually two-way vessel passage, with only occasional low overhanging vegetation.</li> </ul>	<ul style="list-style-type: none"> <li>♦ Buoys or markers are high profile and may be inter-visible and/or route is readily followed.</li> <li>♦ Highly developed launch facilities, docks, and amenities typically provided for user convenience.</li> <li>♦ Well-marked approaches to facilities and portages</li> <li>♦ Interpretive displays, maps, information kiosks and signs typically present at access points and along route.</li> <li>♦ On water trails where dense vegetation and obstructions occur (swamps), path is consistently cleared wide enough for unhindered, easy passage of two or more vessels.</li> </ul>	<p>Not managed for watercraft as primary use type.</p>

## Trail Operation and Maintenance Considerations

Trail Operation and Maintenance Considerations are intended to complement the National Trail Class General Criteria. These considerations can be regarded as general guidelines to assist in developing trail prescriptions, and subsequent program management, operations and maintenance. Trail O&M Considerations offer a general starting point and will likely be adapted to reflect financial limitations and specific district, forest, or regional circumstances. The broad guidance outlined below reflects “typical” considerations for trails in different Trail Classes:

<b>Trail Attributes</b>	<b>Trail Class 1 Minimal/Undeveloped Trail</b>	<b>Trail Class 2 Simple/Minor Development Trail</b>	<b>Trail Class 3 Developed/Improved Trail</b>	<b>Trail Class 4 Highly Developed Trail</b>	<b>Trail Class 5 Fully Developed Trail</b>
<b>Trail Management</b>	<p>Typically managed to accommodate:</p> <ul style="list-style-type: none"> <li>♦ Low use levels.</li> <li>♦ Highly skilled users, comfortable off-trail.</li> <li>♦ Users with high degree of orienteering skill.</li> <li>♦ Some travel modes and ability levels may be impractical or impossible, and may not be encouraged.</li> <li>♦ Water Trails: Users require high level of navigation/orientation and paddling skills.</li> </ul>	<p>Typically managed to accommodate:</p> <ul style="list-style-type: none"> <li>♦ Low-to-moderate use levels</li> <li>♦ Mid-to-highly skilled users, capable of traveling over awkward condition/obstacles</li> <li>♦ Users with moderate orienteering skill.</li> <li>♦ Trail suitable for many user types, but challenging and involves advanced skills.</li> <li>♦ Water Trails: Moderate to high level of navigation/orientation and paddling/piloting skills required.</li> </ul>	<p>Typically managed to accommodate:</p> <ul style="list-style-type: none"> <li>♦ Moderate to heavy use.</li> <li>♦ Users with intermediate skill level and experience.</li> <li>♦ Users with minimal orienteering skills .</li> <li>♦ Moderately easy travel by managed use types.</li> <li>♦ Random potential for accessible use.</li> <li>♦ Water Trails: Basic to moderate navigation and paddling/piloting skills required.</li> </ul>	<p>Typically managed to accommodate:</p> <ul style="list-style-type: none"> <li>♦ Very heavy use.</li> <li>♦ Users with minimal skills and experience.</li> <li>♦ Users with minimal or no orienteering skills.</li> <li>♦ Easy/comfortable travel by managed use types</li> <li>♦ May be (or has potential to be made) accessible.</li> <li>♦ Water Trails: Basic navigation and paddling/piloting skills required.</li> </ul>	<p>Typically managed to accommodate:</p> <ul style="list-style-type: none"> <li>♦ Intensive use.</li> <li>♦ Users with limited trail skills and experience.</li> <li>♦ Trail typically meets agency requirements for accessibility</li> <li>♦ Includes “Pedestrian Trails”.</li> </ul>
<b>Maintenance Indicators</b>	<ul style="list-style-type: none"> <li>♦ Resource protection.</li> <li>♦ Safety commensurate with targeted recreational experience.</li> </ul>	<ul style="list-style-type: none"> <li>♦ Resource protection.</li> <li>♦ Safety commensurate with targeted recreational experience.</li> </ul>	<ul style="list-style-type: none"> <li>♦ Resource protection.</li> <li>♦ User convenience.</li> <li>♦ Safety commensurate with targeted recreational experience.</li> </ul>	<ul style="list-style-type: none"> <li>♦ User comfort and ease.</li> <li>♦ Resource Protection.</li> <li>♦ Safety commensurate with targeted recreational experience.</li> </ul>	<ul style="list-style-type: none"> <li>♦ User comfort and ease.</li> <li>♦ Targeted high level of accessibility to key recreational opportunities.</li> <li>♦ Safety commensurate with targeted recreational experience.</li> </ul>
<b>Maintenance Frequency &amp; Intensity**</b>	<ul style="list-style-type: none"> <li>♦ Infrequent or no scheduled recurring maintenance.</li> <li>♦ Maintenance interval is typically 5 or more years, or in response to reports of unusual resource problems requiring repair.</li> </ul>	<ul style="list-style-type: none"> <li>♦ Maintenance scheduled to preserve the trail facility and route location.</li> <li>♦ Maintenance interval typically 3-5 years, or in response to reports of unusual problems.</li> </ul>	<ul style="list-style-type: none"> <li>♦ Trail cleared to make available for use early in use season, and to preserve trail integrity.</li> <li>♦ Maintenance interval typically 1-3 years, or in response to reports of trail or resource damage or significant obstacles to managed use type and experience level.</li> </ul>	<ul style="list-style-type: none"> <li>♦ Trail cleared to make available for use at earliest opportunity in use season.</li> <li>♦ Typically, maintenance performed at least annually.</li> </ul>	<ul style="list-style-type: none"> <li>♦ Maintenance performed at least annually, or as needed to meet posted conditions.</li> <li>♦ Major damage or safety concerns (outside of UA conditions posted at trailhead) typically corrected or posted &lt;24 hours of notice.</li> </ul>

\*\* See Trail Condition Assessment Survey Matrix (CASM) for survey interval and intensity.