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National Trail Classification System, FSM 2350 and FSH 2309.18; Notice

DEPARTMENT OF AGRICULTURE

Forest Service

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National Trail Classification System, FSM 2350 and FSH 2309.18

AGENCY: Forest Service, USDA.

ACTION: Notice of issuance of interim final directives and public comment period.

SUMMARY: The Forest Service is issuing these interim final directives as an amendment to Forest Service Manual 2350, Trail, River, and Similar Recreation Opportunities, and Forest Service Handbook 2309.18, the Trail Management Handbook, to incorporate revisions to the agency's national trail classification system (TCS), consisting of the Trail Classes and Design Parameters. Chapters 30 and 40 in the Trail Management Handbook have not been included in these interim final directives because these chapters do not relate directly to the TCS and Design Parameters and because the agency plans to update them significantly. The comments on these chapters will be addressed in preparation of final directives. The agency is providing a 60-day public comment period on these interim final directives and will review timely comments in developing final directives.

Trail Classes are general categories reflecting trail development scale, arranged along a continuum. Managed Uses are the modes of travel that are actively managed and appropriate on a trail, based on its design and management. Designed Use is 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 will apply to a trail. The Design Parameters are technical guidelines for the survey, design, construction, maintenance, and assessment of a trail, based on its Designed Use and Trail Class.

DATES: These interim final directives are effective October 16, 2008.

ADDRESSES: The interim final directives and this **Federal Register** notice are available electronically on the World Wide Web at *http://www.fs.fed.us/recreation/*. The record for these interim final directives is available for inspection and copying at the office of the Director, Recreation, Heritage, and Volunteer Resources Staff, USDA Forest Service, 4th Floor Central, Sidney R. Yates Federal Building, 1400 Independence Avenue, SW., Washington, DC, from 8:30 a.m. to 4 p.m., Monday through Friday, except holidays. Those wishing to inspect the record are encouraged to call Jonathan Stephens at (202) 205–1701 beforehand to facilitate access into the building.

FOR FURTHER INFORMATION CONTACT: Jonathan Stephens, Recreation, Heritage, and Volunteer Resources Staff, USDA Forest Service, (202) 205–1701.

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1. Background and Need for the Interim Final Directives

The Forest Service is responsible for managing 193 million acres of National Forest System (NFS) lands. On these lands, approximately 144,000 miles of NFS trails are managed by the Forest Service. An NFS trail is a forest trail other than a trail which has been authorized by a legally documented right-of-way held by a State, county, or other local public road authority (36 CFR 212.1). A forest trail is a trail wholly or partly within or adjacent to and serving the NFS that the Forest Service determines is necessary for the protection, administration, and utilization of the NFS and the use and development of its resources (36 CFR 212.1). Design, construction, operation, and maintenance of NFS trails fall under the authority of Forest and Grassland Supervisors.

Since at least 1991, the directives have included three categories for classifying NFS trails based on their difficulty level. These categories, which are enumerated in the Forest Service Handbook (FSH), are most difficult, more difficult, and easiest. In addition, since 1991, the FSH has contained technical guidelines, called trail guides, for specific types of uses, including hiking and pack and saddle use. For each of the three difficulty levels, each trail guide contains design, construction, and maintenance guidelines for the physical characteristics of trails. The physical characteristics include maximum pitch grade and length, clearing width and height, tread width, and surface. The difficulty levels in the trail guides encompass trails ranging from the least developed, which are typically steep or narrow, to the most highly developed, which are typically wide with minimal grades.

Trail management and use were (and still are) based on the management intent for the trail, as determined by the applicable land management plan, applicable travel management decisions, trail-specific decisions, and other related direction. When local managers identified a trail's management and use, they identified the applicable difficulty level. Once managers determined the applicable trail management and use and difficulty level, applicable technical guidelines from the appropriate trail guide could be identified.

In 1994, the Forest Service implemented a trails database module that included numerous trail attributes, including the three difficulty levels of most difficult, more difficult, and easiest, and the three trail classes of way, secondary, and, mainline. However, the classes of way, secondary, and mainline incorporated into the database did not correlate directly with the difficulty levels in the FSH.

In 1998, the Forest Service determined that a more uniform and integrated national trail classification system would improve inventory and on-the-ground management. Consequently, in 1999 the Forest Service transitioned from the three trail classes of way, secondary, and mainline to the five Trail Classes in effect today. The five Trail Classes are keyed more precisely to the physical characteristics of NFS trails and more accurately stratify them for various purposes, including database inventory, development of land management planning objectives, visitor information, and assessment of costs. In general, the five Trail Classes encompass many of the attributes and characteristics of the

previous way, secondary, and mainline trail categories.

In 2000, the Forest Service launched a national effort to enhance its trail program, including improving inventory, tracking of trail condition and needs, and accuracy and accountability of costs; minimizing confusion and inconsistency in terminology and interpretation of guidance; and improving the communication, quality, and utility of trail data. As a result, the agency refined five concepts that are now collectively known as the ''Trail Fundamentals,'' including Trail Type, Trail Class, Managed Use, Designed Use, and Design Parameters. The Trail Fundamentals provide an updated and more effective means for consistently recording and communicating the guidelines for trail design, construction, maintenance, survey, and assessment.

The Trail Fundamentals integrate the five Trail Classes with technical guidelines, called Design Parameters, for the design, construction, maintenance, survey, and assessment of NFS trails. The Design Parameters, which were implemented in 2004, superseded the technical parameters in the Trail Guides in the FSH. When the agency shifted from the Trail Guides to the Design Parameters, the design, construction, and maintenance guidelines changed in minor, technical ways with no effect on how trails were managed on the ground.

The following provides a description of Trail Class, Managed Use, and Designed Use, the three Trail Fundamentals that were most critical to development of the TCS and Design Parameters.

Trail Class

The current Trail Classes range from Minimal/Undeveloped (Trail Class 1) to Fully Developed (Trail Class 5):

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

Each Trail Class has descriptors for the physical characteristics of trails, including tread and traffic flow, obstacles, constructed features and tread elements, signs, and typical recreational environment and experience.

Managed Use

A Managed Use is a mode of travel that is actively managed and appropriate on a trail, considering its design and management. There may be more than one Managed Use per trail or trail segment. As indicated by use of the word ''actively,'' the term ''Managed Use'' reflects a management decision or intent to accommodate a particular use through trail design, maintenance, and management. As with the previous classification system, the applicable Managed Uses of a trail are based on a trail's management intent. A trail's management intent is determined by the applicable land management plan, applicable travel management decisions, trail-specific decisions, and other related direction.

The concepts of Trail Class and Managed Use are interdependent. Determining the desired development scale or Trail Class requires consideration of the Managed Uses of a trail. Likewise, determining the Managed Uses of a trail requires consideration of the development scale of the trail. Therefore, the applicable Trail Class is usually identified in conjunction with the Managed Uses of a trail.

Designed Use

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

While there may be more than one Managed Use, there can be only one Designed Use per trail or trail segment. For example, if a trail has a Managed Use of Hiker/Pedestrian and Pack and Saddle, Pack and Saddle would be the Designed Use or design driver because it requires more stringent trail design, construction, and maintenance parameters.

Once the Trail Class, Managed Uses, and Designed Use are determined for a trail or trail segment, the corresponding set of technical guidelines or Design Parameters can be applied.

Design Parameters

The Design Parameters are technical guidelines for the survey, design, construction, maintenance, and assessment of a trail, based on its Designed Use and Trail Class. They reflect the dominant physical criteria that most define the geometric shape of a trail, including tread width, surface, grade, cross slope, clearing width and height, and turning radius. In some instances, a specific value for these factors is identified in the Design Parameters, while in others, a range of values is identified. In the latter case, managers narrow the range, selecting the specific value that best reflects the management intent for the trail.

The Design Parameters do not indicate the types of uses that can occur or are allowed on NFS trails, but rather establish general guidelines for the design, construction, maintenance, survey, and assessment of NFS trails, based on their physical characteristics and Designed Use, as determined by preexisting management decisions. All nonmotorized uses are allowed on any NFS trail unless specifically prohibited (motor vehicle use is covered by 36 CFR part 212, subpart B). In addition, local deviations from any Design Parameter 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.

2. Public Comments on the Proposed Directives and Agency Response

Overview of Comments

On July 3, 2006, the Forest Service published the proposed revisions to the TCS, including Design Parameters, in the **Federal Register** (71 FR 127) for a 60-day public comment period. The proposed revisions were also posted on the Forest Service Web site at *http://www.fs.fed.us/recreation/.*

The Forest Service received 122 letters or electronic messages in response to the proposed revisions. Each respondent was grouped into one of the following categories:

Trail Interests—118

State Agencies—2

Individuals (unaffiliated or unidentifiable)—2

No comments were received on any section of the directives that is not listed below.

Response to General Comments

The TCS

Comment. One respondent stated that the Trail Fundamentals and revisions to the TCS appear to be ''well conceived and could provide useful guidance.'' Another respondent stated that the Design Parameters and Trail Classes seem reasonable and in tune with what is on the ground.

Response. The agency agrees that the TCS is an effective trail management tool that provides valuable guidance for the planning, design, construction, maintenance, assessment, and management of NFS trails. The TCS is resulting in improved consistency, communication, and quality of trail inventory, prescription, condition, and cost data.

Comment. Two respondents were pleased with the clear definition and application of Managed Use, which

recognize that there can be more than one Managed Use for a trail.

Response. The Forest Service agrees that Managed Use is an important and very useful trail management concept and continues to strive for a clear understanding and consistent interpretation of this concept through issuance of these directives, training, and other reference material.

Comment. Two respondents expressed support for the definition and application of Designed Use, based on the belief that this concept, in conjunction with the concept of Managed Use, promotes multiple trail uses on sufficiently designed, constructed, and maintained trails.

Response. The agency agrees that Designed Use is an important trail management concept and that Designed Use, in conjunction with Managed Use, allows managers to communicate clearly the intended uses of a trail and to specify the design, construction, and maintenance parameters needed to accommodate those uses.

Comment. One respondent believed that the TCS appears to take into account the impacts of nonpedestrian trail uses on resources and other trail users and to direct motorized and pedestrian use to trails that are capable of sustaining those uses.

Response. The Forest Service agrees that the TCS and the interim final directives provide improved guidance regarding sustainable development, management, and use of NFS trails.

Comment. One respondent asserted that application of the TCS should not result in a net reduction of trail miles on NFS lands and that trails closed for habitat protection should be rerouted.

Response. The application of the TCS does not result in changes in availability or management on NFS trails. Rather, the TCS is a tool for improving consistency in tracking and summarizing trail inventory and communicating trail design, construction, and maintenance parameters. Decisions regarding adding or removing NFS trails from the forest transportation system are subject to applicable land management plan direction, travel management planning, and trail-specific planning and are beyond the scope of these directives.

Comment. Two respondents asserted that there should be full funding for periodic, scheduled trail maintenance. One respondent recommended that any new standards or guidelines focus on appropriate scheduling of reconstruction, repair, and maintenance, as well as development of alternative funding sources to maximize trail appropriations and to fully fund trail work.

Response. The Forest Service recognizes that there is a need for adequate funding for trail maintenance. Consequently, the agency has an even greater need for effective approaches for assessing and tracking NFS trail inventory, conditions, and maintenance needs and prioritizing needed trail maintenance. Implementation of the TCS is a key step in agency efforts to improve efficiency, consistency, and credibility in the identification and reporting of maintenance needs agency-wide and in the prioritization and implementation of maintenance work to be completed with limited resources. The TCS also facilitates identification, communication, and implementation of trail repair and maintenance conducted by contractors, Forest Service crews, and thousands of volunteers across the country.

The interim final directives provide general guidance in FSH 2309.18, section 18, exhibit 01, for determining appropriate schedules for recurring and other trail work. However, the determination of trail-specific maintenance schedules depends on a variety of factors, including current management priorities and available resources. While the agency strives to increase contributions from volunteers and to leverage funding for trail work, these activities are beyond the scope of these directives.

Comment. One respondent stated that the proposed directives fail to provide context by not including guidance regarding the mission, vision, and goals of the TCS.

Response. The interim final directives contain statements regarding the goals of the TCS in FSM 2353.02, paragraph 1, and 2353.12, as well as FSH 2309.18, section 20.2, paragraph 1.

Comment. One respondent requested that the agency simplify the text of the proposed directives on the grounds that it is too bureaucratic, arcane, and difficult to understand.

Response. The primary intended audience for this direction is Forest Service employees charged with administering the agency's trails program. The agency acknowledges that some of the TCS materials are technical and therefore require a certain level of technical training and expertise to understand. To facilitate clear communication and consistent interpretation, the agency is incorporating revisions throughout the interim final directives to improve clarity to the extent possible, including several new or revised definitions.

Comment. Two respondents questioned the need for directives on the TCS and expressed concern that the Forest Service is spending time on paper and process, rather than accomplishing trail work in the field.

Response. The Forest Service believes that sufficient and credible information for trail inventory and prescriptions is essential for effective management of the agency's trail program, including the determination of needed field work and efficient application of limited resources to accomplish that work. This information is used annually to report to Congress regarding annual accomplishments, the work needed to meet the National Quality Standards for Trails, and the cost of that work.

Multi-Use Trails

Comment. Some respondents stated that identification of one Designed Use per trail or trail segment would be too limiting and would not accommodate multiple uses on a trail. These respondents expressed concern that identification of a single Designed Use would be based on the most intensive use on a trail, even if that use represented only a small percentage of use occurring on the trail. These respondents contended that this approach to Designed Use could result in the displacement or exclusion of trail uses. Some respondents stated that there needs to be a mixed-use trail category that would permit trails to remain available for multiple uses. Two respondents contended that in most cases there is no single Designed Use and that the TCS should include a single multi-use nonmotorized Designed Use for these situations.

Response. The majority of NFS trails are managed for multiple modes of travel, including various combinations of Managed Uses. Implementation of the TCS does not change this approach to trail management. For example, many NFS trails are managed for hiker/pedestrian, bicycle, and pack and saddle use, and many others are managed for all-terrain vehicle (ATV) and motorcycle use, with numerous other uses allowed on these trails.

The TCS does not determine the Managed Uses of NFS trails. Rather, local trail managers determine the Managed Uses for each NFS trail, based on applicable land management plan direction, applicable travel management decisions, trail-specific decisions, and other related direction. This direction is based on consideration of current trail uses and their volume, relative levels, and seasons of use; potential or existing use conflicts; desired distances and challenge levels; topography; estimated

development and maintenance costs; and other factors.

Identification of the Designed Use from among the Managed Uses of a trail helps managers to ensure that the design, construction, and maintenance parameters for the trail are adequate to accommodate all the Managed Uses of that trail. To clarify this point, the interim final directives state that when determining the Designed Use from among the Managed Uses identified for a trail, managers should 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 (FSH 2309.18, sec. 14.4, para. 3).

Comment. One respondent expressed concern that the requirement to identify one Designed Use per trail or trail segment does not apply to multi-season trails.

Response. Many NFS trails have varying combinations of Managed Uses during different seasons of the year. Implementation of the Design Parameters does not change these determinations. To the contrary, both the proposed directives (FSH 2309.18, section 2.03) and the interim final directives (FSH 2309.18, section 14.4) state that when determining the Designed Use and Design Parameters of an NFS trail or trail segment, local managers should ''consider all Managed Uses that occur during all seasons of use of the trail or trail segment.'' Determination of the appropriate Designed Use from among the Managed Uses of a trail helps managers to ensure that the design, construction, and maintenance parameters for the trail are adequate to accommodate all of its Managed Uses during all of its seasons of use and on various Trail Types (such as when a Standard Terra Trail overlaps a Snow Trail).

Comment. One respondent recommended developing Trail Management Objectives (TMOs) specific to multi-use trails that would allow less intensive nonmotorized uses, as well as more intensive motorized uses.

Response. TMOs are developed at the local level, are trail-specific, are based on applicable management direction, and include the identification of several factors, including the applicable Trail Class, Managed Uses, the Designed Use, and corresponding Design Parameters for the trail or trail segment. The TCS provides guidance for development of trail-specific TMOs for all NFS trails, including those with various combinations of motorized and nonmotorized Managed Uses. The development of trail-specific TMOs helps managers to identify the Managed Uses, including motorized and nonmotorized uses, and the corresponding intensity of use for a particular trail or trail segment.

Concerns Regarding Unnecessary Improvement and Maintenance

Comment. Several respondents expressed concern that implementation of the TCS would lead to unnecessary improvement and maintenance of trails to a higher standard, resulting in wider, more urban trails and detracting from the rugged, challenging, natural quality of the trail experience on NFS lands. Two respondents expressed concern that implementation of the proposed Design Parameters would be elaborate, excessive, and costly, resulting in trails that would no longer have the wild, rugged character that many seek. Several respondents expressed concern that adoption of the proposed Design Parameters would result in mixed-use trails that look more like highly developed suburban trails.

Response. Implementation of the TCS and Design Parameters will not cause any changes in trail prescriptions or on-the-ground management of trails. The TCS and Design Parameters are applied by local managers based on applicable land management plan direction, applicable travel management decisions, trail-specific decisions, and other related direction to develop trail-specific TMOs and trail prescriptions. Managers strive to provide a variety of trail opportunities for experiencing diverse environments and modes of travel, ranging from primitive and semiprimitive to roaded natural and urban, consistent with the role of recreation in the NFS and the capability of the land (FSM 2302, 2303, and 2350, sec. 03, para. 2).

The national Trail Classes encompass a full spectrum of trail development, ranging from minimally developed, extremely rugged, and highly challenging trails in Trail Class 1 to fully developed, minimally challenging, and often accessible trails in Trail Class 5. The agency views each of the five Trail Classes as a valuable component of the range of NFS trail opportunities. In the interim final directives, the agency has included additional guidance on the Design Parameters regarding the level of challenge associated with various combinations of Trail Class and Designed Use, as shown in section 3 of this preamble, Table 7, ''Changes to the Trail Class Matrix,'' under Obstacles, and in Tables 8 through 14, under Design Surface Protrusions and Obstacles.

Comment. One respondent expressed concern that trail maintenance and upgrades are determined by the use with the most impact, potentially resulting in undesired and costly development of higher-end trails.

Response. The TCS does not dictate trail maintenance or upgrades. Under the TCS, trail prescriptions, including maintenance and improvement, are based on a trail's TMOs, which include identification of the intended Trail Class, Managed Uses, Designed Use, and Design Parameters for the trail or trail segment. Local managers are responsible for making these determinations based on the applicable land management plan direction, applicable travel management decisions, trail-specific decisions, and other related direction. This direction is based on consideration of current trail uses; their volume, relative levels, and seasons of use; potential or existing use conflicts; desired distances and challenge levels; topography; estimated development and maintenance costs; and other factors. Under the TCS, management intent drives the level of development of a trail, as reflected in the applicable Trail Class and Design Parameters, rather than the allowed uses of a trail. Therefore, the level of trail development under the TCS is desired and appropriate.

Nonmotorized Use

Comment. Some respondents strongly supported the open-unless-closed Forest Service trails policy regarding nonmotorized use of NFS trails and believed that the following statement should remain in the TCS directives: ''All nonmotorized uses are allowed on any NFS trail unless specifically prohibited.''

Response. All trail uses, not just nonmotorized uses, are allowed on NFS trails unless specifically prohibited. Therefore, the agency is retaining the following statement in the final interim directives: ''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.'' (FSH 2309.18, sec. 14.3, para. 4).

Comment. Some respondents expressed concern regarding potential displacement of nonmotorized trail use by motorized trail use as a result of implementation of the TCS. Many of these respondents expressed concern that the Designed Use and subsequent maintenance parameters would be determined by the most intensive or motorized use, which would encourage more of the Designed Use and displace less intensive, nonmotorized uses.

Several respondents expressed concern that adoption of higher trail standards would encourage motorized use, shifting the emphasis from nonmotorized to motorized use and promoting the exclusion of nonmotorized uses. Specifically, these respondents were concerned that all trails where motorcycles are not prohibited would be designed and maintained for motorcycle use, even if 95 percent of the use of these trails were nonmotorized.

Response. The TCS does not cause a shift in the Managed Uses or in the balance of motorized and nonmotorized uses of NFS trails, nor will the implementation of the TCS result in adoption of higher trail standards. Trail managers are responsible for applying the TCS to reflect the management intent for each NFS trail, which derives from applicable land management plan direction, applicable travel management decisions, trail-specific decisions, and other related direction. This direction is based on consideration of current trail uses; their volume, relative levels, and seasons of use; potential or existing use conflicts; desired distances and challenge levels; topography; estimated development and maintenance costs; and other factors.

The agency is sensitive to potential displacement of trail uses as use patterns and technology change. The agency believes that the TCS enhances managers' ability to implement the management intent for NFS trails and to provide desired trail opportunities, experiences, and challenge levels for nonmotorized and motorized uses, individually or in combination.

Coordination With Travel Management

Comment. One respondent requested clarification of how the TCS integrates with travel management, in particular, with designation of routes for motor vehicle use.

Response. Once a trail is designated for motor vehicle use, the trail's TMOs should reflect that designation. Directives are being finalized for implementation of the travel management rule at 36 CFR part 212, subpart B. The proposed travel management directives state that TMOs should reflect applicable travel management decisions. In addition, a trail's TMOs include identification of the applicable Trail Class, Managed Uses, Designed Use, and Design Parameters.

Comment. Several respondents expressed concern that the proposed revisions to the TCS were not coordinated with, are inconsistent with, and do not reflect the subtleties of the Forest Service's new travel management rule. Some respondents recommended that the TCS be reviewed by travel management program coordinators and be made consistent with the travel management rule with respect to designation of trail loops, establishment of trail cutoffs, and conversion of closed roads to trails

Response. The Forest Service is working on final travel management directives to implement the travel management rule, which requires each administrative unit or Ranger District to designate those NFS roads, NFS trails, and areas on NFS lands that are open to motor vehicle use by vehicle class and, if appropriate, by time of year. The managers of the national trail program and travel management program have consulted extensively in the development of their directives to ensure consistency in terminology and appropriate program integration. Designation of trails for motor vehicle use and consideration of conversion of NFS roads to NFS trails are within the scope of the travel management directives and beyond the scope of the TCS directives.

Comment. Two respondents expressed concern about the cost of new federal requirements to upgrade trails and recommended that the upgrading be postponed until after the travel management directives are finalized.

Response. The TCS does not require any specific actions with regard to design, construction, and maintenance of NFS trails, including upgrading their condition. Rather, the TCS is a tool used by trail managers to improve consistency in tracking and summarizing inventory and communicating design, construction, and maintenance parameters for NFS trails. Therefore, issuance of the interim final directives will not affect the cost of trail maintenance.

Recreation Opportunity Spectrum

Comment. Some respondents commented that the proposed directives treat NFS trails solely as recreational facilities, with Design Parameters and maintenance cycles linked to classes in the Recreation Opportunity Spectrum (ROS) or Wilderness ROS, rather than as multi-function transportation facilities with no linkage to ROS or Wilderness ROS classes.

Response. The objectives in FSM 2353.02 for management of NFS trails remain largely unchanged. These objectives include the provision of ''trail-related recreation opportunities that serve public needs and meet land management and recreation policy objectives,'' the provision of ''trail recreation opportunities that emphasize the natural setting of national forests and grasslands and are consistent with land capability,'' and the provision of ''trail access for resource management and protection.'' The agency believes that implementation of the TCS furthers all three of these objectives because it is based on the scale of trail development and applied, along with the Design Parameters, so as to reflect the management intent for each NFS trail.

ROS and Wilderness ROS classes are used by the agency to identify social, physical, and managerial settings in the NFS and to ensure NFS trails offer a suitable diversity of outdoor recreation opportunities (FSM 2353.13). There is no direct correlation between the five Trail Classes and ROS and Wilderness ROS classes, although some combinations occur more commonly than others. To clarify the lack of a direct correlation in the interim final directions, the agency has added a footnote to the Trail Class Matrix that states: ''The Trail Class Matrix shows 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'' (FSH 2309.18, sec. 14.2, ex. 01). Managed Uses reflect various modes of travel, each of which may occur on trails managed for recreational use, on trails managed for recreational and nonrecreational use, or both. The TCS enhances managers' ability to develop prescriptions for the design, construction, and maintenance needed to accommodate the Managed Uses of each NFS trail.

National Scenic and National Historic Trails

Comment. Some respondents said that it is unclear how National Historic and National Scenic Trails fit into the proposed TCS. These respondents expressed concern that none of the proposed Trail Classes includes guidelines for preserving National Historic Trails and that a one-size-fits-all approach is not appropriate for these trails.

Response. The TCS applies to all NFS trails, including National Historic and National Scenic Trails. The TCS does not provide guidance on preservation of National Historic Trails. Rather, with regard to trail maintenance, the purpose of the TCS is to provide managers with a tool for consistently and effectively inventorying NFS trails and identifying and communicating their condition and the work needed to maintain them to their prescribed standard.

Comment. One respondent expressed concern that the proposed Trail Classes vary with regard to the standards for trail marking and that signing and marking (even in wilderness areas) for National Historic and National Scenic Trails need to be consistent.

Response. The Trail Class Matrix provides general guidelines regarding the appropriate level and type of signage by Trail Class. The agency has incorporated several clarifications regarding signing at junctions and route markers into the Trail Class Matrix (FSH 2309.18, sec. 14.2, ex. 01), as shown in Table 7, ''Changes to the Trail Class Matrix,'' in section 4 of this preamble. See ''Sign and Poster Guidelines for the Forest Service'' (EM–7100–15) for guidance on trail signing and marking, including sign design and placement for various modes of travel and at various locations, including wilderness areas and NFS trails.

Comment. One respondent stated that the proposed Trail Classes must not change the intended or allowed recreational uses on National Scenic and National Historic Trails.

Response. The Trail Classes do not dictate the intended or allowed uses of NFS trails. Trail Classes reflect the development scale of NFS trails and are applied, along with their applicable Design Parameters, so as to reflect the management intent for each NFS trail. Determination of a trail's management intent is based on applicable land management plan direction, applicable travel management decisions, trail-specific decisions, and other related direction. Decisions about which modes of travel are allowed on NFS trails, including National Scenic and National Historic Trails, are made by the responsible official at the local level, consistent with applicable law, including the National Trails System Act.

Comment. One respondent expressed concern that application of the TCS could unintentionally alter well-established practices for construction, maintenance, and management of the Appalachian National Scenic Trail and its facilities. This respondent assumed that the stewardship manual for the Appalachian National Scenic Trail would continue to provide guidance with respect to polices applicable to that trail. This respondent expressed hope that the TCS would reduce, rather than increase, misunderstandings regarding appropriate development of the trail, its side trails, and its facilities.

Response. Implementation of the TCS will not change on-the-ground management of the Appalachian National Scenic Trail. The TCS gives managers a standardized tool for inventorying trails, identifying and communicating the condition of trails, and identifying the work needed to maintain them to their prescribed standard. The TCS will not supersede the stewardship manual for the Appalachian National Scenic Trail. The agency believes that implementation of the TCS will improve communication between the Forest Service and its trail partners, including those who work on the Appalachian National Scenic Trail.

Management of Trails Based on Their Current Condition

Comment. Two respondents asserted that Forest Service personnel surveying trails for the proposed TCS were instructed to determine the applicable Trail Class based on a trail's current condition and expressed concern about this practice. One respondent contended that this practice has resulted in reduction of the Trail Class for many trails that have had minimal or no maintenance over the past 30 years. The other respondent contended that in many cases a trail's inventoried condition differs considerably from its TMOs and that this discrepancy needs to be rectified.

In addition, this respondent expressed concern that management of trails based on their current condition is inappropriate in wilderness areas and provided recommendations for assessing a trail's current condition in terms of whether the trail meets its desired condition. This respondent stated that establishment of trail objectives should be guided by the intent and purposes of the Wilderness Act, scientifically sound data on the capability of the ecosystem to withstand various types and varying intensity of use, and the need to preserve opportunities for primitive travel experiences and solitude, including transport by pack and saddle.

This respondent also believed that trails in wilderness areas should maximize opportunities for primitive travel and camping, solitude, and aesthetic experiences unique to wilderness areas. This respondent contended that the agency should track the degree to which the condition of trails in wilderness areas reflects their management intent, as follows: (a) Meeting their management intent; (b) if they do not meet their management intent, being improved to meet it, if funding permits; (c) if funding does not permit improving them to meet their management intent, maintaining their current condition; or (d) continuing to deteriorate and further deviate from their management intent.

Response. Forest Service trail managers are not instructed to classify NFS trails in accordance with their current condition. Forest Service training and reference materials instruct trail managers to identify the applicable Trail Class, Managed Uses, and Design Parameters for each NFS trail based on applicable land management plan direction, applicable travel management decisions, trail-specific decisions, and other related direction. Trail managers are instructed to document the applicable Trail Class, Managed Uses, and applicable Design Parameters in TMOs, which are defined in the interim final directives as ''documentation of the intended purpose and management of an NFS trail based on management direction, including access objectives'' (FSM 2353.05 and FSH 2309.18, sec. 05). When determining the applicable Trail Class, managers are instructed to ''choose the one that most closely reflects the management intent of the trail,'' as stated in the introductory paragraph to the Trail Class Matrix (FSH 2309.18, sec. 14.2, ex. 01). For further clarification, the agency has revised the interim final directives at FSH 2309.18, section 14.2, paragraph 7, to state: ''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.''

Managers are instructed to apply the same management approach to NFS trails inside and outside wilderness areas. In wilderness areas, management intent for NFS trails is also contained in the applicable enabling legislation and wilderness management plan. Application of this management approach, which is based on the management intent for NFS trails, will not result in reduction of the Trail Class for NFS trails that have not received the desired level of maintenance.

Training

Comment. One respondent recommended that the Forest Service consider some form of internal and external educational outreach to explain the TCS, as well as the Interagency Trail Data Standards (ITDS), the Forest Service Trail Accessibility Guidelines (FSTAG), and the Forest Service Outdoor Recreation Accessibility Guidelines (FSORAG).

Response. The Forest Service presents numerous training sessions each year on these topics. While the majority of these training sessions are for Forest Service employees at the national, regional, and local levels, the agency has also provided dozens of related training sessions for participants from other

federal agencies, state and local agencies, and many trail organizations. With the increasing need for budget efficiency, the agency is also providing expanded opportunities for online training for Forest Service employees on these topics. The agency also continues to improve and disseminate its related reference and training materials and is planning to make them available via an external Web site, which is currently under development.

Need for Change

Comment. Several respondents questioned the need for revision of the TCS and contended that the agency insufficiently explained and supported the need for the changes in the proposed directives. Some respondents requested that the Forest Service's trail classification system and Trail Guides remain the same as they are in the current directives.

Response. As explained in the preamble to the proposed and interim final directives, the Forest Service's trail classes of way, secondary, and mainline did not correlate directly with the difficulty levels in FSH 2309.18, section 2.32c, exhibit 01. The five Trail Classes, in contrast, are keyed more precisely to the physical characteristics of NFS trails and more accurately stratify NFS trails for purposes of inventory, land management planning, visitor information, and assessment of maintenance and construction costs. The five Trail Classes are also incorporated into each set of Design Parameters.

The Design Parameters, which superseded the technical parameters in the Trail Guides in the FSH, incorporate the design, construction, and maintenance guidelines in the Trail Guides, with only minor, technical changes that have no effect on how trails are managed on the ground. In some cases, the Design Parameters expand the range of values in a category. In contrast to the Trail Guides, each set of Design Parameters includes a standardized set of factors (e.g., Design Tread Width, Target Grade, and Short Pitch Maximum). These factors are defined in the interim final directives to enhance consistency in their application (FSM 2353.05 and FSH 2309.18, sec. 05).

The Forest Service transitioned to the five Trail Classes in 1999 and began using the Design Parameters in 2004. These inventory and trail management tools have been integrated throughout the agency's trail database, TMOs, and related management tools. The TCS and Design Parameters have resulted in improved consistency and quality of trail inventory, condition assessments, prescriptions reflecting the work needed to meet the National Quality Standards for Trails, and corresponding cost estimates. Therefore, it would not be cost-effective or productive to return to the earlier system.

2353.05—Definitions

Comment. Some respondents supported a clearer distinction between nonmotorized bicycles and motor vehicles such as motorcycles.

Response. The Forest Service agrees and in the interim final directives has added a definition that defines a bicycle as ''a pedal-driven, human-powered device with two wheels attached to a frame, one behind the other.'' In addition, the agency has removed the definition for ''trail vehicle,'' defined as ''vehicles designed for trail use, such as bicycles, snowmobiles, trail bikes, trail scooters, and all terrain vehicles (ATV).''

Comment. One respondent expressed concern that replacing the term ''trail guides'' with ''Design Parameters'' lends the impression that they contain requirements, rather than guidelines, with little room for variance due to local situations. This respondent recommended using the term ''design parameter guidelines'' or revising FSH 2309.18, section 14.5, paragraph 1, to state that the Design Parameters are only guidelines, not requirements.

Response. The definition of Design Parameters included in FSM 2353.05 and FSH 2309.18, section 05, and the introductory paragraph included with each set of Design Parameters state that the Design Parameters are technical guidelines. To clarify this point further, the agency has revised the introductory paragraph in each set of Design Parameters to state that the Design Parameters are technical guidelines for determining the parameters reflecting the management intent for each NFS trail. In addition, the agency has clarified the introductory paragraph in each set of Design Parameters to state that local deviations to any Design Parameter may be established based on specific trail conditions, topography, and other factors, provided that the deviations are consistent with the general intent of the applicable Trail Class.

Comment. One respondent recommended changing the definition for Trail Class to ''a word description and numerical identifier of the trail development that represents the intended design and management standards of the trail.'' This respondent expressed concern that the definition in the proposed directives, ''The prescribed scale of trail development, representing the intended design and management standards of the trail,'' would give the impression that the Trail Class assigns the appropriate level of development, rather than reflecting its management intent.

Response. The agency believes that the definition of Trail Class in the proposed directives is effective and succinct and is therefore not changing it in the interim final directives. After nearly 10 years of use, agency managers and technicians are familiar with this term as currently defined and, as a result, understand that determination of the appropriate Trail Class for each NFS trail or trail segment is based on the management intent for the trail as reflected in the applicable land management plan, applicable travel management decisions, trail-specific decisions, and other related direction, which may or may not reflect the current condition of the trail.

Comment. One respondent recommended changing the definition for four-wheel drive way to ''a National Forest System Trail commonly used for four-wheel drive vehicles.''

Response. In the interim final directives, the agency has replaced the term ''four-wheel drive way'' with the term ''four-wheel drive vehicle greater than 50 inches in width'' and its corresponding definition in FSM 2353.05 and FSH 2309.18, section 05. Defining the vehicle, rather than the type of trail used by the vehicle, is consistent with the concept of Managed Use, which is based on modes of travel, rather than trail categories defined by use type. Direction relating to four-wheel drive vehicles greater than 50 inches in width will be provided in the final travel management directives at FSM 2353, 7700, and 7710 and FSH 7709.55. The agency has deleted FSM 2352, ''Four-Wheel Drive Ways,'' from the interim final directives because the concept of four-wheel drive ways is no longer used by the agency.

Comment. Two respondents recommended defining the term ''trailheads'' to distinguish between a constructed parking area at a designated trailhead that has a hard surface and that is periodically maintained and a parking area with a natural or perhaps user-created surface. These respondents contended that this distinction is especially important when determining the applicability of the FSTAG between a trailhead and a trail.

Response. The agency has revised the definition for ''trailhead'' in the interim final directives to include a related sub-definition of a trailhead for purposes of the FSTAG (FSM 2353.05).

2353.3—Difficulty Levels

Comment. One respondent suggested requiring difficulty levels in FSM 2353.3 for pack and saddle and hiker/pedestrian uses that indicate the elevation and severity of a trail. This respondent stated that often when hikers share trails with equestrians, it can be dangerous for the riders and horses. This respondent recommended requiring posting of advice or warnings on trails with dangerous sections for inexperienced riders, such as a trail with rock bluffs and unsure footing and no areas in which to turn around.

Response. The Forest Service does not believe that it would be appropriate to require posting of trail elevations, severity, or warnings on all NFS trails managed or designed to accommodate hiker/pedestrian and pack and saddle use. This approach would not be consistent with management of NFS trails for other uses. Moreover, consistent with the FSTAG, the agency is no longer identifying difficulty levels for trails with a Designed Use of Hiker/Pedestrian. Instead, for trails in Trail Classes 4 and 5 with a Designed Use of Hiker/Pedestrian, the agency is requiring posting at trailheads the typical and maximum trail grade, typical and maximum cross slope, typical and minimum tread width, surface type and firmness, and obstacles. Managers have the discretion to post this information at trailheads for other Hiker/Pedestrian trails and NFS trails with other Managed or Designed Uses.

FSH 2309.18

Zero Code

05—Definitions

The agency received the same comments on the definitions in FSM 2353 and FSH 2309.18. Therefore, the agency is incorporating here by reference the response to comments on the definitions in FSM 2353.

FSH 2309.18, Chapter One (Recoded to Chapter 10 in the Interim Final Directives)

Section 1.2—Planning (Recoded to Section 12 in the Interim Final Directives)

Comment. Two respondents supported field manager discretion in trail design and requested that this discretion be retained. Several respondents requested that the agency add flexibility to the proposed directives by basing Managed Uses and Design Parameters on practical concerns, instead of the proposed sets of overly rigorous Design Parameters. Several respondents requested that the agency give managers and resource specialists the discretion they need to design and maintain trails to retain their primitive and undeveloped character across all Trail Classes and Designed Uses. One respondent commented that the proposed directives should state that the determination of the appropriate Trail Class is not discretionary with the trail manager and should not reflect a trail's existing condition.

Response. The agency believes that local managers need discretion to apply the TCS so as to reflect the management intent for NFS trails, which may or may not be consistent with their current condition. Accordingly, the proposed and interim final directives give local managers a considerable amount of discretion in identifying a trail's TMOs (including the applicable Trail Class, Managed Uses, Designed Use, and Design Parameters) based on the management intent for that trail. Flexibility is also built into the Design Parameters, providing a range for trail attributes such as tread width.

Additionally, the Design Parameters allow for local deviations based on specific trail conditions, topography, and other factors, including desired setting, challenge levels, and experience opportunities, provided that the deviations are consistent with the general intent of the applicable Trail Class. To clarify this point, the agency has modified the Trail Class Matrix to reflect more clearly the range of ROS and WROS classes for each Trail Class (see Table 7 in section 4 of this preamble). In addition, the agency has added a footnote to the Trail Class Matrix stating that it displays commonly occurring combinations of Trail Class and ROS or WROS settings, although trails in all Trail Classes may and do occur in all settings (FSH 2309.18, sec. 14.2, ex. 01).

Comment. Some respondents expressed concern that application of the TCS and Design Parameters would result in the closure or reduction of trails open to pack and saddle use and requested the opportunity to provide public input before any trails are reclassified, declassified, or closed. Several respondents stated that the agency should consider availability of funding, labor, materials, and time when making decisions about trail management and that lack of these factors should not result in reduction in the Trail Class.

Response. The proposed and interim final directives do not provide for reduction in the Trail Class of any NFS trails, closure of any NFS trails, or removal of any NFS trails from the forest transportation system because of inability to maintain the trails to the applicable standard. To the contrary, the applicable Trail Class and Design Parameters of an NFS trail are based on its management intent, as reflected in applicable direction.

In the interim final directives, the agency has revised FSH 2309.18, sections 14.2 and 14.3, to state more clearly that determination of the Trail Class and Managed Uses of a trail is based on its management intent, as shown in the applicable land management plan, applicable travel management decisions, trail-specific decisions, and other related direction, which may or may not reflect the current condition of the trail.

FSH 2309.18, section 18, identifies several factors to be considered when establishing priorities and requirements for trail management, including funding for labor and materials and scheduling of work. The directives include the National Quality Standards for Trails, which describe outcomes that trail users can expect to encounter and the level of quality the Forest Service plans to provide on NFS trails managed at a full-service level (FSH 2309.18, sec. 15). These standards establish the baseline for estimating the total cost of providing the quality opportunities visitors expect.

Comment. Several respondents requested that the Forest Service develop a system for tracking consistency of TMOs with Forest Service planning documents that meet the requirements of NEPA and NFMA. One of these respondents stated that section 1.2, paragraph 2, of the proposed directives should clearly state that follow-up analysis needed to determine specific standards for a trail must comply with the National Environmental Policy Act (NEPA) and the National Forest Management Act (NFMA) and be subject to appropriate public involvement. Another respondent believed that the proposed directives must include provisions for public input on determination of all trail classifications, maintenance needs, and design parameters.

Response. TMOs must be consistent with the applicable land management plan, applicable travel management decisions, trail-specific decisions, and other related direction issued in compliance with NEPA. The agency believes that it is not necessary to establish a separate process for tracking consistency of TMOs with the applicable land management plan and other applicable direction.

In addition, application of the TCS and Design Parameters does not trigger the public involvement requirements in

NEPA and NFMA. Application of the TCS and Design Parameters is based on a trail's management intent, as reflected in direction that has been issued in compliance with NEPA and NFMA. Therefore, further environmental analysis and public involvement are not required. See *Back Country Horsemen of America* v. *Johanns*, No. 05–0960 (D.D.C. Mar. 29, 2006), slip op. at 15–20.

During required public involvement for trail-related direction and in general, trail managers work with the public and trail groups to obtain their input regarding the status and management of trails they use. Changes in the management intent of NFS trails as reflected in the applicable land management plan, applicable travel management decisions, trail-specific decisions, and other related direction are subject to the direction in FSH 2309.18, section 11, including the direction regarding compliance with NEPA.

Section 1.42—Trail Classes (Recoded to Section 14.2 in the Interim Final Directives)

Comment. One respondent disagreed that there is a direct relationship between Trail Class and Managed Uses, that is, that one cannot be determined without consideration of the other. This respondent acknowledged that they were related, but believed that the determination of Managed Uses is always made before the determination of the applicable Trail Class.

Response. Generally, the determination of Managed Uses cannot be made before the determination of the applicable Trail Class and vice versa. Trail Class and Managed Uses are interdependent because the appropriate scale of development of a trail depends on the types of uses that are actively managed on the trail, and the reverse is also true. To clarify that this interdependence is not an absolute, the interim final directives state: ''There is a direct relationship between Managed Uses and Trail Class: generally, one cannot be determined without consideration of the other.''

Section 1.42, Exhibit 01—Trail Class Matrix (Recoded to Section 14.2, Exhibit 01, in the Interim Final Directives)

Comment. Several respondents stated that the three previous trail classes of mainline (easy), secondary (more difficult), and way (most difficult) and the Pack and Saddle Trail Guide adequately accommodated pack and saddle use in all ROS and WROS classes. Some respondents requested that the proposed directives state that trails in Trail Classes 1 through 3 are appropriate in primitive and semiprimitive settings, both inside and outside wilderness areas. One respondent expressed concern that application of the TCS with regard to ROS and WROS classes would result in changes in management of wilderness areas and the uses that are accommodated in wilderness areas.

Response. The agency believes that the Trail Classes and Design Parameters are better tools for managing NFS trails, including NFS trails with a Designed Use of Pack and Saddle in all ROS and WROS settings, than the previous three difficulty levels and Trail Guides. In comparison with the previous three categories, the five Trail Classes are keyed more precisely to the physical characteristics of NFS trails and more accurately stratify NFS trails for purposes of inventory, land management planning, visitor information, and establishment of maintenance and construction costs.

When the agency shifted from the Trail Guides to the Design Parameters in 2004, the design, construction, and maintenance guidelines in the Trail Guides, including the Pack and Saddle Trail Guide, changed in only minor, technical ways with no effect on how trails are managed on the ground. In contrast to the Trail Guides, which did not correlate with the trail classes of mainline, secondary, and way in the agency's database, the Design Parameters track the five Trail Classes. In addition, the Design Parameters refine and clarify the categories and values in the Trail Guides.

The agency does not believe it is appropriate to state categorically that trails in Trail Classes 1 through 3 are appropriate in primitive and semiprimitive settings, both inside and outside wilderness areas. However, the agency has clarified in a new footnote 3 to the Trail Class Matrix (FSH 2309.18, section 14.2, exhibit 01, in the interim final directives) that the matrix shows commonly occurring combinations of Trail Class and ROS and WROS settings, but that trails in all Trail Classes may and do occur in all settings. The new footnote 3 also refers managers to FSM 2310 and 2353 and FSH 2309.18 for guidance on application of the ROS and WROS.

Application of the TCS does not change management of wilderness areas or the uses that are accommodated in wilderness areas. Land management planning establishes ROS and WROS classes. The TCS merely provides managers with a tool for more consistently and effectively inventorying trails and identifying and communicating trail conditions and the work needed to maintain trails to their prescribed standard.

Comment. Several respondents requested that the proposed directives give local managers the discretion to use treated round or dimensional timber for the construction and maintenance of water bars, puncheon, turnpike, and bridge components in Trail Classes 1 through 3 where it will not detract from the desired experience of a typical user. These respondents also requested that the proposed directives give local managers the discretion to use laminated and steel components in the construction and maintenance of trail structures in Trail Class 3.

One respondent objected to the guidance to use only native materials for the surface of trails in Trail Classes 1 and 2 and typically native materials for the surface of trails in Trail Class 3 on the grounds that this guidance would impose unnecessary costs. This respondent recommended that use of treated materials not be precluded or discouraged for the surface of trails in Trail Classes 1 through 3 when use of those materials would not detract from the desired user experience.

Response. The Trail Class Matrix provides guidance, rather than direction, to local trail managers in identification of the applicable Trail Class based on applicable land management plan direction, applicable travel management decisions, trail-specific decisions, and other related direction. The Trail Class Matrix clearly states that 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.

To address these respondents' concerns and to enhance clarity, the agency has made several modifications to the Trail Class Matrix, as shown in Table 7 in section 4 of this preamble. Specifically, the agency has modified the Tread and Traffic Flow descriptors from ''Native materials only'' to ''Predominantly native materials'' for Trail Class 1; from ''Native materials'' to ''Typically native materials'' for Trail Class 2; and from ''Typically native materials'' to ''Native or imported materials'' for Trail Class 3.

The agency has modified the descriptors for Constructed Features and Trail Elements to remove references to the material type for structures, other than a reference to native materials for natural fords in Trail Class 1; a reference to native materials for structures and natural fords in Trail Class 2; and a

reference to structures being typically constructed of imported materials and a reference to constructed or natural fords in Trail Class 3. To minimize confusion, the agency has removed the reference in Trail Class 3 to generally native materials being used in wilderness areas.

Comment. Several respondents requested that local managers be given the discretion to use a bridge to cross any stream that meets the criteria in proposed FSH 2309.18, section 2.31, paragraph b, regardless of Trail Class.

Response. FSH 2309.18, section 2.31, paragraph b, in the proposed directives provided guidance on trail bridges constructed to accommodate pack and saddle use. The agency has retained this guidance, except for expanding the guidance regarding minimum bridge widths of 48 inches to include minimum bridge railing heights and a reference to the corresponding guidance in FSH 7709.56b, section 7.69, exhibit 01, Trail Bridge Design Criteria. In addition, the agency has added guidance to the Pack and Saddle Design Parameters regarding the minimum width of bridges with and without handrails for each of the Trail Classes managed for pack and saddle use (Trail Classes 2 through 4), as shown in Table 9 in section 4 of this preamble.

The Trail Class Matrix in the proposed directives provided guidance in Trail Classes 3 through 5 regarding use of bridges where they are determined to be needed and appropriate and, by allowing for deviations, provided the discretion to use bridges in Trail Classes 1 through 2 where they are determined to be necessary. In the Trail Class Matrix in the interim final directives, the agency has removed ''no constructed bridges or foot crossings'' from the descriptors in Trail Class 1; replaced ''primitive foot crossings and fords'' with ''bridges as needed for resource protection and appropriate access'' in Trail Class 2; and made minor, nonsubstantive edits to the references to bridges in Trail Classes 3 through 5 (see Table 7 in section 4 of this preamble).

Comment. Several respondents requested that the Trail Class Matrix provide for minimum signing at all NFS trail junctions and encourage marking along all NFS trails.

Response. The agency agrees that the Trail Class Matrix needs to contain additional guidance on signing at NFS trail junctions and marking along NFS trails. Accordingly, the agency has modified the Trail Class Matrix, as shown in Table 7 in section 4 of this preamble, to include guidance regarding signing at trail junctions and route markers for all Trail Classes and has added a footnote referencing additional applicable guidance and direction in the Sign and Poster Guidelines for the Forest Service (EM–7100–15).

Comment. One respondent believed that by specifying that trails in Trail Class 4 would rarely occur in wilderness areas, the agency would be relegating pack and saddle use in wilderness areas to the hazards or obstacles associated with the lower Trail Classes that were not encountered by long pack strings when the Wilderness Act was passed, thereby redefining the character of wilderness areas.

Response. In the interim final directives, the agency has removed this language and replaced it with language stating that the WROS class typically includes WROS Transition or Portal classes. Trails that were previously classified as mainline now fall into Trail Class 2, Trail Class 3, or Trail Class 4. Trails in Trail Classes 2 and 3 are commonly found in wilderness areas, while trails in Trail Class 4 that occur in wilderness areas are typically limited to access routes and routes connecting wilderness to nonwilderness areas.

Tables 1 through 6 in section 3 of this preamble show that the range of trails covered by the Pack and Saddle Trail Guide equates with the range of trails covered by the Pack and Saddle Design Parameters. The Design Parameters provide guidance, rather than direction, based on the management intent for a trail and its Trail Class. The Design Parameters state that local deviations from any Design Parameter 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. Therefore, the Design Parameters do not cause changes in on-the-ground management of NFS trails.

Comment. Two respondents stated that four-wheel drive motor vehicles do not fit neatly into the paradigm established for all other trail uses outlined in section 1.42, Exhibit 01, of the proposed directives and that trails for four-wheel drive motor vehicles should be designed to provide a more challenging experience. These respondents provided a revised version of the Trail Class Matrix entitled, ''Trail Classes, Four-Wheel Drive Motor Vehicles Only.'' The proposed matrix included the five Trail Classes ranging from least developed to most developed, but reversed the corresponding level of challenge, so that trails in Trail Class 1 would be the least developed and least challenging, and trails in Trail Class 5 would be the most developed and most challenging. The respondents' proposed trail class matrix for four-wheel drive motor vehicles included descriptors for each trail class attribute.

Response. The Forest Service does not believe that this proposed approach to four-wheel drive motor vehicles is appropriate. The five Trail Classes reflect the scale of development, arranged along a continuum, for all NFS trails, regardless of their Managed Uses, with the level of challenge decreasing with the level of development. The agency does not believe that it would be productive or appropriate to develop a set of Trail Classes specific to only one Managed Use. In addition, it would be counter-intuitive to reverse the level of challenge associated with the scale of development, since as trails become more developed, they become less challenging. The agency believes that trails that are managed for four-wheel drive motor vehicles are encompassed by the Trail Class Matrix. In addition, four-wheel drive motor vehicles are covered by the chart addressing the potential appropriateness of the five Trail Classes for the Managed Uses of NFS trails and are addressed in their own set of Design Parameters in the interim final directives.

Comment. One respondent expressed concern about removing the four sets of additional criteria included with the Trail Class Matrix. This respondent believed that this information serves a useful purpose and provides additional guidance. However, this respondent noted that removal of this information from the Trail Class Matrix would be acceptable if it were adequately covered elsewhere in the directives.

Response. The agency has incorporated the information contained in the four sets of additional criteria included with the Trail Class Matrix into the corresponding sets of Design Parameters. Therefore, the agency believes that removal of the additional criteria from the Trail Class Matrix is appropriate.

Section 1.45—Design Parameters (Recoded to Section 14.5 in the Interim Final Directives)

Comment. Several respondents expressed concern that the Design Parameters are overly rigorous and would be costly and impractical to implement.

Response. The agency disagrees that the Design Parameters are overly rigorous or will be costly or impractical to implement. The Design Parameters are technical guidelines, rather than requirements, for trail survey, design, construction, maintenance, and assessment. Local deviations from any

Design Parameter 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. In addition, in contrast to the Trail Guides, the Design Parameters provide greater consistency and precision for all Managed Uses, which will enhance local managers' ability to effectively and efficiently develop trail prescriptions that reflect the management intent for each NFS trail.

Section 1.6, Exhibit 01—Trail Operation and Maintenance Considerations

Comment. Two respondents proposed a set of ''Trail Operation and Maintenance Considerations for Four-Wheel Drive Motor Vehicle Trails Only,'' based on the respondents' proposed version of the Trail Class Matrix, where trails in Trail Class 1 would be the least developed and least challenging, and trails in Trail Class 5 would be the most developed and most challenging.

Response. The agency does not believe that it is necessary to provide a set of Trail Operation and Maintenance Considerations specific to one Managed Use, nor does the agency believe that it is appropriate to reverse the level of challenge associated with the scale of development. In addition, trails managed for four-wheel drive motor vehicles are covered by the Trail Operation and Maintenance Considerations, which apply to all NFS trails.

Chapter 2—Trail Development (Recoded to Chapter 20 in the Interim Final Directives)

Section 2.23a—Trailhead Location (Recoded as Section 22.41 in the Interim Final Directives)

Comment. Two respondents expressed concern that the statement in proposed section 2.23a, paragraph 1, regarding locating trailheads so as to allow access to the greatest number and types of trails could eliminate trailheads serving trails with only one type of use and could lead to use conflicts and illegal use of trails.

Response. The agency has clarified this paragraph in the interim final directives at FSH 2309.18, section 22.41, to provide for locating trailheads so as to allow access to trails with the same Managed Use or with multiple Managed Uses, depending on the combination of uses, relative use levels, and potential for use conflicts. In addition, this provision states that the development scale and size of the trailhead facility should match the carrying capacity of the area and the Trail Classes of the trails to be served.

Section 2.23c—Pack and Saddle Trailheads (Recoded as Section 22.43 in the Interim Final Directives)

Comment. One respondent believed that the section on pack and saddle trailheads had not yet been written and wanted to know when this section would be developed and how the respondent could comment on it.

Response. FSH 2309.18, section 2.23c, in the current directives provides guidance regarding development and management of pack and saddle trailheads. The agency has not proposed any substantive changes to this section.

Comment. One respondent requested that the Forest Service increase access for horsetrailers and trucks for horse camping and staging near NFS trails. One respondent wanted to use stock trailers and trucks on NFS lands to access trails and to engage in dispersed camping, without being confined to designated staging areas or designated access routes.

Response. The interim final directives provide local managers with tools for more consistently and effectively inventorying trails and identifying and communicating trail conditions and the work needed to maintain trails to their prescribed standard. The interim final directives have no effect on motor vehicle access to NFS lands. Designation of routes for motor vehicle use by vehicle class, and if appropriate, by time of year is governed by 36 CFR part 212, subpart B. The agency is finalizing separate directives implementing 36 CFR part 212, subpart B.

The Forest Service recognizes the importance of providing adequate access for equestrians at trailheads accessing pack and saddle trails. The agency will continue to provide facilities for staging, loading, and unloading pack and saddle stock. The Forest Service is designating those NFS roads, NFS trails, and areas on NFS lands that are open to motor vehicle use pursuant to 36 CFR part 212, subpart B. In designating routes, responsible officials may include the limited use of motor vehicles within a specified distance of certain designated routes for dispersed camping.

Comment. One respondent questioned the adequacy of trailhead parking in Trail Class 3 for pack and saddle stock and cited design and location concerns with specific trailheads in the Southwestern Region. This respondent stressed the need for adequate space and visibility for parking stock trucks and trailers and proper directional orientation of parking lines. This respondent also raised safety concerns regarding placement of a step-over gate near a culvert that horses could step into, locating parking along a curve in a road, and the speed of traffic along roads paralleling access trails. This respondent also recommended drainage improvement and expansion of a particular trailhead.

Response. The proposed directives identified general design considerations for pack and saddle trailheads. The interim final directives at FSH 2309.18, section 22.43, address some of the respondent's concerns by pointing out that the needs of pack and saddle trail users vary based on the type of vehicle used to transport pack and saddle stock. The respondent's concerns about a specific trailhead will be best addressed if they are brought to the attention of the appropriate District Ranger's or Forest or Grassland Supervisor's Office.

Section 2.24—Facilities and Associated Constructed Features Along Trails (Recoded as Section 22.5 in the Interim Final Directives)

Section 2.24, paragraph 2b—Trail Shelters or Lean-Tos With Three Walls in a GFA (Recoded as Section 22.5, Paragraph 2b, in the Interim Final Directives)

Comment. One respondent noted that it is impossible to use a wheelchair at snowmobile warming and safety shelters in the State of Wyoming due to their remote location and requested clarification regarding accessibility requirements at snowmobile warming and safety shelters.

Response. All people, including people with disabilities, can and do access remote areas by horse, sit-ski, snowmobile, or their own wheelchair. The Architectural Barriers Act requires facilities that are constructed, altered, or leased by, for, or on behalf of a federal agency to be in compliance with the accessibility guidelines in effect at the time of construction. Remote facilities such as three-sided shelters and pit toilets are changed very little by incorporation of applicable accessibility guidelines.

For example, a door on a pit toilet must be at least 32 inches wide. If the pit toilet consists simply of a riser with no walls, the only requirement for accessibility is that the riser be 17 to 19 inches above the ground, with adjacent clear space. To be accessible, the open side of a three-sided shelter must have a floor that is no higher than 17 to 19 inches above the ground to allow for transfer from a wheelchair. Each of these accessibility requirements is

reasonable and blends into the structure, ensuring that everyone can use the facility without changing its natural setting.

Section 2.25—Wilderness Considerations (Recoded as Section 22.6 in the Interim Final Directives)

Comment. One respondent recommended that a different set of standards be developed for trails in wilderness areas. In support of this recommendation, this respondent stated that unlike trails in nonwilderness areas, trails in wilderness areas are not always designed for a variety of uses and that trails and related structures in wilderness areas are subject to a specific, narrower standard, i.e., the minimum required to protect wilderness.

Response. The Trail Class Matrix and Design Parameters are national guidelines that are applied and adapted by local managers in wilderness areas to reflect the management intent of NFS trails, based on the applicable land management plan and wilderness management plan and consistent with wilderness management direction in FSM 2320. The Design Parameters provide a full range of values that can be applied in the development of trail-specific prescriptions that reflect the management intent for NFS trails in wilderness areas. All of the Design Parameters give local managers discretion to develop trail-specific prescriptions to meet applicable management direction and site-specific needs.

Section 2.3—Design Parameters (Recoded as Section 23 in the Interim Final Directives)

Comment. One respondent believed that it would not be feasible to meet the guidelines for trail grades in the Rocky Mountain Region.

Response. The agency believes that the range of trail grades in the Design Parameters reflects the topography of NFS lands nationwide and generally covers all NFS trails. There are thousands of miles of NFS trails in the Rocky Mountain Region with trail grades that match those in the Design Parameters. Moreover, as illustrated in Tables 5 and 6 in section 3 of this preamble, the trail grades included in the Design Parameters are generally consistent with the trail grades in the Trail Guides.

Section 2.31a—Hiker/Pedestrian Design Parameters (Recoded as Section 23.11 in the Interim Final Directives)

Comment. Some respondents recommended adding a set of Design Parameters for runners, on the grounds that runners have distinct needs and objectives that are different from and in some cases conflict with the needs and objectives of the uses covered by the existing Design Parameters.

Response. Each set of Design Parameters is based on a mode of travel. The mode of travel for hikers, pedestrians, and runners is on foot. The Hiker/Pedestrian Design Parameters reflect a wide range of desired experience and challenge levels for runners. Local managers determine the Managed Uses, Designed Use, and Design Parameters of an NFS trail based on applicable land management plan direction, applicable travel management decisions, trail-specific decisions, and other related direction. This direction is based on consideration of current trail uses and their volume, relative levels, and seasons of use; potential or existing use conflicts; desired distances and challenge levels; topography; estimated development and maintenance costs; and other factors.

Comment. Several respondents believed that the Hiker/Pedestrian Design Parameters should apply to trails that have not historically accommodated pack and saddle use or to trails on which pack and saddle use is prohibited.

Response. The Hiker/Pedestrian Design Parameters were derived from the Hiker and Barrier-Free Trail Guides. Like hiker and barrier-free trails, NFS trails managed for hiker/pedestrian use span the widest range of development scale of any NFS trails, ranging from minimally developed, very rugged and challenging trails in Trail Class 1 to fully developed, minimally challenging, high-use, and often accessible trails in Trail Class 5 (see Tables 1 and 3 in section 3 of this preamble). This broad range of trails is a well-established and legitimate Managed Use on many NFS trails.

Many NFS trails are actively managed for both hiker/pedestrian and pack and saddle use, in which case the Designed Use would be Pack and Saddle. There are other instances, however, where NFS trails are actively managed for hiker/pedestrian use and pack and saddle use, although allowed, is not actively managed. In these situations, the Hiker/Pedestrian Design Parameters would apply. Local managers determine the Managed Uses and Designed Use of a trail, based on applicable land management plan direction, applicable travel management decisions, trail-specific decisions, and other related direction.

Comment. One respondent requested clarification of proposed section 2.31a, paragraph 3, regarding measurement of tread width for structures across wet areas in the Hiker/Pedestrian Design Parameters. Specifically, this respondent asked whether the tread on a puncheon of two planks placed 2 to 4 inches apart is measured from the outer edge of one plank to the outer edge of the other, or whether the tread is measured as the width of each plank.

Response. In the interim final directives, the agency has revised section 2.31a regarding trail crossings at wet areas or streams to track the guidelines in the Design Parameters regarding the minimum tread width for trail structures. Specifically, section 23.11, paragraph 3, in the interim final directives states that stepping stones generally should be at least 12 to 18 inches wide, depending on the Trail Class of the trail and its management intent, and should be set no more than 24 inches apart. Additionally, as shown in Table 8 in section 4 of this preamble, the agency has added the attribute of minimum width of trail structures to the Design Parameters to provide better guidance regarding the minimum usable tread width on trail structures such as puncheon, bridges, and turnpike.

Comment. Another respondent recommended eliminating Design Parameters and guidance in the proposed directives that would undermine the primitive character of hiker/pedestrian trails. Specifically, the respondent suggested removing specific guidance in FSH 2309.18, section 2.31b, paragraph 3, regarding location of turns and section 2.31a, paragraphs 2 and 4, regarding a minimum tread width on structures across wet areas, the maximum spacing between stepping stones, and adequate design of bridges.

Response. The agency does not believe that any Design Parameters or guidance in the proposed directives needs to be removed to preserve the primitive character of hiker/pedestrian trails. The guidance recommended for removal is needed to design trails that can accommodate hiker/pedestrian use safely and adequately. Local managers and technicians have the discretion to determine the appropriate turn for specific locations, based on the interim final directives and their experience, training, and judgment.

Section 2.31a, paragraph 4, of the proposed directives does not require installation of bridges, but rather provides useful guidance regarding adequate design once a determination has been made that a bridge is needed. Therefore, the agency has retained this guidance in the interim final directives.

2.31a, Exhibit 01—Hiker/Pedestrian Design Parameters (Recoded as Section 23.11, Exhibit 01, in the Interim Final Directives)

Comment. One respondent assumed that most of the Appalachian National Scenic Trail would be classified as Trail Class 2 or 3 and only in limited circumstances as Trail Class 4 or 5, where the trail passes through developed areas. This respondent was unsure whether portions of the trail passing through a wilderness area would be classified as Trail Class 1. If so, the respondent was concerned that this classification would preclude historical camping practices, including installation of shelters and improved campsites. This respondent expressed appreciation for provisions in the Trail Class Matrix that would accommodate these practices.

Response. Local managers determine the applicable Trail Class of a National Scenic Trail or trail segment based on the comprehensive plan for the trail, applicable land management plan direction, applicable travel management decisions, trail-specific decisions, and other related direction.

The classification of an NFS trail does not determine whether improvements along the trail are appropriate. The applicable Trail Class represents the development scale of the trail itself. Improvements adjacent to the trail should be consistent with the applicable land management plan or other management direction for the trail and surrounding area.

Section 2.31b—Pack and Saddle Design Parameters (Recoded as Section 23.12, Exhibit 01, in the Interim Final Directives)

Comment. Some respondents expressed concern that the changes to the Design Parameters would discriminate against pack and saddle use and represent an attempt by the Forest Service to eliminate pack and saddle access to NFS trails. One respondent expressed concern that the proposed Pack and Saddle Design Parameters would prevent an older person with disabilities from accessing the backcountry on horseback. One respondent requested that there continue to be unlimited access for horses to all NFS lands.

Two other respondents requested no reduction in the trail miles currently open to pack and saddle use. Some respondents expressed concern that implementation of the Design Parameters would result in NFS trails inside and outside wilderness areas being classified to a lower Trail Class, removed from the forest transportation system, or being no longer available for pack and saddle stock use. Several respondents expressed concern that the TCS reduces the spectrum of recreation opportunities and possibly the number of trails available for pack and saddle use in wilderness and nonwilderness areas. One respondent stated that there should be no reduction in the scope of existing trail classification or maintenance standards anywhere on NFS lands. Other respondents were concerned that implementation of the Design Parameters would result in camping areas no longer being available for pack and saddle use.

Several respondents requested that recreational pack and saddle use be accommodated in each wilderness area and in each portion of a wilderness area that had a history of pack and saddle use when the area was designated, and that historical access to equestrian trails in wilderness areas be maintained, unless a subsequent decision has been made to the contrary to preserve the area's wilderness character. One respondent expressed concern that implementation of the Design Parameters would primarily affect wilderness areas and that restriction of wilderness access would have a broad impact on equestrian use and expressed particular interest in the effect of implementation of the TCS on equestrian access to wilderness areas in the Mark Twain National Forest.

Response. The Design Parameters do not reduce the range of recreation opportunities or the number of trails available for pack and saddle use, including the miles of NFS trails available to riders for accessing the backcountry or wilderness areas. Application of the Design Parameters will not cause on-the-ground changes or preclude access to any trail users, nor will it cause reclassification of NFS trails, removal of NFS trails from the forest transportation system, or a reduction in NFS trails managed for any uses, including pack and saddle use.

To the contrary, the Pack and Saddle Design Parameters encompass the full range of trails covered by the Pack and Saddle Trail Guide and in fact cover more trails in the upper end of Trail Class 4 than the Pack and Saddle Trail Guide (see Tables 5 and 6 in section 3 of this preamble). Moreover, the Pack and Saddle Design Parameters are either identical or functionally equivalent to the Pack and Saddle Trail Guide or reflect an expansion of a category (see Tables 5 and 6 in section 3 of this preamble).

Implementation of the Design Parameters will not affect on-the-ground management of NFS trails, including pack and saddle trails, because local managers determine the applicable Design Parameters of a trail or trail segment based on applicable land management plan direction, applicable travel management decisions, trail-specific decisions, and other related direction. In addition, the Design Parameters give managers the flexibility to deviate from their guidelines based on specific trail conditions, topography, and other factors, provided that the deviations are consistent with the general intent of the applicable Trail Class.

Determinations regarding continuation, addition, or reduction of trail access on NFS lands are subject to applicable land management plan direction, applicable travel management decisions, trail-specific decisions, and other related direction. Substantive changes in the management intent for NFS trails are subject to the direction in FSH 2309.18, section 11, including the direction regarding compliance with NEPA.

Local managers apply and adapt the Trail Class Matrix and Design Parameters in wilderness areas to reflect the management intent of NFS trails, based on the applicable land management plan and wilderness management plan and consistent with wilderness management direction in FSM 2320. All of the Design Parameters give local managers discretion to develop trail-specific prescriptions to meet applicable wilderness management direction.

The Design Parameters do not apply to developed sites, such as campgrounds. Therefore, application of the Design Parameters will not affect the availability of developed sites, including campgrounds, for pack and saddle use.

The Forest Service has long recognized and continues to recognize the value and role of pack and saddle use as a mode of travel and recreation opportunity on NFS trails. The interim final directives refine the agency's trail inventory, planning, and management tools, resulting in enhanced clarity, quality, and consistency in management of all uses of NFS trails, including pack and saddle use.

Comment. Two respondents requested that the historical importance of pack and saddle use be considered in determining the appropriate level of trail maintenance for pack and saddle trails.

Response. Consistent with the Forest Service's multiple-use mission under the Multiple Use-Sustained Yield Act, 16 U.S.C. 528–531, the agency strives

not to elevate any use of the NFS above any other. The agency endeavors to manage the NFS for a variety of uses, including a variety of trail uses.

The Design Parameters establish guidelines for maintenance of NFS trails. The Trail Operation and Maintenance Considerations provide additional guidance on maintenance of NFS trails. The Pack and Saddle Design Parameters and the portion of the Trail Operation and Maintenance Considerations that apply to the Designed Use of Pack and Saddle provide appropriate guidelines for maintenance of NFS trails with a Designed Use of Pack and Saddle. Specifically, the Pack and Saddle Design Parameters provide guidance regarding adequate tread width, grades, cross slope, clearing limits, and turning radius. In addition, the Trail Operation and Maintenance Considerations Matrix provides guidance regarding maintenance indicators and the frequency and intensity of routine maintenance.

Comment. One respondent asked the agency to eliminate Design Parameters and guidance that would undermine the primitive character of pack and saddle trails and identified several specific items that should be removed on that basis.

Response. The agency does not believe that application of any of the Design Parameters or guidelines in the proposed directives would undermine the primitive character of pack and saddle trails. The Pack and Saddle Design Parameters, including the items recommended for removal, are needed to design trails that can accommodate pack and saddle use safely and adequately. The agency believes that the requested changes would preclude pack and saddle use or would result in pack and saddle trails that are poorly designed, that are not sustainable, and that adversely affect the safety of equestrians. For example, section 23.12, paragraph 1, in the interim final directives distinguishes between day use and long-term use, which is important information to consider when identifying the applicable Design Parameters for clearing limits, including the need for pack clearances. Consequently, the agency has declined to adopt the respondent's recommendation regarding elimination of guidelines in the Pack and Saddle Design Parameters and the considerations for their application in the interim final directives.

Comment. One respondent commented on the apparent inconsistency between the minimum turning radius of 5 feet for pack and saddle trails in section 2.31b, paragraph 3, of the current directives and the turning radius of 4 to 5 feet for Trail Class 2 in the Pack and Saddle Design Parameters in the proposed directives. This respondent stated that since the Forest Service is attempting to provide some diversity within Trail Classes, section 2.31b, paragraph 3, should be changed to reflect the 4-to-5-foot range for turning radius in the Design Parameters.

Response. The Design Turn attribute in the Design Parameters refers to turns in general, including switchbacks and climbing turns, whereas the guidance regarding the 5-foot turning radius in section 2.31b, paragraph 3, in the current directives refers specifically to switchbacks. The 4-to-5-foot range in the Design Parameters is appropriate for turns in general.

To enhance clarity, the agency has added a definition for ''Design Turn'' in FSH 2309.18, section 05, in the interim final directives. The agency has also modified section 2.31b, paragraph 3 in the proposed directives (section 23.12, paragraph 3, in the interim final directives), to provide specific guidance regarding a 4-foot minimum radius for climbing turns, in addition to the existing guidance regarding a 5-foot minimum radius for switchbacks. In addition, section 23.12, paragraph 3, in the interim final directives provides for consideration of the applicable Trail Class and site-specific conditions when determining the appropriate radii for climbing turns and switchbacks.

Comment. One respondent pointed out that the section pertaining to the Pack and Saddle Design Parameters in the proposed directives was improperly designated as section 2.31c, instead of section 2.3b.

Response. The agency has correctly designated the section pertaining to the Pack and Saddle Design Parameters (section 23.12) in the interim final directives.

Comment. One respondent observed that section 2.31b, paragraph 4, in the current directives provides guidance regarding measurement and provision of pack clearances, but that the Pack and Saddle Design Parameters in the proposed directives make no reference to this guidance.

Response. The Forest Service appreciates this respondent's observation and has added guidance regarding pack clearances to the Pack and Saddle Design Parameters, as shown in Table 9 in section 4 of this preamble.

Comment. One respondent commented that section 2.31b, paragraph 5, in the current directives mentions providing a clearance of 48 to 60 inches along precipices, but that the accompanying Design Parameters in the proposed directives provide for a clearance of 60 inches along precipices for Trail Classes 3 and 4. This respondent recommended that the intent regarding the 60-inch clearance in the Design Parameters be more specifically enumerated or that the range for the corresponding clearance be deleted from section 2.31b, paragraph 5.

Response. The guidance in the Pack and Saddle Design Parameters applies to trails designed for day use, equestrians with loaded pack strings, and combinations of both. Section 2.31b, paragraph 5, of the current directives provides additional guidance specific to trails managed for use by pack strings by referring to accommodation ''of pack clearance on trails cut through solid rock on steep sidehills'' and stating that ''along a precipice or other hazardous area, the trail base should be at least 48 inches to 60 inches wide to be safe for both animal and rider.''

The Pack and Saddle Design Parameters in the proposed directives provide for tread widths of up to 48 inches at switchbacks, turnpikes, fords and steep side slopes for Trail Classes 2 through 4 and up to 60 inches along precipices for Trail Classes 3 and 4. The statements for Design Tread Width in the Pack and Saddle Design Parameters of ''may be to 48 inches,'' rather than ''at least 48 inches,'' along steep side slopes and ''up to 60 inches,'' rather than ''at least 60 inches,'' along precipices, provides clear guidance while allowing for exercise of local managers' discretion in determining the appropriate tread width, including consideration of the topography and whether the trail is managed for day rides or loaded pack strings. This approach provides guidance to local managers without requiring application of a specific tread width that might be appropriate in some situations, but might result in unnecessary or undesirable overdevelopment in others.

When the Design Parameters include a range of values or a minimum or maximum value for any given attribute, FSH 2309.18, section 14.5, paragraph 3, of the interim final directives instructs managers to identify a single value that reflects the management intent for the trail. Moreover, as the respondent noted, local deviations from any Design Parameter 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.

However, the agency agrees that the guidance regarding tread widths in the Pack and Saddle Design Parameters could be clarified. Accordingly, the agency has clarified the text regarding tread widths along steep side slopes and precipices and has specified tread widths of 48 to 60 inches or greater along precipices in Trail Class 2. In addition, the agency has replaced the Design Tread Width for Trail Class 3 and Trail Class 4 of ''up to 60 inches along precipices'' with ''48 to 60 inches or greater along precipices'' to clarify the minimum appropriate tread width and to state more clearly that tread widths greater than 60 inches may be appropriate when deemed necessary (see Table 9 in section 4 of this preamble).

2.31b, Exhibit 01—Pack and Saddle Design Parameters (Recoded as Section 23.12, Exhibit 01, in the Interim Final Directives)

Comment. Several respondents requested that the agency incorporate into the Pack and Saddle Design Parameters for Trail Classes 1 through 3 the continuum of trail opportunities provided by mainline (easiest), secondary (more difficult), and way (most difficult) trails and their corresponding standards in the Pack and Saddle Trail Guides.

One respondent expressed concern that trails in Trail Class 2 would not be maintained for pack and saddle use. Another respondent believed that the Pack and Saddle Design Parameters for Trail Class 2 were inadequate to accommodate pack and saddle use.

Several respondents expressed concern that trails in Trail Class 1 would not be designed or maintained to accommodate pack and saddle use. Several respondents expressed concern that some trails where equestrian use is allowed, both inside and outside wilderness areas, would be classified as Trail Class 1 and would no longer be available for equestrian use, including equestrian use conducted by outfitters and guides.

Response. In developing the TCS, the agency transitioned from three to five trail classes. Thus, the TCS is more refined than the previous trail classification system in terms of the development scale reflected in the Trail Classes and the technical guidelines in the Design Parameters.

With respect to the Trail Class Matrix, the range of NFS trails managed for pack and saddle use falls within the broader range of NFS trails managed for hiker/pedestrian use, which encompasses the least developed and most developed NFS trails (see Tables 1 through 4 in section 3 of this preamble). The Forest Service has incorporated the full range of trail opportunities and corresponding standards from the Pack and Saddle Trail Guides into Trail Classes 2 through 4 of the Pack and Saddle Design Parameters. The agency believes that trails in Trail Classes 2 through 4, which range from moderately developed to highly developed, accurately reflect the development scale of NFS trails managed for pack and saddle use.

Trails in Trail Class 1 are the least developed and most challenging and are typically very or extremely rugged and often very steep, with little or no defined tread or clearing and many or even continuous obstacles. Therefore, the agency does not believe that Trail Class 1, which includes the least developed NFS trails, is appropriate for pack and saddle use, which requires more development to provide adequate and safe clearance for riders and animals. This approach to the most challenging trails in the Trail Class Matrix is consistent with the approach to the most difficult trails in the Pack and Saddle Trail Guide, which stated: ''Assume pack animals normally are not accommodated on most difficult trails, so less clearing width is needed. Same holds true for day-use horse trails.'' (FSH 2309.18, sec. 2.31b, ex. 01, footnote 1, in the current directives).

The Pack and Saddle Design Parameters provide guidelines for survey, design, construction, maintenance, and assessment of pack and saddle trails, which span Trail Classes 2 through 4. The Pack and Saddle Design Parameters encompass the full range of trails covered by the Pack and Saddle Trail Guide and in fact cover more trails in the upper end of Trail Class 4 than the Pack and Saddle Trail Guide (see Tables 5 and 6 in section 3 of this preamble). Moreover, the Pack and Saddle Design Parameters are either identical or functionally equivalent to the Pack and Saddle Trail Guide or reflect an expansion of a category (see Tables 5 and 6 in section 3 of this preamble). The Design Parameters give managers the flexibility to deviate from their guidelines based on specific trail conditions, topography, and other factors, provided that the exceptions are consistent with the general intent of the applicable Trail Class. In addition, the agency has revised the Pack and Saddle Design Parameters to enhance clarity and accommodation of pack and saddle use (see Table 9 in section 4 of this preamble).

Implementation of the Design Parameters will not affect on-the-ground management of pack and saddle trails because local managers determine the applicable Design Parameters of a trail or trail segment based on applicable land management plan direction, applicable travel management decisions, trail-specific decisions, and other related direction. Moreover, where pack and saddle use is allowed on NFS trails, it may continue, even if it is not a Managed Use or the Designed Use of those trails.

Comment. One respondent expressed concern about the Design Clearing Height of 6 feet and Design Clearing Width of potentially less than 24 inches for Trail Class 1 in the proposed Pack and Saddle Design Parameters. This respondent recommended a Design Clearing Height of 10 feet and a Design Clearing Width of 8 feet to accommodate riders and pack horses.

One respondent stated that the 3- to 4-foot Design Clearing Width for Trail Class 2 in the proposed Pack and Saddle Design Parameters was adequate for bridle paths, but inadequate for pack and saddle access, and thus potentially limited the number of trails available for pack and saddle use. Another respondent expressed concern that 36 inches, the lowest value in the proposed range for Design Clearing Limits for Trail Classes 2 through 4, was insufficient to provide clearance for a pack animal. Instead of a range, this respondent recommended a Design Clearing Width of 96 inches, 48 inches on either side of the center line of a trail, for all pack and saddle trails.

Response. It appears that the first of these respondents was inadvertently referring to the Design Clearing Height and Width for Trail Class 1 in the Hiker/Pedestrian Design Parameters. As shown in Tables 5 and 6 in section 3 of this preamble, the Pack and Saddle Design Parameters encompass the full range of trails covered by the Pack and Saddle Trail Guide. Moreover, the Design Clearing Widths in the Pack and Saddle Design Parameters match or encompass the clearing widths in the Pack and Saddle Trail Guide. For example, the clearing width is 3 to 4 feet for the most difficult trails in the Pack and Saddle Trail Guide and for Trail Class 2 in the Pack and Saddle Design Parameters. The clearing width is 8 feet for the easiest trails in the Pack and Saddle Trail Guide and 6 to 8 feet for Trail Class 4 in the Pack and Saddle Design Parameters.

While a clearing width of 3 feet may barely provide clearance for an equestrian, a clearing width of 3 feet is generally insufficient for passage by pack and saddle stock and is clearly insufficient for passage by loaded pack and saddle stock. Therefore, in the

interim final directives, the agency has revised the Design Clearing Width in the Pack and Saddle Design Parameters to provide for a minimum of 6 feet for Trail Class 2 and a minimum of 8 feet for Trail Class 4. The agency has declined to accept the respondent's recommendation for an 8-foot Design Clearing Limit across Trail Classes 2 through 4, as this width may be too broad in some situations to reflect the desired range of experiences and challenge levels associated with these Trail Classes.

Comment. Some respondents recommended that the guidelines for Trail Class 2 in the Pack and Saddle Design Parameters be adopted for Trail Class 1.

Response. The agency does not believe it would be appropriate to adopt the same guidelines for Trail Classes 1 and 2 in the Pack and Saddle Design Parameters. The guidelines for each Trail Class in the Design Parameters need to be consistent with the development scale for that Trail Class. Therefore, the guidelines for Trail Classes 1 and 2 need to vary to reflect their different levels of development.

Comment. One respondent expressed concern that a trail segment classified as Trail Class 1 or Trail Class 2 could eliminate pack and saddle use on a trail that is generally classified as Trail Class 3 or Trail Class 4.

Response. Local trail managers apply the Trail Classes and corresponding Design Parameters to an NFS trail or trail segment, based on the management intent of the trail. If consistent with the trail's management intent, a trail segment could be classified as Trail Class 1 or Trail Class 2, and the remainder of the trail could be classified as Trail Class 3 or Trail Class 4. Trails in Trail Classes 2 through 4 are potentially appropriate for pack and saddle use. Therefore, classification of a trail segment as Trail Class 1 or Trail Class 2 would not preclude pack and saddle use on the rest of the trail if it is classified as Trail Class 3 or Trail Class 4. In fact, pack and saddle use may be appropriate on the trail segment, if it is classified as Trail Class 2. Even if the trail segment is not managed for pack and saddle use, that use is allowed unless it is prohibited on the trail segment.

Comment. Several respondents expressed concern that the Design Clearing Width of 5 to 6.5 feet for Trail Class 3 in the Pack and Saddle Design Parameters would not allow less-skilled riders to access wilderness areas and would increase the risk of accidents for riders with moderate skills. These respondents recommended a Design Clearing Width of 8 feet for Trail Class 3.

Response. The agency agrees that additional clearing width is needed for Trail Class 3 in the Pack and Saddle Design Parameters and has increased the Design Clearing Width for Trail Class 3 in the Pack and Saddle Design Parameters from 5 to 6.5 feet to 6 to 8 feet.

Comment. Several respondents contended that under the proposed TCS, standards associated with mainline pack and saddle trails (comparable, according to the respondents, to trails in Trail Class 4) would no longer or rarely be appropriate in wilderness areas.

Response. Trails that were classified as mainline trails will now fall into Trail Class 2, Trail Class 3, or Trail Class 4. Trails in Trail Classes 2 and 3 are commonly found in wilderness areas. Trails in Trail Class 4 are less common but still occur in wilderness areas as access routes and routes connecting wilderness and nonwilderness areas.

Comment. One respondent expressed concern that many trails are deteriorating and not adequately maintained for equestrian use. This respondent questioned whether the inadequate maintenance was due to insufficient funding, the poor quality of field work, reduced interest in and awareness of equestrian needs on the part of Forest Service employees and the public, or changes in design standards. This respondent believed that emphasis should be placed on adequate trail maintenance, rather than on reclassification of trails.

Response. The agency acknowledges and is concerned about deterioration of all types of NFS trails, not just equestrian trails. Trail maintenance backlogs are due to funding and staffing constraints, rather than insufficient field work, reduced interest in and awareness of equestrian needs, or changes in design guidelines for trails. The TCS assists the agency with identifying the work needed to maintain trails to their intended condition and prioritizing that work. The TCS also helps the agency more accurately estimate and communicate the funding needed to complete the work. Thus, the TCS helps local managers prioritize limited resources.

Comment. Several respondents requested that the Pack and Saddle Design Parameters provide discretion to use full bench construction, i.e., construction of the trail bed entirely on undisturbed material, on side slopes (both inside and outside wilderness areas) as necessary to protect trails and to provide safe passage for their intended uses. These respondents also recommended an increase in the Design Tread Width from 12 to 18 inches to 24 to 36 inches for Trails Class 3 and Trail Class 4 and from 12 to 18 inches to 12 to 24 inches for Trail Class 2 to accommodate benched construction where needed. These respondents stated that a Design Tread Width of 24 inches would obviate the need to use fill to compensate for narrowing of the trail bed during construction.

Response. The Design Parameters generally do not dictate specific methods of construction, including whether full bench construction should be used on a trail segment. The Design Parameters provide technical guidance for determinations made by local trail technicians and managers regarding the most appropriate trail prescriptions and construction methods for particular trail segments. The Pack and Saddle Design Parameters do not preclude the use of full bench construction in any Trail Class, either inside or outside wilderness areas.

The Design Parameters do not dictate tread widths, as the respondents suggest, but rather provide nationally standardized guidance to be applied in the determination of trail-specific prescriptions. These prescriptions may include deviations from the Design Parameters based on trail-specific conditions, topography, or other factors, provided that the deviations are consistent with the general intent of the applicable Trail Class. For further clarification, the agency has defined ''Design Tread Width'' in the interim final directives as ''the tread width determined to be appropriate for accommodating the Managed Uses of a trail'' (FSH 2309.18, sec. 05).

The proposed Pack and Saddle Design Parameters stated that the Design Tread Width in wilderness areas may be increased to 48 inches along steep side slopes for Trail Classes 2 through 4 and to 60 inches along precipices for Trail Classes 3 and 4. The Pack and Saddle Design Parameters in the interim final directives provide for a Tread Width of up to 60 inches along precipices for Trail Class 2. In addition, the agency has increased the Design Tread Width for single-lane trails in Trail Class 3 in wilderness areas from 12 to 24 inches to 18 to 24 inches to reflect appropriate tread widths for pack and saddle stock on typical trails in Trail Class 3 (see Table 9 in section 4 of this preamble).

The Design Tread Width for single-lane trails in Trail Class 4 in wilderness areas remains 24 inches. This width is consistent with the guidance for wilderness areas in both the current and interim final directives (FSH 2309.18, sec. 2.24, para. 8 (current), and sec. 22.6,

para. 2h (interim final)), which provides that trail treads should not exceed 24 inches in width in wilderness areas. The Design Tread Width for single-lane trails in Trail Class 2 trails in wilderness areas remains 6 to 18 inches, which the agency believes reflects an appropriate range of tread widths for pack and saddle stock on these typically more challenging, narrower, and less developed trails.

Local deviations to any Design Parameter may be established based on trail-specific conditions, topography, and other factors, provided that the deviations are consistent with the general intent of the applicable Trail Class.

Comment. Several respondents contended that the proposed cross slopes of 5 to 10 percent for Trail Class 2 and 5 percent for Trail Classes 3 and 4 in the Pack and Saddle Design Parameters were unrealistic in steep, mountainous areas of the west and requested that these guidelines be revised to meet the design criteria in place since at least 1935.

Response. The Forest Service has modified the guidance regarding Design Cross Slope in the interim final directives to reflect more clearly appropriate cross slopes on trails managed for pack and saddle use (see Table 9 in section 4 of this preamble). The agency has revised the Target Cross Slope for Trail Class 3 from 5 percent to 3 to 5 percent and the Target Cross Slope for Trail Class 4 from 5 percent to 0 to 5 percent. The values identified for Trail Class 4 more aptly reflect Target Cross Slopes on more highly developed trails. These trails are often designed to accommodate higher levels of use and have smoother surfaces, where steeper cross slopes may not be as functional or appropriate and where other types of drainage probably need to be employed.

In addition, the agency has decreased the Maximum Cross Slope in Trail Class 2 from natural ground to 10 percent, based on the recognition that continuous cross slopes of more than 10 percent can strain stock, to minimize trail tread expansion down slope due to pack and saddle stock traffic. The agency has reduced the Maximum Cross Slope for Trail Class 3 from 10 to 8 percent. In addition, the agency has decreased the Cross Slope for Trail Class 4 from 10 to 5 percent. Tread cross slopes greater than 5 percent tend to move trail tread down slope due to lateral erosion, especially on trails in Trail Class 4, which typically have higher levels of use and are smoother, with a less natural surface.

Section 2.31c—Bicycle Design Parameters [Reserved] (Recoded as Section 23.13 in the Interim Final Directives)

Comment. Some respondents offered assistance in developing FSH 2309.18, section 2.31c, which was reserved for development of guidance regarding the Bicycle Design Parameters.

Response. Development of the TCS, including guidance on the Design Parameters, is subject to public notice and comment requirements under NFMA. *Back Country Horsemen of America* v. *Johanns,* No. 05–0960 (D.D.C. Mar. 29, 2006), slip op. at 8–14. Pursuant to those requirements, the agency is requesting public comment on the proposed Bicycle Design Parameters, along with the rest of the interim final directives. The agency will consider timely comments in development of final directives.

Comment. Some respondents requested guidance similar to that contained in FSH 2309.18, section 2.31a, paragraph 5, of the current directives, which helps differentiate between trails in Trail Class 1 in the Hiker/Pedestrian Design Parameters and user-created routes, trails designed for mountain bicycle use, and bicycle motor-cross (BMX) routes with jumps and berms.

Response. This suggestion will be considered when this section of the directives is developed.

2.31c, Exhibit 01—Bicycle Design Parameters (Recoded as Section 23.13, Exhibit 01, in the Interim Final Directives)

Comment. Some respondents expressed their belief that the revised TCS fairly addresses management of mountain bicycle trails and expressed appreciation that mountain bicycling is categorized as nonmotorized, allowed in applicable Trail Classes, and distinct from motorized uses.

Response. The Forest Service agrees with this comment.

Comment. Two respondents commended the Forest Service for clearly managing mountain bicycle use separately from off-highway vehicle use. These respondents specifically supported the agency's treatment of mountain bicycles as a nonmotorized use, rather than as a motorized use.

Response. The Forest Service recognizes that bicycles, including mountain bicycles, are a nonmotorized use that does not fall under the agency's definition of off-highway vehicles. The agency further recognizes that the design considerations for trails managed for bicycle use are different from the design considerations for trails managed for motorized uses and that trails managed for bicycle use therefore require a different set of Design Parameters. For clarity, the agency has included definitions for ''bicycle,'' ''motor vehicle,'' and ''off-highway vehicle'' and removed the definition for ''trail vehicle'' in the interim final directives.

Comment. Some respondents supported identifying mountain bicycles as potentially appropriate in all five Trail Classes.

Response. The Forest Service agrees that mountain bicycles are potentially appropriate in all five Trail Classes and has reflected that assessment in the chart showing the potential appropriateness of the Trail Classes for the Managed Uses of NFS trails.

Comment. One respondent stated that all sets of Design Parameters, including the Bicycle Design Parameters, may not adequately provide for environmentally sustainable trails. However, this respondent believed that this issue should not be addressed unless all sets of Design Parameters, not just the Bicycle Design Parameters, were taken into account.

Response. The concept of sustainability has long been incorporated into Forest Service trail design and construction guidance, publications, and training materials. The Design Parameters provide general guidelines for survey, assessment, design, construction, and maintenance of NFS trails. These national guidelines include minimum values, maximum values, or ranges of values for various trail attributes for each Trail Class. The Design Parameters serve as a general reference for development of trail-specific prescriptions at the local level, based on the management intent for each NFS trail. Local managers identify trail-specific Design Parameters based upon consideration of site-specific factors, including soils, hydrological conditions, use levels, erosion potential, and other factors contributing to surface stability and overall trail sustainability, as indicated in a footnote to each set of Design Parameters.

For example, it may be possible to design a sustainable hiker/pedestrian trail in Trail Class 2 across slick rock with a Target Grade of up to 15 percent and a Short Pitch Maximum of up to 25 percent (see FSH 2309.18, section 05, for a definition of ''Target Grade'' and ''Short Pitch Maximum''), whereas a hiker/pedestrian trail in Trail Class 2 across fragile, organic soils may require a Target Grade of less than 8 percent and a Short Pitch Maximum of less than 15 percent.

The agency has modified the footnote referenced above to communicate the concept of sustainability more clearly and has incorporated the concept of sustainability in FSH 2309.18, section 20.2, paragraph 2. In addition, the agency has revised various descriptors, attribute values, and footnotes in all sets of Design Parameters to clarify the intended design, construction, and maintenance of sustainable trails (see Tables 8 through 14 in section 4 of this preamble).

Comment. Some respondents proposed several specific changes to the Bicycle Design Parameters in the proposed directives. These changes included increasing the range for Design Tread Width for one-lane trails in Trail Class 2 from 12 to 24 inches to 6 to 24 inches and for one-lane trails in Trail Class 3 from 18 to 30 inches to 18 to 36 inches, and increasing the range for Design Tread Width for two-lane trails in Trail Class 3 from 48 to 60 inches to 36 to 48 inches and for two-lane trails in Trail Class 4 from 60 to 84 inches to 48 to 84 inches.

In addition, these respondents recommended changing the value for Obstacles for Trail Class 1 from a range of 6 to 12 inches to an upper limit of 24 inches; increasing the value for Obstacles for Trail Class 2 from 6 to 12 inches; increasing the value for Obstacles for Trail Class 3 from 3 to 6 inches; and changing the range for Obstacles for Trail Class 4 from 1 to 2 inches to 2 to 3 inches.

These respondents recommended increasing the range for Design Target Grade for Trail Class 1 from 15 to 18 percent to less than or equal to 18 percent; increasing the range for Design Target Grade for Trail Class 3 from less than or equal to 10 percent to less than or equal to 12 percent; and increasing the range for Design Target Grade for Trail Class 4 from less than or equal to 8 percent to less than or equal to 10 percent.

These respondents also recommended changing the range for Design Clearing Width for Trail Class 2 from 36 to 48 inches to 24 to 36 inches and providing in the descriptor for Design Clearing Width for Trail Class 3 and Trail Class 4 for clearing beyond the edge of the trail tread and removing trees when the trail tread is at least 24 inches wide.

Response. The Forest Service is revising the Bicycle Design Parameters as shown in Table 10 in section 4 of this preamble. The revisions incorporate the recommended adjustments to the values for Design Tread Width for one-lane trails in Trail Class 3 and for two-lane trails in Trail Class 3 and Trail Class 4.

However, the agency does not believe that the lower limit for the Design Tread Width for Trail Class 2 should be reduced from 12 inches to 6 inches. When combined with the most challenging values for the other attributes for Trail Class 2 in the Bicycle Design Parameters, the level of challenge would no longer be consistent with the development scale for Trail Class 2 and would more appropriately be covered under Trail Class 1. For example, a trail crossing steep side slopes with a sustained Trail Grade of 12 percent and a Tread Width of only 6 inches would generally exceed the level of challenge expected on trails in Trail Class 2 and would more appropriately fit under the parameters of Trail Class 1.

Upon further review of the Design Tread Widths, the agency believes that it is appropriate to identify values for double-lane trails in Trail Class 1 and Trail Class 2 in the Bicycle Design Parameters and has incorporated those values, as shown in Table 10 in section 4 of this preamble.

In addition, to enhance clarity, the agency has split Obstacles in each set of Design Parameters into two categories: Obstacles and Protrusions. The agency has also adjusted the tolerances under Obstacles and Protrusions in all sets of Design Parameters, as shown in Tables 8 through 14 in section 4 of this preamble.

The agency has adjusted the values for Design Target Grade to identify a range for each Trail Class, as applicable. The agency believes that incorporation of a lower limit better reflects the minimum grade typically necessary to provide adequate drainage on sustainable trails. The agency has identified a lower or flatter minimum Design Target Grade for trails in Trail Class 4 and Trail Class 5, which typically include compacted tread surfaces that can more readily provide adequate drainage on segments with flatter grades than trails with a rougher, native surface that are more often encountered in Trail Classes 1 through 3.

The agency has not increased the Design Target Grade for Trail Class 3 and Trail Class 4, as suggested by the respondents, because these changes, combined with the most challenging values for the other attributes in those Trail Classes, would result in a level of challenge that is not consistent with the development scale for Trail Class 3 and Trail Class 4. Trail Class 3 is geared to accommodate mountain bicycle riders with intermediate skills. These trail users can generally ride sustained grades of 10 percent, but sustained grades of 12 percent frequently require dismounting and walking. The level of challenge proposed by the respondents for Trail Class 3 would more appropriately be covered under Trail Class 2. Similarly, the suggested change in the Design Target Grade for Trail Class 4 would make trails in this Trail Class too difficult for many beginner and lower intermediate riders.

The agency has revised the ranges for Design Clearing Width to clarify the minimum clearing width and has added guidance regarding clearance of bicycle pedal bumpers under the new category of Shoulder Clearance.

Mountain bicycle handlebars are generally 26 inches wide. The agency did not adopt the respondents' suggestion to reduce the minimum Design Clearing Width for Trail Class 2 to 24 inches because this level of challenge would not be consistent with the development scale for Trail Class 2 and would more appropriately be covered under Trail Class 1. In the interim final directives, the lower limit in the range of 36 to 48 inches for the Design Clearing Width in Trail Class 2 accommodates typical handlebar widths, with approximately 6 inches on both sides of the bicycle frame. The range for the Design Clearing Width in Trail Class 1 remains 24 to 36 inches.

Comment. Some respondents expressed concern that the proposed directives included Bicycle Design Parameters for Trail Class 1, even though bicycle use is prohibited in wilderness areas as a mechanized use. These respondents asserted that bicycle use is inconsistent with the Wilderness Act and that the TCS should not provide for bicycle use on trails in Trail Class 1, which occur in wilderness areas.

Response. Application of the TCS does not affect whether certain modes of travel are allowed on a trail. The five Trail Classes represent the development scale of NFS trails. The Design Parameters are guidelines for survey, design, construction, maintenance, and assessment of NFS trails, based on their applicable Trail Class and management intent. From among the allowed uses of each NFS trail, local managers determine its Managed Uses and Designed Use, which in turn determines the applicable Design Parameters for that trail. The modes of travel allowed on a trail in a wilderness area must be consistent with the Wilderness Act, the authorizing statute for the wilderness area, and the applicable wilderness management plan.

Comment. One respondent stated that trails in Trail Class 1 should not be actively managed for bicycle use unless they are subject to a special use permit.

Otherwise, this respondent believed that bicycle use should merely be allowed at the user's risk on trails in Trail Class 1. Another respondent questioned whether the agency really wants mountain bicycles on trails in Trail Class 1. Two respondents expressed interest in development of Design Parameters for BMX use with berms, jumps, and steep grades.

Response. The agency believes that Trail Class 1, which reflects the most challenging and minimally developed NFS trails, can be actively managed for bicycle use. Trails in Trail Class 1 are typically extremely rugged and often very steep, with narrow tread and clearing limits and many or continuous obstacles. The Forest Service believes that in certain locations and situations, trails in Trail Class 1 can be and are developed and managed to provide appropriately challenging, enjoyable, and sustainable mountain bicycle opportunities.

The agency understands that there is increasing interest in challenge courses for mountain bicycling. The agency provides NFS trails for a wide variety of users with various skill levels. In general, the Forest Service does not design challenge courses, which may raise safety and sustainability concerns. The agency works with trail groups to provide an appropriate range of NFS trails managed for bicycle use, including incorporation of natural obstacles, as deemed appropriate, to provide challenging trail opportunities. The Forest Service encourages those interested in development of mountain bicycle challenge courses to work with members of the private sector regarding provision of these types of recreation opportunities, which may be more appropriate on nonNFS lands.

Section 2.32—Standard/Terra Motorized Trails (Recoded as Section 23.2 in the Interim Final Directives)

Comment. One respondent recommended modifying all sections of the FSM and FSH regarding motorized use of trails to include language similar to the provisions in proposed section 2.35b, paragraph 4, regarding avoidance of sensitive wildlife and habitat and the inappropriateness of motorized use in wilderness study areas, inventoried roadless areas, and habitat protection areas unless they can be adequately protected.

Response. The travel management rule at 36 CFR part 212, subpart B, requires each administrative unit or Ranger District of the Forest Service to designate those NFS roads, NFS trails, and areas on NFS lands that are open to motor vehicle use by vehicle class and, if appropriate, by time of year. The travel management rule requires the responsible official to consider the effects of designating NFS trails for motor vehicle use on various resources, with the objective of minimizing those effects. These effects include (1) damage to soil, watershed, vegetation, and other forest resources and (2) harassment of wildlife and significant disruption of wildlife habitats. The travel management rule also requires consideration of general criteria in designating trails for motor vehicle use, including effects on natural and cultural resources. The agency is finalizing directives implementing the travel management rule that also address these criteria. The agency does not believe that it is necessary to duplicate these requirements in the TCS directives.

Section 2.32a—Motorcycle Design Parameters (Recoded as Section 23.21 in the Interim Final Directives)

Comment. Some respondents supported the proposed change in the title of these Design Parameters from ''Bike Design Parameters'' to ''Motorcycle Design Parameters'' to distinguish clearly between bicycle and motorcycle uses.

Response. The Forest Service agrees with this comment and has created the Bicycle Design Parameters and the Motorcycle Design Parameters.

Comment. Several respondents expressed concern regarding the direction in proposed FSH 2309.18, section 2.32a, paragraph 3, to designate suitable closed roads as NFS trails open to motorcycle use and requested that this provision be removed from the directives, rather than shifted to the All-Terrain Vehicle or Four-Wheel Drive Design Parameters.

Response. The agency has removed the provision in proposed section 2.32a, paragraph 3, regarding designation of suitable closed roads as NFS trails open to motorcycle use entirely from the interim final directives. Designation of roads, trails, and areas for motor vehicle use is conducted pursuant to the travel management rule at 36 CFR part 212, subpart B, and its implementing directives, not the TCS directives.

Comment. One respondent expressed concern about the reference in proposed section 2.32a, paragraph 6, to user needs and variety of distances and recommended removing this language from the interim final directives. If this language is not removed from this section, the respondent requested that comparable language be added to the guidance regarding application of each set of Design Parameters.

Response. The agency has revised this provision in the interim final directives to state that a variety of distances and recreation experiences may be provided by designing cutoffs for less experienced riders within a system of loop trails; that an experienced rider can ride approximately 50 miles in an average day; and that some riders can cover over 100 miles in a day. The agency believes that the revised language provides useful guidance for the design and management of trails managed for motorcycle use.

Comment. One respondent stated that when trails are managed for multiple uses that include motorcycle use, the objective should be to decrease the speed of motorcycles. This respondent suggested striking in its entirety proposed section 2.32a, paragraph 9, regarding turns and switchback radii for motorcycle use. This respondent requested removal of guidance to use concrete blocks and cement to harden corners on multi-use trails. This respondent also proposed requiring the posting of speed limits of 10 to 15 miles per hour on multi-use trails.

Response. The Motorcycle Design Parameters are geared toward development and management of trails that offer an appropriate range of experience opportunities and levels of challenge for motorcyclists, while minimizing trail-related impacts on adjacent resources. The guidance in the Motorcycle Design Parameters regarding design turns (which include switchbacks, horizontal turns, and climbing turns) and in proposed section 2.32a regarding switchback radii will assist managers in meeting those objectives and has been retained.

Rather than identifying as an objective the desire for slower speeds for motorcycles, the interim final directives identify a method for slowing motorcycles, where deemed necessary or appropriate, by decreasing the turning radius. Whether motorcycle speeds need to be slowed is best judged by the local trail manager.

It is standard practice to use concrete blocks and cement to harden trails where deemed necessary to protect sensitive soils at switchbacks and climbing turns. Therefore, the agency has retained guidance regarding use of this practice in the interim final directives.

The agency does not believe it is appropriate to require posting of speed limits of 10 to 15 miles per hour on multi-use trails.

Comment. One respondent expressed concern that the narrative portion of proposed section 2.32a primarily focuses on the appropriateness of highly

developed trails in Trail Class 4 for motorcycles and recommended that this section be revised to reflect the appropriateness of trails in Trail Class 2 and Trail Class 3 for motorcycles.

Response. The Forest Service believes that the interim final directives at FSH 2309.18, section 23.21, appropriately address motorcycle use of trails in Trail Classes 2 through 4, based on their development scale.

Section 2.32a, Exhibit 01—Motorcycle Design Parameters (Recoded as Section 23.21, Exhibit 01, in the Interim Final Directives)

Comment. Some respondents recommended development of a set of Design Parameters for challenging motorcycle trails with sharp curves, steep grades, and other demanding characteristics.

Response. The Forest Service does not believe that it is necessary to develop a set of Design Parameters for challenging motorcycle trails. The agency believes that the array of Trail Classes identified for motorcycle use in the Motorcycle Design Parameters provides an appropriate range of recreation opportunities and levels of challenge on NFS trails, consistent with the objectives identified in proposed FSH 2309.18, section 2.02.

In the Motorcycle Design Parameters, Trail Class 2 provides the most challenging trail conditions for NFS trails managed for motorcycle use. Challenge is achieved by a combination of trail characteristics, including trail grade, alignment, clearing width, tread conditions, gain or loss of elevation, and other criteria outlined in the Design Parameters. The agency has revised the descriptors for Surface Obstacles and Protrusions in the Motorcycle Design Parameters to clarify consideration of these features as design elements in determining and prescribing the desired level of challenge (see Table 11 in section 4 of this preamble). Also, as stated in footnote 2 to the Motorcycle Design Parameters, the determination of the trail-specific Design Grade, Design Surface, and other Design Parameter attributes should be based upon soils, hydrological conditions, use levels, erosion potential, and other factors contributing to surface stability and overall sustainability of the trail.

The agency understands that there is increasing interest in the design of challenge courses. The agency manages NFS trails for a wide variety of uses and skill levels. In general, the Forest Service does not design challenge courses, which may raise safety concerns. The agency works with trail groups to provide an appropriate range of NFS trails managed for motorcycle use, including incorporation of natural obstacles as deemed appropriate to provide challenging trail opportunities. The Forest Service encourages trail users interested in development of motorcycle challenge courses to work with members of the private sector regarding provision of these types of recreation opportunities, which may be more appropriate on non NFS lands.

Comment. Two respondents recommended splitting the Motorcycle Design Parameters into different levels of difficulty. These respondents believed that providing motorcycle trails with a higher level of challenge that would be less likely to appeal to hikers and equestrians would be the best way to avoid use conflicts between hiking and horseback riding and motorcycle use.

Response. The agency does not believe it is necessary to create additional trail classes in the Motorcycle Design Parameters. The Trail Classes and each set of Design Parameters incorporating them reflect the development scale of NFS trails and corresponding levels of difficulty. Local managers determine the Managed Use or Uses, Designed Use, and corresponding trail-specific Design Parameters based on the applicable Trail Class and the management intent for each NFS trail. Each set of Design Parameters encompasses a wide range of recreation experiences and levels of challenge, which gives managers the flexibility to develop trail-specific prescriptions based on the Managed Uses of a trail, site-specific resource considerations, and other factors. To clarify this intent, the agency has added guidance in section 14.4, paragraph 3, of the interim final directives regarding identification of the Designed Use and Design Parameters for trails with more than one Managed Use.

Section 2.32b—All-Terrain Vehicle Design Parameters (Recoded as Section 23.22 in the Interim Final Directives)

Section 2.32b, Exhibit 01—All-Terrain Vehicle Design Parameters (Recoded as Section 23.22, Exhibit 01, in the Interim Final Directives)

Comment. One respondent stated that the proposed Design Tread Width in the All-Terrain Vehicle (ATV) Design Parameters contradicts federal policy to limit ATV trails to 50 inches or less in width.

Response. The policy referenced by the respondent applies to ATVs, not to the width of trails managed for ATV use. ATV is defined at FSM 2353.05 as a type of off-highway vehicle that travels on three or more low-pressure tires; has handle-bar steering; is less than or equal to 50 inches in width; and has a seat designed to be straddled by the operator. This definition refers to the total external width of the vehicle, including fenders, rather than to the wheelbase, which is typically narrower than the total width of the vehicle. The Design Tread Widths for single-lane trails in the ATV Design Parameters vary from a minimum of 48 inches for Trail Class 2 to 72 inches for Trail Class 4. This range of Design Tread Widths provides adequate clearance for the range of ATVs used on NFS trails.

New Section 23.23—Design Parameters for Four-Wheel Drive Vehicle Greater Than 50 Inches in Width

Comment. Two respondents recommended adding Design Parameters and corresponding guidance for four-wheel drive motor vehicles.

Response. The agency agrees with this suggestion and has added Design Parameters and corresponding guidance regarding four-wheel drive vehicles greater than 50 inches in width in the interim final directives. The agency did not include the word ''motor'' in the heading for this subsection because it falls under the section heading ''Standard Terra Trails: Motorized.'' Inclusion of the word ''motor'' in the heading for this subsection would therefore be redundant and inconsistent with the two other subsection headings, ''All-Terrain Vehicle'' and ''Motorcycle,'' neither of which includes the word ''motor.''

Comment. Two respondents made 11 specific recommendations regarding application of the Design Parameters for Four-Wheel Drive Vehicle Greater Than 50 Inches in Width. Each recommendation is listed below, followed by the agency's response.

Recommendation 1. State that generally four-wheel drive motor vehicle use on NFS lands can be either trail-based or road-based, depending on the availability of high-clearance NFS roads, the Road Management Objectives of those roads, the availability of trails suitable and open for four-wheel drive motor vehicles or other vehicles exceeding 50 inches in width, the TMOs of those trails, and the Managed Uses and Designed Use of those trails.

Response. Although different wording was used, the intent of this suggestion with respect to trail use is reflected in the interim final directives at FSH 2309.18, section 14.3. The suggestions dealing with management of motor vehicle use on roads are beyond the scope of these directives.

Recommendation 2. Designate suitable closed roads as NFS trails open to four-wheel drive motor vehicles.

Response. The agency has removed a provision regarding opening closed roads to motorcycle use and does not believe it is appropriate to add a similar provision for other uses, including four-wheel drive vehicles greater than 50 inches in width. Designation of roads, trails, and areas is made at the local level pursuant to the travel management rule and its implementing directives, rather than the TCS directives.

Recommendation 3. State that four-wheel drive motor vehicle trails generally should be classified as Trail Class 1 or Trail Class 2 and modified to create a greater degree of difficulty for the driver. The respondents based the latter recommendation on application of a revised Trail Class Matrix proposed by the respondents, with the least developed trails correlating to the least level of difficulty.

Response. Trails in Trail Class 1 are generally inappropriate for four-wheel drive vehicles greater than 50 inches in width. Trails in Trail Class 1 are the least developed and most challenging and are typically extremely rugged and often very steep, with little or no defined tread or clearing and many or continuous obstacles. Nevertheless, the Design Parameters allow for deviations based on trail-specific considerations, provided that the deviations are consistent with the general intent of the applicable Trail Class.

The agency believes that trails in Trail Class 2 are appropriate for four-wheel drive vehicles greater than 50 inches in width, as shown in their Design Parameters and the chart regarding appropriateness of the Trail Classes for the Managed Uses of NFS trails.

The agency does not believe it is appropriate to establish a direct, rather than an inverse, correlation between development scale and level of difficulty in the Trail Class Matrix. Since less developed trails in the lower Trail Classes such as Trail Class 2 are more challenging, there is no need to enhance the level of difficulty for trails in Trail Class 2 in the Design Parameters for four-wheel drive vehicles greater than 50 inches in width.

Recommendation 4. State that the higher the Trail Class, the higher the degree of difficulty of the trail.

Response. As stated above, the agency believes that the level of challenge provided by a trail inversely correlates with its development scale. The less developed trails are, the more challenging they are, and vice versa.

Recommendation 5. State that user needs for different distances and experiences can be accommodated by providing trunk trails offering a lower level of difficulty than secondary trails leading off trunk trails. State that the degree of difficulty of a trail affects its length: The more difficult the trail, the shorter the length necessary for a desired recreation experience; conversely, the less difficult the trail, the longer the length necessary for a desired recreation experience. State that the shorter the trail length and the smaller the area, the more difficult the trail experience should be.

Response. The agency believes that the length of a trail relates to its level of difficulty, in that users with less skill may need shorter trails. Accordingly, the agency has added section 23.23, paragraph 2c, to state that a variety of distances and recreation experiences may be provided by designing cutoffs for less experienced riders within a system of loop trails.

Recommendation 6. Encourage drainage dips, especially those that are close together, over water bars to enhance the level of challenge provided by a trail and to mitigate adverse impacts associated with sustained grades.

Response. The agency agrees that drainage dips on trails for four-wheel drive vehicles greater than 50 inches in width can provide more challenge and can mitigate adverse impacts on the trails. Accordingly, the agency has added guidance to the interim final directives encouraging drainage dips over water bars on trails managed for use by four-wheel drive vehicles greater than 50 inches in width. However, the agency has not provided for drainage dips to be within close proximity to one another because appropriate spacing of drainage dips is site-specific and determined at the local level.

Recommendation 7. Encourage the use of climbing turns and discourage the use of switchbacks whenever possible. State that implementation of rolling dips should be considered before and after climbing turns for side slopes with a grade exceeding 30 percent.

Response. The agency has added guidance recommending the use of climbing turns rather than switchbacks in section 23.23 of the interim final directives. Guidance regarding incorporation of dips in conjunction with switchbacks belongs in the Forest Service's Standard Specifications for Construction and Maintenance of Trails (EM 7720–103) and has not been included in the interim final directives.

Recommendation 8. State that turning radii should vary depending on the difficulty level of the trail. State that decreasing the turning radius can offer a greater level of challenge.

Response. The Design Parameters for Four Wheel Drive Vehicles Greater Than 50 Inches in Width provide guidance on turning radii that corresponds with the level of challenge in each Trail Class. The agency has provided additional guidance in section 23.23 of the interim final directives regarding the relationship of the turning radius to the level of challenge of a curve.

Recommendation 9. State that trail junctions should be located so that no more than two trails intersect at one point.

Response. The agency has included this recommendation in section 23.22 in the interim final directives for the Motorcycle Design Parameters and the ATV Design Parameters, but does not believe that it is necessary to include this recommendation for four-wheel drive vehicles greater than 50 inches in width because these vehicles generally travel at slower speeds on trails than motorcycles and ATVs.

Recommendation 10. State that varying degrees of horizontal and vertical alignments should be provided, with a tread surface that can accommodate an average speed of 2 to 4 miles per hour.

Response. The agency has included this recommendation in section 23.23, paragraph 2b, of the interim final directives.

Recommendation 11. State that improvements and modifications of four-wheel drive motor vehicle trails should enhance the degree of difficulty for the driver: the more developed the trail, the more difficult the trail should be.

Response. The Forest Service does not believe that the degree of difficulty of a trail increases with its development scale. Rather, the agency believes that the level of challenge of a trail inversely correlates to its development scale. The more developed a trails is, the less challenging it is, and vice versa.

The primary purposes of constructed features on NFS trails are to protect resources and to provide for user convenience, based on the applicable Trail Class and management intent for each trail. Design elements influencing the degree of challenge provided by an NFS trail include trail grade, alignment, clearing width, trail tread, surface obstacles and protrusions, and gain or loss of elevation. The interim final directives are not intended to provide guidance regarding development of ATV challenge courses or increasing the level of challenge through installation of constructed features.

New Section 23.23, Exhibit 01—Design Parameters for Four-Wheel Drive Vehicles Greater Than 50 Inches in Width

Comment. Two respondents proposed a set of Four-Wheel Drive Motor Vehicle Design Parameters.

Response. Trails in Trail Class 1 and Trail Class 5 are not typically designed or actively managed for four-wheel drive vehicle use. Therefore, in contrast to the respondents' proposed Design Parameters, which included a range for tread widths of 72 to 216 inches, the range for Design Tread Widths in the Design Parameters for Four-Wheel Drive Vehicle Greater Than 50 Inches in Width in the interim final directives is 72 to 120 inches, with the lower numbers in the range correlated with the lower Trail Classes.

The Forest Service has incorporated the respondents' suggestion for a 16-foot Design Tread Width for Trail Class 2. It would be inconsistent with the purpose of the Design Parameters not to specify Tread Width for Trail Class 3 and Trail Class 4. Accordingly, the agency has identified a minimum Design Tread Width of 16 feet for these Trail Classes.

In addition, the agency has included guidance regarding the Design Surface Type, including the use of native or imported surface material, grading, tread roughness, and tread stability, and guidance regarding the Surface Obstacles and Protrusions for each Trail Class. The descriptor for Surface Obstacles and Protrusions includes guidance to consider these elements as design features influencing the degree of challenge provided by a trail. The agency has also included a range of grades and cross slopes similar to those proposed by the respondents for each Trail Class. Some of the Design Clearing Limits in the Design Parameters for Four-Wheel Drive Vehicle Greater Than 50 Inches in Width in the interim final directives, such as those for Trail Classes 2 through 4, are similar to those suggested by the respondents.

The Design Parameters for Four-Wheel Drive Vehicles Greater Than 50 Inches in Width in the interim final directives incorporate a range of Design Turns for the Trail Classes that is similar to the range of Design Turns suggested by the respondents. For example, the respondents proposed a range of design turn radii from 10 to 25 feet, and the Design Parameters identify a range of design turn radii of 10 to 30 feet.

The agency has not included the three additional trail attributes (''Non-Defined Foot Print,'' ''Obstacles—Rock,'' and ''Obstacles—Desert'') proposed by the respondents in the Design Parameters for Four-Wheel Drive Vehicle Greater Than 50 Inches in Width. These additional attributes do not appear in any other set of Design Parameters and would create unnecessary inconsistency in the Design Parameters.

New Section 23.32—Snowshoe Design Parameters

New Section 23.32, Exhibit 01—Snowshoe Design Parameters

Comment. Two respondents recommended developing a set of Snowshoe Design Parameters.

Response. The agency agrees with these respondents and has included a set of Snowshoe Design Parameters in the interim final directives.

2.33c—Snowmobile Design Parameters (Recoded as Section 23.33 in the Interim Final Directives)

2.33c, Exhibit 01—Snowmobile Design Parameters (Recoded as Section 23.33, Exhibit 01, in the Interim Final Directives)

Comment. One respondent expressed concern that the Snowmobile Design Parameters do not seem to take into account a trail that is used for multiple purposes, such as snowmobiles, cross-country skiing, snowshoeing, and dog sledding. This respondent expressed particular concern regarding identification of the appropriate trail grade for trails with multiple uses.

Response. The TCS addresses the common situation where an NFS trail is actively managed for more than one use. A trail may have multiple Managed Uses, such as snowmobiling, cross-country skiing, snowshoeing, and dog sledding, but can have only one Designed Use. The Designed Use of a trail is the design driver because it is the Managed Use that requires the most demanding design, construction, and maintenance parameters. When determining the Designed Use and corresponding Design Parameters for a trail, managers are instructed to 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, including the Design Trail Grade.

Comment. One respondent stated that the Design Clearing Limits for snowmobiles are insufficient to provide adequate snowfall or visibility around turns on snowmobile trails and recommended that these Design Clearing Limits be increased.

Response. The Design Clearing Limits in the Snowmobile Design Parameters have been verified in the field and have been determined to be generally applicable and appropriate, including around turns. Trail-specific deviations may be established based on trail-specific conditions, topography, and other factors, provided that the deviations are consistent with the general intent of the applicable Trail Class.

Response to Comments on the Regulatory Certifications in the Proposed Directives Environmental Impact

Comment. Several respondents stated that the agency has not considered and documented environmental impacts and impacts on trail users and pack and saddle use associated with implementation of the TCS. One respondent expressed concern that environmental analysis was not conducted on the proposed TCS. One respondent expressed concern that the proposed TCS would be adopted pursuant to a categorical exclusion from documentation in an environmental impact statement (EIS) or environmental assessment (EA) without addressing potential effects associated with trails developed and maintained for motorized use.

Several respondents disagreed with the agency's conclusion that the proposed TCS does not require preparation of an EA or EIS and requested that the agency complete an environmental analysis addressing potential economic impacts on the agency and adverse impacts on natural resources from implementation of the proposed TCS. One respondent stated that the proposed TCS represents a significant departure from previous policy and requested that a programmatic EIS be prepared for the proposed TCS. One respondent requested that the agency provide data on economic impacts associated with implementation of the TCS and stated that many equestrians in the State of Missouri travel to the western states to trail ride and to hunt and that to be denied this opportunity would be disturbing to equestrians and also damaging to the local economies of those western states.

Response. The management intent for a trail is reflected in the applicable land management plan, applicable travel management decisions, trail-specific decisions, and other related direction. Management direction for NFS trails is developed with public involvement and appropriate environmental documentation pursuant to NEPA and NFMA. Substantive changes in the management intent for NFS trails are subject to the direction in FSH 2309.18,

section 11, including the direction regarding compliance with NEPA.

In contrast, implementation of the TCS does not affect on-the-ground management of NFS trails. The TCS is merely a tool for classifying NFS trails for purposes of survey, design, construction, maintenance, and assessment. Local trail managers identify the applicable Trail Class, Managed Uses, Designed Use, and corresponding Design Parameters for an NFS trail based on its management intent. Therefore, implementation of the TCS falls within the Forest Service's categorical exclusion for ''rules, regulations, or policies to establish Servicewide administrative procedures, program processes, or instructions,'' and preparation of an EA or EIS is not required. *See Back Country Horsemen of America* v. *Johanns,* No. 05–0960 (D.D.C. Mar. 29, 2006), slip op. at 15–20.

Regulatory Impact

Comment. Two respondents stated that the proposed TCS incorporates without justification several major policy changes, including changing the basis for trail design, construction, and maintenance from transportation to recreational use and providing less stringent trail standards in wilderness areas.

Two respondents disagreed with the agency's assertion that the proposed revisions to the TCS are non-significant and therefore do not require review by the Office of Management and Budget (OMB) under Executive Order 12866.

Response. The agency has provided ample justification in the preambles to the proposed and interim final directives for the changes made to the TCS. Implementation of the TCS does not affect on-the-ground management of NFS trails, which continue to be surveyed, designed, constructed, maintained, and assessed in accordance with their management intent.

OMB has the responsibility in the Executive Branch to determine whether regulations and policies are significant for purposes of the criteria in Executive Order 12866. The interim final directives will establish guidelines for trail survey, design, construction, maintenance, and assessment that will apply internally to the Forest Service. Applying the criteria in Executive Order 12866, OMB has determined that these interim final directives cannot and may not reasonably be anticipated to lead to an annual effect of $100 million or more on or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or Tribal governments or communities; create a serious inconsistency or otherwise interfere with an action taken or planned by another agency; raise novel legal or policy issues; or materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights or obligations of beneficiaries of those programs. Therefore, OMB has determined that the proposed and interim final directives are non-significant.

Unfunded Mandates

Comment. One respondent stated that the proposed directives were an unfunded mandate.

Response. The interim final directives do not constitute an unfunded mandate for purposes of 2 U.S.C. 1531–1538 because the interim final directives will not compel the expenditure of $100 million or more by any State, local, or Tribal government or anyone in the private sector. Rather, the interim final directives will establish internal agency guidelines for survey, design, construction, maintenance, and assessment of NFS trails.

Controlling Paperwork Burdens on the Public

Comment. Two respondents contended that the Paperwork Reduction Act applies and that the agency's assertion to the contrary is incorrect.

Response. The interim final directives do not contain any public recordkeeping or reporting requirements or other information collection requirements as defined in 5 CFR part 1320. Rather, the interim final directives contain only internal agency recordkeeping and reporting requirements for purposes of inventorying and managing NFS trails. This information is currently incorporated into the agency's national trail database.

Comments Beyond the Scope of the Directives

Comments. One respondent expressed concern about the effects on energy use resulting from encouraging motorized trails.

Response. The interim final directives do not encourage any particular type of trail use. The TCS is applied based on the development scale of NFS trails and their management intent. Energy consumption by trail users is beyond the scope of these interim final directives.

Comment. One respondent objected to prohibiting mechanized methods for trail maintenance in wilderness areas. This respondent stated that mechanized methods for trail maintenance would cut the cost of keeping these types of trails open. One respondent requested that the Forest Service set aside a two-week period in the spring to allow trail crews to use chainsaws in the Sawtooth and Paysayten Wilderness areas.

Response. The propriety of the use of mechanical transport and motorized tools in wilderness areas is beyond the scope of these directives, which establish guidelines for trail survey, design, construction, maintenance, and assessment that will apply internally to the Forest Service.

Comment. One respondent wondered why the TCS does not include mapping guidelines by Trail Class and wondered if the different Trail Classes would be displayed on Forest Service maps that are available to the public. This respondent stated that historically trails in Trail Classes 3 through 5 have appeared on maps and assumed that trails in Trail Class 2 would also sometimes appear on Forest Service maps, depending on local factors. This respondent did not expect that trails in Class 1 would generally apear on maps and assumed that they would more likely be known only to users who come across them.

Response. Requirements for Forest Service visitor maps are found in FSM 7140 and FSH 7109.13a, chapter 10, which are beyond the scope of these directives.

Comments. Several respondents expressed concern and made requests regarding management of specific NFS trails.

Response. Implementation of the TCS does not result in changes in on-the-ground management of NFS trails. The TCS does not identify specific trails, their Managed Uses or Designed Use, or corresponding Design Parameters. These determinations are made by managers at the local level based on applicable land management plan direction, applicable travel management decisions, trail-specific decisions, and other related direction. Trail-specific situations should be addressed at the local level in consulation with the local trail manager.

3. Comparison of the Pack and Saddle Trail Guides and the Pack and Saddle Design Parameters

Tables 1 through 6 compare the Pack and Saddle Trail Guides in the current directives with the Pack and Saddle Design Parameters in the interim final directives. The correlation between the two sets of tables is approximate, rather than exact, and the trail classifications shown are not to scale due to limitations of the size of the page. Only factors common to the Trail Guides and Design

Parameters are included in these examples.

Tables 1, 2, 3, and 4 demonstrate that the technical guidelines for pack and saddle trails have never applied to the full range of NFS trails. Specifically, these tables show that the guidelines in both the Pack and Saddle Trail Guide and the Pack and Saddle Design Parameters apply to trails that fall in between the least developed and the most developed NFS trails.

The Hiker and Barrier-Free Trail Guides Versus The Pack and Saddle Trail Guide

Table 1: The Hiker and Barrier-Free Trail Guides

Hiker/pedestrian use encompasses the widest range of trail development scale in the NFS. Accordingly, Table 1 shows a broad range of trails ranging from the lowest level of development in the Hiker Trail Guide and the highest level of development in the Barrier-Free Trail Guide. The combined range includes extremely challenging and minimally developed trails in the Most Difficult Category in the Hiker Trail Guide, with maximum pitch grades exceeding 30 percent, tread widths of 1 foot, and clearing widths of 3 feet, to the least challenging, most highly developed, and fully accessible trails in the Easiest Category in the Barrier-Free Trail Guide, with grades of 1 to 3 percent, tread widths of 8 feet, and clearing widths free of underbrush for 1 foot on both sides of the trail.

Table 2: The Pack and Saddle Trail Guide

The basic elements of the Pack and Saddle Trail Guide are included in Table 2, which encompasses trails ranging from Most Difficult, with tread widths not indicated, maximum pitch grades exceeding 30 percent, and clearing widths of 3 to 4 feet, to Easiest, with tread widths of 24 inches, maximum pitch grades of 15 percent, and clearing widths of 8 feet. In the current directives, the Most Difficult Category in the Pack and Saddle Trail Guide is referenced by a footnote that states: ''Assume pack animals normally are not accommodated on most difficult trails, so less clearing width is needed. Same holds true for day-use horse trails.''

Table 1 Versus Table 2

Despite differences in scale, Tables 1 and 2 show that the spectrum of pack and saddle trails falls somewhere within the range of the Most Difficult trails in the Hiker Trail Guide and the Easiest trails in the Barrier-Free Trail Guide.

The Hiker/Pedestrian Versus The Pack and Saddle Design Parameters

Table 3: The Hiker/Pedestrian Design Parameters

The excerpt from the Hiker/Pedestrian Design Parameters shown in Table 3 includes only those factors that were also listed in the corresponding Trail Guides.

Table 3 shows that the agency created the Hiker/Pedestrian Design Parameters by combining the Hiker and Barrier-Free Trail Guides: the Hiker/Pedestrian Design Parameters encompass the full range of trail development scale included in the corresponding Hiker and Barrier-Free Trail Guides, from the Most Difficult level for hiking trails to the Easiest level for barrier-free trails.

Table 4: The Pack and Saddle Design Parameters

The excerpt from the Pack and Saddle Design Parameters shown in Table 4 includes only those factors that were also included in the Pack and Saddle Trail Guide (tread width, surface, maximum pitch grade or short pitch maximum grade, clearing height, and clearing width).

Table 4 shows that the Pack and Saddle Design Parameters encompass trails ranging from Trail Class 2, with tread widths of 12 to 18 inches in wilderness and 12 to 24 inches outside of wilderness, short pitch maximum grades of 30%, and clearing widths of 6 feet, to Trail Class 4, with tread widths of 24 in wilderness and 24 to 120 inches outside of wilderness, short pitch maximum grades of 15%, and clearing widths of 8 feet.

Table 3 Versus Table 4

Despite differences in scale, Tables 3 and 4 show that the NFS trails encompassed by the Pack and Saddle Design Parameters do not encompass the full range of NFS trails, but rather fall within the range of NFS trails encompassed by the Hiker/Pedestrian Design Parameters.

The Pack and Saddle Trail Guide Versus The Pack and Saddle Design Parameters

Tables 5 and 6 demonstrate that the guidelines in the Pack and Saddle Design Parameters are either identical or functionally equivalent to the guidelines in the Pack and Saddle Trail Guide or that the guidelines in the Pack and Saddle Design Parameters are more precise or even more expansive than the guidelines in the Pack and Saddle Trail Guide.

Table 5: The Pack and Saddle Trail Guide

The excerpt from the Pack and Saddle Trail Guide shown in Table 5 is the same as the one shown in Table 2.

Table 6: The Pack and Saddle Design Parameters

The excerpt from the Pack and Saddle Design Parameters shown in Table 6 is the same as the one shown in Table 4.

Table 5 Versus Table 6

Despite differences in scale, Tables 5 and 6 show that the Pack and Saddle Design Parameters incorporate the guidelines from the Pack and Saddle Trail Guide and are based on the assumption in the footnote to that trail guide, which states: ''Assume pack and saddle animals normally are not accommodated on most difficult trails, so less clearing width is needed. Same holds true for day-use trails.'' The Pack and Saddle Design Parameters thus encompass the full range of trail development scale included in the Pack and Saddle Trail Guide.

The Pack and Saddle Design Parameters cover a broad spectrum of equestrian trails, ranging from narrow, highly challenging trails in Trail Class 2 that are often very rugged and steep, with defined but narrow tread, and relatively narrow clearing limits, to wide, minimally challenging bridle trails in Trail Class 4 that typically present moderate-to-minimal levels of challenge and are wider, with well-established tread and wide clearing limits.

To enhance consistency in application, the Pack and Saddle Design Parameters more clearly identify the lower range of the development scale of NFS trails designed and managed to accommodate pack and saddle use by identifying values for the minimum Design Tread Width, Design Target Grade, and Short Pitch Maximum. Similarly, the Pack and Saddle Design Parameters more clearly identify the upper range of the spectrum of NFS trails designed and managed for equestrian use by identifying values for the Design Target Grade and identifying an expanded range of values for the Design Tread Width for single-lane and double-lane trails outside wilderness areas in Trail Class 4. In addition, the Pack and Saddle Design Parameters, like all Design Parameters, explicitly provide for local deviations based on specific trail conditions, topography, and other factors, provided that the deviations are consistent with the general intent of the applicable Trail Class.

Moreover, based on comments received on the proposed directives, the

agency has revised the Pack and Saddle Design Parameters, as shown in Tables 4 and 6. Specifically, the agency has:

- Increased the range for Design Tread Width for single-lane trails in wilderness areas in Trail Class 3 from 12 to 24 inches to 18 to 24 inches.
- Increased the Design Clearing Width for Trail Class 2 from a range of 3 to 4 feet (which matched the clearing width for Most Difficult trails in the Pack and Saddle Trail Guide) to a Design Clearing Width of 6 feet.
- Increased the range for the Design Clearing Width for Trail Class 3 from 5 to 6.5 feet to 6 to 8 feet.
- Increased the Design Clearing Width for Trail Class 4 from a range of 6 to 8 feet to 8 feet.
- Added pack clearances for Trail Class 3 and Trail Class 4, consistent with the clearances identified in the Pack and Saddle Trail Guide.

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COMPARISON OF HIKER AND BARRIER-FREE TRAIL GUIDES WITH PACK AND SADDLE TRAIL GUIDE

Table 1: Hiker Trail Guide and Barrier-Free Trail Guide

Design Variable		Hiker Trail Guide			Barrier-Free Trail Guide		
		Most Difficult	More Difficult	Easiest	Most Difficult	More Difficult	Easiest
Tread	Width One-Way	12"	12" – 18"	18" – 24" Obstacle Free	3'	4'	4'
	Width Two-Way				4' or 3' with turnouts[1]	8' or 4' with 2' x 5' turnouts	8' or 4' with 2' x 5' turnouts
	Surface	No graded tread except on side slopes > 50%	Not surfaced—leave roots, imbedded rocks, and some logs	Spot gravel surfacing	Hard packed sandy loam, some roots and rocks.	Asphalt, soil cement, very fine crushed rock ¾" (-) solidly packed.	Concrete or asphalt with subgrade of rock
Grade	Grade	(not indicated)	(not indicated)	(not indicated)	6% - 8%	+ 3% - 6%	± 1% or 3%
	Max. Pitch	+ 30%	30%	20%	Short pitches to 12%	(not indicated)	(not indicated)
	Length	500'	300'	100'	(not indicated)	Vertical climb up to 160'	Vertical climb up to 80'
Clearing	Length	8'	8'	8'	(not indicated)	(not indicated)	(not indicated)
	Width	3'	3' – 4'	4'	Clear underbrush to 6" from trail	Clear underbrush to 1' from trail.	Clear underbrush to 1' from trail

Approximate Correlation

Table 2: Pack and Saddle Trail Guide

Design Variable		Pack and Saddle Trail Guide		
		Most Difficult [1]	More Difficult	Easiest
Tread	Width	(not indicated)	18" – 24"	24"
	Surface	Not graded except on slopes greater than 30%	Leave roots and imbedded rocks.	Surfacing as needed for stability. Construct extra trailbed in steep terrain.
Grade	Grade	(not indicated)	(not indicated)	(not indicated)
	Max. Pitch	+ 30%	25%	15%
	Length	500'	300'	200'
Clearing	Height	Maximum 8'	8'	10'
	Width	3' – 4'	6' Pack Clearance: 3'	8' 6' between large trees. Pack Clearance: 3'

[1] Assume pack animals normally are not accommodated on most difficult trails, so less clearing width is needed. Same holds true for day-use horse trails (emphasis added).

COMPARISON OF HIKER/PEDESTRIAN DESIGN PARAMETERS WITH PACK AND SADDLE DESIGN PARAMETERS

Table 3: Hiker/Pedestrian Design Parameters

Designed Use HIKER/PEDESTRIAN		Trail Class 1	Trail Class 2	Trail Class 3	Trail Class 4	Trail Class 5
Design Tread Width	Wilderness (Single Lane)	0" – 12"	6" – 18"	12" – 24"	18" – 24"	Not applicable
	Non-Wilderness (Single Lane)	0" – 12"	6" – 18"	18" – 36"	24" – 60"	36" – 72"
	Non-Wilderness (Double Lane)	36"	36"	36" – 60"	48" – 72"	72" – 120"
Design Surface[3]	Type	Native, un-graded May be continuously rough	Native, limited grading May be continuously rough	Native with some borrow or imported material… occasional grading Intermittently rough	Native with sections of borrow or imported material, routine grading Minor roughness	Likely imported material, routine grading Uniform, firm, and stable
Design Grade	Target Grade	5% – 25%	5% – 18%	3% – 12%	2% – 10%	2% – 5%
	Short Pitch Max	40%	35%	25%	15%	5% FSTAG: 5% – 12%[2]
	Max Pitch Density	20% – 40% of trail	20% – 30% of trail	10% – 20% of trail	5% – 20% of trail	0% – 5% of trail
Design Clearing	Height	6'	6' – 7'	7' – 8'	8' – 10'	8' – 10'
	Width	≥ 2'	2' – 4'	3' – 5'	4' – 6'	5' – 6'

Approximate Correlation

Table 4: Pack and Saddle Design Parameters

Designed Use PACK AND SADDLE		Trail Class 1	Trail Class 2	Trail Class 3	Trail Class 4	Trail Class 5
Design Tread Width	Wilderness (Single Lane)	Typically not designed or actively managed for equestrians, although use may be allowed	12" – 18"	18" – 24" [~~12" – 24"~~][2]	24"	Typically not designed or actively managed for equestrians, although use may be allowed
	Non-Wilderness (Single Lane)		12" – 24"	18" – 48"	24" – 96"	
	Non-Wilderness (Double Lane)		60"	60" – 84"	84" – 120"	
Design Surface	Type		Native, limited grading May be frequently rough	Native with some borrow or imported material… occasional grading Intermittently rough	Native, with… sections of borrow or imported material, routine grading Minor roughness	
Design Grade	Target Grade		5% – 20%	3% – 12%	2% – 10%	
	Short Pitch Max		30%	20%	15%	
	Max Pitch Density		15% – 20% of trail	5% – 15% of trail	5% – 10% of trail	
Design Clearing	Height		8' – 10'	10'	10' – 12'	
	Width		6' [~~3' – 4'~~][2]	6' – 8' [~~5' – 6.5'~~][2] [Pack Clearance: 3'][2]	8' [~~6' – 8'~~][2] [Pack Clearance: 3'][2]	

Brackets and strikeout show changes made to the proposed directives based on public comments.

COMPARISON OF PACK AND SADDLE TRAIL GUIDE WITH PACK AND SADDLE DESIGN PARAMETERS

Table 5: Pack and Saddle Trail Guide

Design Variable		Pack and Saddle Trail Guide		
		Most Difficult [1]	More Difficult	Easiest
Tread	Width	(not indicated)	18" – 24"	24"
	Surface	Not graded except on slopes greater than 30%	Leave roots and imbedded rocks.	Surfacing as needed for stability. Construct extra trailbed in steep terrain.
Grade	Target Grade	(not indicated)	(not indicated)	(not indicated)
	Max. Pitch	+30%	25%	15%
	Length	500'	300'	200'
Clearing	Height	Maximum 8'	8'	10'
	Width	3' – 4'	6' Pack Clearance: 3'	8' 6' between large trees. Pack Clearance: 3'

[1] Assume pack animals normally are not accommodated on most difficult trails, so less clearing width is needed. Same holds true for day-use horse trails (emphasis added).

Approximate Correlation

Table 6: Pack and Saddle Design Parameters

Designed Use PACK AND SADDLE		Trail Class 1	Trail Class 2	Trail Class 3	Trail Class 4	Trail Class 5
Design Tread Width	Wilderness (Single Lane)	Typically not designed or actively managed for equestrians, although use may be allowed	12" – 18"	18" – 24" [~~12" – 24"~~] [2]	24"	Typically not designed or actively managed for equestrians, although use may be allowed
	Non-Wilderness (Single Lane)		12" – 24"	18" – 48"	24" – 96"	
	Non-Wilderness (Double Lane)		60"	60" – 84"	84" – 120"	
Design Surface	Type		Native, limited grading; May be frequently rough	Native with some borrow or imported material… occasional grading; Intermittently rough	Native, with… sections of borrow or imported material, routine grading; Minor roughness	
Design Grade	Target Grade		5% – 20%	3% – 12%	2% – 10%	
	Short Pitch Maximum		30%	20%	15%	
	Maximum Pitch Density		15% – 20% of trail	5% – 15% of trail	5% – 10% of trail	
Design Clearing	Height		8' – 10'	10'	10' – 12'	
	Width		6' [~~3' – 4'~~] [2]	6' – 8' [~~5' – 6.5'~~] [2] [Pack Clearance: 3'] [2]	8' [~~6' – 8'~~] [2] [Pack Clearance: 3'] [2]	

[2] Brackets and strikeout show changes made to the proposed directives based on public comments.

4. Summary of Revisions to the Trail Class Matrix and Design Parameters

The following section provides a summary of the substantive changes the agency has made to the Trail Class Matrix and Design Parameters in the interim final directives. These changes will not require a change in any existing TMOs, trail-specific prescriptions, or corresponding data recorded in the Forest Service's national database.

a. Changes to the Trail Class Matrix

For clarity, in the interim final directives, the agency has changed the captions for the five Trail Classes to read:

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

The 2001 Trail Class Matrix included three sets of additional criteria specific to particular types of uses (motorized, snowmobile, and water uses), which were applied in addition to the general criteria in the five Trail Classes. In 2005, a fourth set of additional criteria was added to the Trail Class Matrix for pack and saddle use. The primary intent of the original sets of additional criteria was to address considerations specific to those uses that were not addressed by the general criteria. A secondary intent was to indicate the applicability of each Trail Class to types of Managed Uses. The agency is removing the four sets of additional criteria because they duplicate the use-specific guidance in the Design Parameters. The agency is including a new chart in the FSH that shows the potential appropriateness of each Trail Class for each of the Managed Uses of NFS trails.

In addition, attached to the 2001 Trail Class Matrix is a chart entitled, ''Trail Operation and Maintenance Considerations.'' While these considerations are a useful tool for trail managers, they are not part of the Trail Class Matrix or Design Parameters. Rather, they are provided to assist field managers in the development of trail prescriptions, program management, and trail operation and maintenance. The considerations provide a starting point and likely will be adapted locally to reflect site-specific financial limitations and applicable district, forest, and regional circumstances. To clarify this distinction, the agency is severing this chart from the Trail Class Matrix and addressing its context and purpose in FSM 2353 and FSH 2309.18.

Table 7 shows the substantive revisions and clarifications made to the Trail Class Matrix. New text is shown in italicized font, and deleted text is shown with strikeout. The following summarizes the key substantive changes.

Tread and Traffic Flow

The agency has added guidance regarding single and constructed passing allowances for trails in Trail Class 1 and Trail Class 2 and revised the corresponding guidance for trails in Trail Class 3 and Trail Class 4 for consistency. The agency has modified the qualifiers (for example, ''predominantly'' and ''typically'' are now used) for native and imported tread material types for trails in Trail Class 1, Trail Class 2, and Trail Class 3.

Obstacles

The Trail Class Matrix now provides guidance on obstacles for each Trail Class and takes into account the effect of obstacles on the level of challenge provided by a trail.

Constructed Features and Trail Elements

The agency has modified the discussion of this attribute for all Trail Classes to include guidance regarding the use of native or imported materials for trail structures, to provide clearer guidance regarding drainage for trails in Trail Class 1, to provide clearer guidance for trails in Trail Classes 1 through 4, and to provide or revise guidance regarding bridges for all Trail Classes.

Signs

The agency has revised the discussion of this attribute to provide improved clarity and consistency in guidance regarding signs and markers for trails in all Trail Classes.

TABLE 7 – CHANGES TO THE TRAIL CLASS MATRIX

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
Tread & Traffic Flow	• Tread intermittent and often indistinct • May require route finding • *Single lane, with no allowances constructed for passing* • *Predominantly* native materials ~~only~~	• Tread *continuous and* discernible, ~~and continuous,~~ but narrow and rough • *Single lane, with minor* ~~Few or no~~ allowances constructed for passing • *Typically* native materials	• Tread *continuous and* obvious ~~and continuous~~ • *Single lane, with allowances constructed for passing where required by traffic volume in places where there is no reasonable opportunity to pass* ~~Width accommodates unhindered one-lane travel with occasional constructed passing sections~~ • ~~Typically~~ Native *or imported* materials	• Tread wide and relatively smooth with few irregularities • *Single lane, with allowances constructed for passing where required by traffic volume in places where there is no reasonable opportunity to pass* ~~Width may consistently accommodate two-lane travel~~ • *Double lane where traffic volume is high and passing is frequent* • Native or imported materials • May be hardened	• *Tread wide, firm, stable, and generally uniform* • *Single lane, with frequent turnouts where traffic volume is low to moderate* ~~Width generally accommodates two-lane and two-directional travel, or provides frequent passin turnouts~~ • *Double lane where traffic volume is moderate to high* • Commonly hardened with asphalt or other imported material
Obstacles	• Obstacles common, *naturally ocurring, often substantial, and intended to provide increased challenge* • Narrow passages; brush, steep grades, rocks and logs present	• Obstacles ~~occasionally present~~ *may be common, substantial, and intended to provide increased challenge* • Blockages cleared to define route and protect resources • Vegetation may encroach into trailway	• Obstacles ~~infrequent~~ *may be common, but not substantial or intended to provide challenge* • Vegetation cleared outside of trailway	• *Obstacles infrequent and insubstantial* ~~Few or no obstacles exist~~ • ~~Grades typically < 12%~~ • Vegetation cleared outside of trailway	• *Obstacles not present* ~~• No obstacles present~~ • Grades typically < 8%

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
Constructed Features & Trail Elements	• *Structures* minimal to non-existent • Drainage ~~is functional~~ *typically accomplished without structures* • *Natural fords* • *Typically no bridges* ~~No constructed bridges or foot crossings~~	• Structures of limited size, scale, and ~~number~~ *quantity; typically constructed of native materials* • ~~Drainage is functional~~ • Structures adequate to protect trail infrastructure and resources • *Natural fords* ~~Primitive foot crossings and fords~~ • *Bridges as needed for resource protection and appropriate access*	• Structures ~~(walls, steps, drainage, raised trail)~~ may be common and substantial*; constructed of imported or native materials* • *Natural or constructed fords* • Bridges as needed for resource protection and appropriate access • ~~Generally native materials used in Wilderness~~	• Structures frequent and substantial*; typically constructed of imported materials* • *Contructed or natural fords* • *Bridges as needed for resource protection and user convenience* ~~Substantial bridges are appropriate at water crossings~~ • Trailside amenities may be present	• Structures frequent or continuous *and typically constructed of imported materials* • May include bridges, boardwalks, curbs, handrails, trailside amenities*, and similar features* • ~~Drainage structures frequent; may include culverts and road-like drainages~~
Signs[2]	• ~~Minimum required~~ • *Route identification signing limited to junctions* • *Route markers present when trail location is not evident* • *Regulatory and resource protection signing infrequent* ~~Generally limited to regulation and resource protection~~ • *Desination signing, unless required, generally not present* ~~No destination signs present~~ • *Information and interpretive signing generally not present*	• ~~Minimum required for basic direction~~ • *Route identification signing limited to junctions* • *Route markers present when trail location is not evident* • *Regulatory and resource protection signing infrequent* ~~Generally limited to regulation and resource protection~~ • *Destination signing typically infrequent outside wilderness areas; generally not present in wilderness areas* ~~Typically very few or no destination signs present~~ • *Information and interpretive signing uncommon*	• ~~Regulation, resource protection, user reassurance~~ • *Route identification signing at junctions and as needed for user reassurance* • *Route markers as needed for user reassurance* ~~Directional signs at junctions, or when confusion is likely~~ • *Regulatory and resource protection signing may be common* • *Destination signing likely outside wilderness areasa; generally not present in wilderness* ~~Destination signs typically present~~ • Information and interpretive signs may be present outside of wilderness	• ~~Wide variety of signs likely present~~ • *Route identification signing at junctions and as needed for user reassurance* • *Route markers as needed for user reassurance* • *Regulatory and resource protection signing common* • *Destination signing common outside of wilderness areas; generally not present in wilderness areas* • *Information and interpretive signs may be common outside wilderness areas* ~~Informational signs likely (outside of Wilderness).~~ • ~~Interpretive signs possible (outside of Wilderness)~~ • ~~Trail Universal Access~~ *Accessibility* information likely displayed at trailhead	• ~~Wide variety of signage is present~~ • *Route identification signing at junctions and for user reassurance* • *Route markers as needed for user reassurance* • *Regulatory and resource protection signing common* • *Destination signing common* • Information and interpretive signs *common* ~~likely~~ • ~~Trail Universal Access~~ *Accessibility* information likely displayed at trailhead

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
Typical Recreation Environs & Experience[3]	• Natural, unmodified • ROS: *Typically Primitive to Roaded Natural* ~~Often Primitive setting, but may occur in other ROS settings~~ • WROS: *Typically Primitive to Semi-Primitive* ~~Primitive~~	• Natural, essentially unmodified • ROS: Typically *Primitive to Roaded Natural* ~~Primitive to Semi-Primitive setting~~ • WROS: *Typically* Primitive to Semi-Primitive	• Natural, primarily unmodified • ROS: Typically *Primitive to Roaded Natural* ~~Semi-Primitive to Roaded Natural setting~~ • WROS: *Typically* Semi-Primitive to Transition	• May be modified • ROS: Typically ~~Roaded Natural~~ *Semi-Primitive* to Rural • WROS: *Typically Portal or Transition* ~~Transition (rarely present in Wilderness)~~	• ~~Can~~ *May* be highly modified • Commonly associated with visitor centers or high-use recreation sites • ROS: Typically *Roaded Natural to Urban* ~~Rural Roaded Natural to Urban~~ • *Generally* not present in Wilderness

[1] For *the National Quality Standards for Trails, Potential Appropriateness of Trail Classes for Managed Uses*~~Trail Class and Managed Use Application Guide, Design Parameters~~, and other related guidance, refer to FSM 2353, FSH 2309.18, and other applicable agency references. ~~The National Quality Standards are posted under the Trails link at www.fs.fed.us/r3/measures.~~

[2] *For standards and guidelines for the use of signs and posters on trails, refer to the Sign and Poster Guidelines for the Forest Service (EM-7100-15).*

[3] *These Trail Class and ROS/WROS setting combinations represent commonly occurring combinations, although trails in all Trail Classes may and do occur in all settings. For guidance on the application of the Recreation Opportunity Spectrum and Wilderness Recreation Opportunity Spectrum, refer to FSM 2310 and 2353 and FSH 2309.18.*

b. Changes to the Design Parameters

The Forest Service is replacing the trail guides in the FSH with the Design Parameters. These interim final directives include Design Parameters for Hiker/Pedestrian, Pack and Saddle, Bicycle, ATV, Motorcycle, Cross-Country Ski, and Snowmobile. The Barrier-Free Trail Guide has additionally been made obsolete by adoption of the FTAG. To enhance consistency, the agency has defined the factors in the Design Parameters, including Design Tread Width, Design Surface, Design Grade, Design Cross Slope, Design Clearing Width and Height, and Design Turns (FSH 2309.18, sec. 05).

The Forest Service has made several revisions to the Design Parameters in the interim final directives, as shown in Tables 8 through 14. Tables 8 through 14 do not include the Design Parameters for Four-Wheel Drive Vehicle Greater Than 50 Inches in Width or the Design Parameters for Snowshoe, which are both new sets of Design Parameters and are included in the interim final directives under FSH 2309.18, sections 23.23, exhibit 01, and 23.32, exhibit 01. The following summarizes the key substantive changes common to each set of Design Parameters. New text in Tables 8 through 14 is shown in italicized font, and deleted text is shown with strikeout.

Design Tread Width

To provide improved guidance for trails where it is determined that a double-lane tread width is needed, the agency has validated, revised, or identified double-lane tread widths for each set of Design Parameters. These double-lane tread widths reflect the desired level of challenge and recreation experience for each Trail Class. In addition, the double-lane tread widths provide for unhindered passage for the Designed Use without special maneuvering when passing or traveling side by side.

The agency has added a subcategory for Design Tread Width called, ''Structures (Minimum Width),'' to each set of Design Parameters to provide better guidance regarding the minimum usable tread width on trail structures such as bridges, puncheon, and turnpike.

Design Surface

The agency has revised the discussion of Design Surface Type to provide guidance for all Trail Classes regarding when to construct the design surface of native or imported material and regarding the roughness of the trail surface.

Under Design Surface, the row previously labeled ''Obstacles'' included guidance on surface obstacles and protrusions. In the interim final directives, the agency has split this row into two rows labeled, ''Protrusions'' and ''Obstacles (Maximum Height),'' to provide increased design flexibility and enhance clarity and consistency in application of the guidelines regarding protrusions and obstacles. The guidance regarding protrusions includes a ''less than or equal to'' value for the height of surface protrusions and indicates whether they are common or continuous. The guidance regarding obstacles identifies a maximum height for surface obstacles.

Design Grade

The agency has revised the values for Design Target Grade to present them as a range of values for all Trail Classes (rather than a range of values in some Design Parameters and a ''less than or equal to'' value in others). In addition, the agency has revised the values for Design Target Grade in most Trail Classes to identify a minimum percentage for the lower limit of the range, since trails with a 0 percent grade typically do not provide adequate drainage. For trails in Trail Classes 4 and 5, the minimum value is 2 percent and 0 percent, respectively, because these Trail Classes typically have harder, more durable surfaces that can more readily provide adequate drainage on flatter grades than trails with a native surface, which is more typically encountered on trails in Trail Classes 1 through 3. The lower value in the range varies somewhat among uses because some are more likely to trigger erosion than others.

In addition, the agency has increased the tolerances for Maximum Pitch Density to reflect more accurately the desired levels of challenge for each Trail Class and the actual maximum grade tolerances of many NFS trails. The upper limit for Maximum Pitch Density depends upon the applicable trail grade and factors concerning sustainability of the trail, as discussed in one of the footnotes to each set of Design Parameters.

Design Clearing

The agency has revised the values for Design Clearing Width for each Trail Class to reflect the entire clearing width (that is, the tread width, plus the distance from the edge of the trail tread needed to accommodate the Designed Use), rather than the entire clearing width for some Trail Classes and merely the distance from the edge of the trail tread for others, as in the proposed directives. This standard approach to Design Clearing Width is consistent with the revised definition for that term and improves clarity and consistency in application of the Design Parameters. In addition, the agency has verified the Design Clearing Limits across each set of Design Parameters against a hypothetical doorway to ensure that the minimum clearing widths provide adequate clearance for the Designed Use in each Trail Class.

The agency has added a new category called ''Shoulder Clearance,'' defined as ''the minimum horizontal and vertical clearance of obstructions (for example, removal of bicycle pedal or motorcycle peg bumpers) immediately adjacent to the trail tread that is determined to be appropriate for accommodating the Manages Uses of the trail'' (FSH 2309.18, sec. 05). This attribute will provide useful guidance and latitude in situations where a manager determines it is appropriate or necessary to leave logs or other obstacles on the ground within the design clearing limits for the trail (e.g., to keep users on the trail tread or to keep other users off the trail).

Design Turn

In the interim final directives, the agency has defined ''Design Turn Radius'' as ''the minimum horizontal radius required for a Managed Use to negotiate a curve (e.g., a switchback, climbing turn, or horizontal turn) in a single maneuver'' (FSH 2309.18, sec. 05).

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TABLE 8 – CHANGES TO THE HIKER/PEDESTRIAN DESIGN PARAMETERS

Designed Use HIKER/PEDESTRIAN		Trail Class 1	Trail Class 2	Trail Class 3[1 2]	Trail Class 4[1 2]	Trail Class 5[1 2]
Design Tread Width	**Wilderness** *(Single Lane)*	0" – 12"	6" – 18"	12" – 24" Exception: May be 36" – 48" at ~~switchbacks, turnpikes, fords and~~ steep side slopes	*18" – 24"* ~~24"~~ Exception: May be 36" – 48" at ~~switchbacks, turnpikes, fords and~~ steep side slopes	Not applicable
	Non-Wilderness *(Single Lane)*	0" – 12"	6" – 18"	*18" – 36"* ~~18" – 48"~~	*24" – 60"* ~~32" – 96"~~	*36" – 72"* ~~36" – 120"~~
	Non-Wilderness *(Double Lane)*	*36"*	*36"*	*36" – 60"*	*48" – 72"*	*72" – 120"*
	Structures *(Minimum Width)*	*18"*	*18"*	*18"*	*36"*	*36"*
Design Surface[3]	**Type**	Native, un-graded *May be continuously rough* ~~Intermittent, rough~~	Native, limited grading *May be continuously rough* ~~Continuous, rough~~	Native with some onsite borrow or imported material *where needed for stabilization and occasional grading* *Intermittently rough*	*Native, with improved sections of borrow or imported material and routine grading* *Minor roughness* ~~Imported materials or hardening is common~~	*Imported material likely and routine grading* Uniform, firm, and stable
	Protrusions	*≤ 24"* *Likely common and continuous*	*≤ 6"* *May be common and continuous*	*≤ 3"* *May be common, but not continuous*	*≤ 3"* *Uncommon and not continuous*	*No protrusions*
	Obstacles *(Maximum Height)*	*24"* ~~Roots, rocks, logs, steps to 24"~~	*14"* ~~Roots, rocks, and log protrusions to 6"; steps to 14"~~	*10"* ~~Generally clear;~~ ~~Protrusions to 3"; steps to 10"~~	*8"* ~~Smooth, few obstacles;~~ ~~Protrusions 2" – 3"; steps to 8"~~	*No obstacles* ~~Smooth, no obstacles;~~ ~~Protrusions <2"~~
Design Grade[2 3]	**Target Grade[3,]** ~~(>90% of Trail)~~	*5% – 25%* ~~</=25%~~	*5% – 18%* ~~</= 18%~~	*3% – 12%* ~~</= 12%~~	*2% – 10%* ~~</= 10%~~	*2% – 5%* ~~</= 5%~~
	Short Pitch Maximum[4,] (Up to 200' lengths)	40%	35%	25%	15%	*5%* ~~</= 10%~~ *FSTAG: 5% – 12%*
	Maximum Pitch Density[5,]	*20% – 40% of trail* ~~< 10% of trail~~	*20% – 30% of trail* ~~< 5% of trail~~	*10% – 20% of trail* ~~< 5% of trail~~	*5% – 20% of trail* ~~< 3% of trail~~	*0% – 5% of trail* ~~< 3% of trail~~

TABLE 8 – CHANGES TO THE HIKER/PEDESTRIAN DESIGN PARAMETERS (CONTINUED)

Designed Use HIKER/PEDESTRIAN		Trail Class 1	Trail Class 2	Trail Class 3[1 2]	Trail Class 4[1 2]	Trail Class 5[1 2]
Design Cross Slope	Target ~~Range~~ *Cross Slope*	*Natural side slope* ~~Not applicable~~	5% – 20%	5% – 10%	3% – 7%	2% – 3% (or crowned)
	Maximum *Cross Slope*	~~Up to~~ Natural side-slope	*25%* ~~Up to natural side-slope~~	15%	10%	3%
Design Clearing	Height	6'	6' – 7'	*7' – 8'* ~~8'~~	*8' – 10'* ~~8'~~	*8' – 10'* ~~>/= 8'~~
	Width	≥ *24"* *Some vegetation may encroach into clearing area* ~~Sufficient to define trail corridor~~	*24" – 48"* *Some light vegetation may encroach into clearing area* ~~24" – 36", with some encroachment into clearing area~~	*36" – 60"* ~~12" – 18" outside of tread edge~~	*48" – 72"* ~~12" – 18" outside of tread edge~~	*60" – 72"* ~~12" – 24" outside of tread edge~~
	Shoulder Clearance	*3" – 6"*	*6" – 12"*	*12" – 18"*	*12" – 18"*	*12" – 24"*
Design Turn	Radius	No minimum	2' – 3'	3' – 6'	4' – 8'	*6' – 8'* ~~6' – 12'~~

In addition to the footnotes common to all set of Design Parameters (listed above), the following footnote appears on the Hiker/Pedestrian Design Parameters:

Footnote referencing Trail Classes 3, 4 and 5: "Trail Classes 3, ~~Trail Class~~ 4, and ~~Trail Class~~ 5, in particular, have the potential to be accessible. If assessing or designing trails for accessibility, refer to the Forest Service Trail Accessibility Guidelines (FSTAG) for more specific technical provisions and tolerances *(FSM 2350)*."

TABLE 9 – CHANGES TO THE PACK AND SADDLE DESIGN PARAMETERS

Designed Use PACK AND SADDLE		Trail Class 1	Trail Class 2	Trail Class 3	Trail Class 4	Trail Class 5
Design Tread Width	**Wilderness** *(Single Lane)*	Typically not designed or actively managed for equestrians, although use may be allowed	12" – 18" *May be up to 48" along steep side slopes* *48" – 60" or greater along precipices* ~~Exception: May be to 48" at switchbacks, turnpikes, fords and steep side slopes~~	*18" – 24"* ~~12" – 24"~~ *May be up to 48" along steep side slopes* *48" – 60" or greater along precipices* ~~Exception: May be to 48" at switchbacks, turnpikes, fords and steep side slopes; up to 60" along precipices~~	24" *May be up to 48" along steep side slopes* *48" – 60" or greater along precipices* ~~Exception: May be to 48" at switchbacks, turnpikes, fords and steep side slopes; up to 60" along precipices~~	Typically not designed or actively managed for equestrians, although use may be allowed
	Non-Wilderness *(Single Lane)*		12" – 24" *May be up to 48" along steep side slopes* *48" – 60" or greater along precipices* ~~(with above exceptions)~~	18" – 48" *48" – 60" or greater along precipices* ~~(with above exceptions)~~	*24" – 96"* ~~36" – 96"~~ *48" – 60" or greater along precipices*	
	Non-Wilderness *(Double Lane)*		*60"*	*60" – 84"*	*84" – 120"*	
	Structures *(Minimum Width)*		*Other than bridges: 36"* *Bridges without Handrails: 60"* *Bridges with Handrails: 84" clear width*	*Other than bridges: 36"* *Bridges without Handrails: 60"* *Bridges with Handrails: 84" clear width*	*Other than bridges: 36"* *Bridges without Handrails: 60"* *Bridges with Handrails: 84" clear width*	
Design Surface[2]	**Type**		Native, limited grading *May be frequently rough*	Native with some onsite borrow or imported material *where needed for stabilization and occasional grading* *Intermittently rough*	*Native, with improved sections of borrow or imported material and routine grading* *Minor roughness* ~~Native with some imported materials or stabilization~~	
	Protrusions		*< = 6"* *May be common and continuous*	*< = 3"* *May be common, but not continuous*	*< = 3"* *Uncommon and not continuous*	
	Obstacles *(Maximum Height)*		*12"* ~~Roots, rocks, logs to 12"~~	*6"* ~~Generally clear;~~ ~~Occasional protrusions to 6"~~	*3"* ~~Smooth, few obstacles;~~ ~~Occasional protrusions 2" – 3"~~	

TABLE 9 – CHANGES TO THE PACK AND SADDLE DESIGN PARAMETERS (CONTINUED)

Designed Use PACK AND SADDLE		Trail Class 1	Trail Class 2	Trail Class 3	Trail Class 4	Trail Class 5
Design Grade[1,2]	Target Grade[2]: ~~(>90% of Trail)~~		*5% – 20%* ~~*<|= 20%*~~	*3% – 12%* ~~*<|= 12%*~~	*2% – 10%* ~~*<|= 10%*~~	
	Short Pitch Maximum[3]: (Up to 200' lengths)		30%	20%	15%	
	Maximum Pitch Density[4]:		*15% – 20% of trail* ~~*< 5% of trail*~~	*5% – 15% of trail* ~~*< 5% of trail*~~	*5% – 10% of trail* ~~*< 3% of trail*~~	
Design Cross Slope	Target ~~Range~~ *Cross Slope*		5% – 10%	*3% – 5%* ~~*5%*~~	*0% – 5%* ~~*5%*~~	
	Maximum *Cross Slope*		*10%* ~~Natural side-slope~~	*8%* ~~*10%*~~	*5%* ~~*10%*~~	
Design Clearing	Height		8' – 10'	10'	10' - 12'	
	Width		*72"* ~~36" – 48"~~ *Some light vegetation may encroach into clearing area*	*72" – 96"* ~~60" – 78"~~	*96"* ~~72" – 96"~~	
	Shoulder Clearance		*6" – 12"* *Pack Clearance: 36" x 36"*	*12" – 18"* *Pack Clearance: 36" x 36"*	*12" – 18"* *Pack Clearance: 36" x 36"*	
Design Turn	Radius		4' – 5'	*5' – 8'* ~~5' – 6'~~	6' – 10'	

TABLE 10 – CHANGES TO THE BICYCLE DESIGN PARAMETERS

Designed Use BICYCLE		Trail Class 1	Trail Class 2	Trail Class 3	Trail Class 4	Trail Class 5
Design Tread Width	*Single Lane* ~~One Lane~~	6" – 12"	12" – 24"	*18" – 36"* ~~18" – 30"~~	24" – 48"	36" – 60"
	Double Lane ~~Two Lane~~	*36" – 48"* ~~Not applicable~~	*36" – 48"* ~~Not applicable~~	*36" – 48"* ~~48" – 60"~~ ~~Accommodate two-lane travel with passing lanes~~	*48" – 84"* ~~60" – 84"~~	72" – 120"
	Structures (Minimum Width)	*18"*	*18"*	*36"*	*48"*	*60"*
Design Surface[2]	Type	Native *and ungraded* *May be continuously rough* *Sections of soft or unstable tread on grades < 5% may be common and continuous* ~~Rough, unstable or soft tread~~	Native, limited grading *May be continuously rough* *Sections of soft or unstable tread on grades < 5% may be common* ~~Unstable or soft sections likely~~	Native with some onsite borrow or imported material *where needed for stabilization and occasional grading* *Intermittently rough* *Sections of soft or unstable tread on grades < 5% may be present, but not common* ~~Some soft areas~~	*Native, with improved sections of borrow or imported materials and routine grading* *Stable with minor roughness* ~~Likely imported or stabilized tread;~~ ~~Few, if any, loose or soft surfaces~~	*Imported material likely, with routine grading* *Uniform, firm, and stable* ~~Firm, hardened surface~~
	Protrusions	*< = 24"* *Likely common and continuous*	*< = 6"* *May be common and continuous*	*< = 3"* *May be common, not continuous*	*< = 3"* *Uncommon, not continuous*	*No protrusions*
	Obstacles (Maximum Height)	*24"* ~~Rocks, logs and roots up to 6 – 12" common;~~ ~~Forced portages likely~~	*12"* ~~Embedded rock, protrusions to 6";~~ ~~Some portages may be needed~~	*10"* ~~Generally smooth with few protrusions exceeding 3"~~	*8"* ~~Smooth, few obstacles;~~ ~~1 – 2" protrusions~~	No obstacles ~~to wheeled transport~~
Design Grade[1, 2]	Target Grade[2] ~~(>90% of Trail)~~	*5% – 20%* ~~15% – 18%~~	*5% – 12%* ~~<= 12%~~	*3% – 10%* ~~<= 10%~~	*2% – 8%* ~~<= 8%~~	*2% – 5%* ~~<= 5%~~
	Short Pitch Maximum[3] (Up to 200' lengths)	30% 50% on downhill-only travel	25% 35% on downhill-only travel	15%	10%	8%
	Maximum Pitch Density[4]	*20% – 30% of trail* ~~< 10% of trail~~	*10% – 30% of trail* ~~< 5% of trail~~	*10% – 20% of trail* ~~< 5% of trail~~	*5% – 10% of trail* ~~< 3% of trail~~	*0% – 5% of trail* ~~< 3% of trail~~

TABLE 10 – CHANGES TO THE BICYCLE DESIGN PARAMETERS (CONTINUED)

Designed Use BICYCLE		Trail Class 1	Trail Class 2	Trail Class 3	Trail Class 4	Trail Class 5
Design Cross Slope	Target ~~Range~~ *Cross Slope*	5% – 10%	*5% – 8%* ~~5% – 10%~~	*3% – 8%* ~~5%~~	3% – 5%	*2% – 3%* ~~3% – 5%~~
	Maximum *Cross Slope*	*10%*	*10%*	*8%*	*5%*	*5%*
Design Clearing	Height	*6'* ~~6' – 7'~~	*6' – 8'* ~~7' – 8'~~	8'	8' - 9'	8' - 9'
	Width	24" – 36" Some vegetation may encroach into clearing area	36" – 48" Some light vegetation may encroach into clearing area	*60" – 72"* ~~12" – 18" outside of tread edge~~	*72" – 96"* ~~12" – 18" outside of tread edge~~	*72" – 96"* ~~18" – 24"" outside of tread edge~~
	Shoulder Clearance	*0' – 12"*	*6" – 12"*	*6" – 12"*	*6" – 18"*	*12" – 18"*
Design Turn	Radius	*2' – 3'* ~~3' – 4'~~	*3' – 6'* ~~4' – 6'~~	*4' – 8'* ~~6' – 8'~~	8' – 10'	8' - 12'

TABLE 11 – CHANGES TO THE MOTORCYCLE DESIGN PARAMETERS

Designed Use MOTORCYCLE		Trail Class 1	Trail Class 2	Trail Class 3	Trail Class 4	Trail Class 5
Design Tread Width ~~(If side-slope >50%, increase widths by 6" – 18")~~	***Single Lane*** ~~**One Lane**~~	Typically not designed or actively managed for motorcycles, although use may be allowed	8" – 24" ~~At switchbacks, 36" – 48"~~	18" – 36" ~~At switchbacks, >/= 48"~~	*24" – 48"* ~~30" – 48"~~ ~~At switchbacks, >/= 48"~~	Typically not designed or actively managed for motorcycles, although use may be allowed
	Double Lane ~~**Two Lane**~~		*48"* ~~Typically not designed for two-lane travel;~~ ~~Passing areas (uncommon) up to 60"~~	48 " – 60" ~~Occasional passing lanes to 72"~~	60" – 72"	
	Structures *(Minimum Width)*		*36"*	*48"*	*48"*	
Design Surface[2]	**Type**		*Native, with limited grading* *May be continuously rough* *Sections of soft or unstable tread on grades < 5% may be common and continuous* ~~Native, with limited or no grading;~~ ~~Commonly unstable and soft~~	*Native, with some on-site borrow or imported material where needed for stabilization and occasional grading* *Intermittently rough* *Sections of soft or unstable tread on grades < 5% may be present* ~~Native with some on-site borrow, pavers, or imported materials;~~ ~~Some loose or soft areas~~	*Native, with imported materials for tread stabilization common and routine grading* *Minor roughness* *Sections of soft tread not common* ~~Gravel, pavers or other imported materials possible;~~ ~~Relatively firm, stable surface~~	
	Protrusions		*< = 6"* *May be common and continuous*	*< = 3"* *May be common, not continuous*	*< = 3"* *Uncommon, not continuous*	
	Obstacles *(Maximum Height)*		*18"* *May be common or placed for increased challenge* ~~Soft sand and embedded rock, steps and protrusions up to 12"~~	*12"* *Common and left for increased challenge* ~~Generally smooth with few protrusions exceeding 6"~~	*3"* *Uncommon* ~~Smooth, few obstacles;~~ ~~Few 2" – 4" protrusions~~	

TABLE 11 – CHANGES TO THE MOTORCYCLE DESIGN PARAMETERS (CONTINUED)

Designed Use MOTORCYCLE		Trail Class 1	Trail Class 2	Trail Class 3	Trail Class 4	Trail Class 5
Design Grade [2]	Target Grade[2] ~~(>90% of Trail)~~		*10% – 25%* ~~*<\/= 25%*~~	*5% – 20%* ~~*<\/= 15%*~~	*3% – 10%* ~~*<\/= 10%*~~	
	Short Pitch Maximum[3] (Up to 200' lengths)		40% ~~Rarely to 50% on downhill-only travel~~	25%	15%	
	Maximum Pitch Density[4]		*20% – 40% of trail* ~~*< 10% of trail*~~	*15% – 30% of trail* ~~*< 10% of trail*~~	*10% – 20% of trail* ~~*< 5% of trail*~~	
Design Cross Slope	Target ~~Range~~ *Cross Slope*		5% – 10%	*5% – 8%* ~~*5%*~~	3% – 5%	
	Maximum *Cross Slope*		15%	10%	10%	
Design Clearing	Height		*6' – 7'* ~~*7' – 8'*~~	*6' - 8'* ~~*8'*~~	*8' - 10'* ~~*8' – 9'*~~	
	Width (On steep side-hills, increase clearing on uphill side by 6" – 12")		36" – 48" Some light vegetation may encroach into clearing area	*48" – 60"* ~~*12" – 18" outside of tread edge*~~	*60" - 72"* ~~*> 18" outside of tread edge*~~	
	Shoulder Clearance		*6" – 12"*	*12" – 18"*	*12" – 24"*	
Design Turn	Radius		*3' – 4'* ~~*4' – 5'*~~	*4' – 6'* ~~*5' – 6'*~~	*5' – 8'* ~~*6' – 8'*~~	

TABLE 12 – CHANGES TO THE ATV DESIGN PARAMETERS

Designed Use ALL-TERRAIN VEHICLE		Trail Class 1	Trail Class 2	Trail Class 3	Trail Class 4	Trail Class 5
Design Tread Width ~~[If sideslopes are >50%, increase widths by 6"–18"]~~	***Single Lane*** ~~**One Lane**~~	Typically not designed or actively managed for ATVs, although use may be allowed	*48" – 60"* ~~30"–48"~~ ~~At switchbacks, > = 48"~~	*60"* ~~42"–60"~~ ~~At switchbacks, > = 60"~~	*60" – 72"* ~~54"–72"~~ ~~At switchbacks, > = 60"~~	Typically not designed or actively managed for ATVs, although use may be allowed
	Double Lane ~~**Two Lane**~~		*96"* ~~Typically not designed for two-lane travel;~~ ~~Passing areas (uncommon)–60"~~	*96" – 108"* ~~60" and/or accommodate with passing areas 60"–78"~~	*96" – 120"* ~~72"–96"~~	
	Structures *(Minimum Width)*		*60"*	*60"*	*60"*	
Design Surface[2]	**Type**		*Native, with limited grading* *May be continuously rough* *Sections of soft or unstable tread on grades < 5% may be common and continuous* ~~Native with limited or no grading; commonly soft and unstable~~	Native with some onsite borrow or imported material *where needed for stabilization and occasional grading* *Intermittently rough* *Sections of soft or unstable tread on grades < 5% may be present* ~~some loose or soft sections~~	*Native, with imported materials for tread stabilization common and routine grading* *Minor roughness* *Sections of soft tread not common* ~~Relatively firm and stable; gravel, pavers or other imported materials possible~~	
	Protrusions		*≤ 6"* *May be common and continuous*	*≤3"* *May be common, but not continuous*	*≤ 3"* *Uncommon and not continuous*	
	Obstacles *(Maximum Height)*		*12"* *May be common or placed for increased challenge* ~~Embedded rock, steps, waterbars, holes and protrusions to 6"~~	*6"* *May be common and left for increased challenge* ~~Generally smooth, with few protrusions exceeding 4"; drain dips and low waterbars~~	*3"* *Uncommon* ~~Smooth, few obstacles; 1"–3" protrusion; drain dips or waterbars with low-angle approach~~	

TABLE 12 – CHANGES TO THE ATV DESIGN PARAMETERS (CONTINUED)

Designed Use ALL-TERRAIN VEHICLE		Trail Class 1	Trail Class 2	Trail Class 3	Trail Class 4	Trail Class 5
Design Grade[1 2]	Target Grade[2,] ~~(>90% of Trail)~~		*10% – 25%* ~~*<\/=25%*~~	*5% – 15%* ~~*<\/=15%*~~	*3% – 10%* ~~*<\/=10%*~~	
	Short Pitch Maximum[3,] (Up to 200' lengths)		35%	25%	15%	
	Maximum Pitch Density[4,]		*20% – 40% of trail* ~~*< 10% of trail*~~	*15% – 30% of trail* ~~*< 5% of trail*~~	*10% – 20% of trail* ~~*< 5% of trail*~~	
Design Cross Slope	Target ~~Range~~ *Cross Slope*		5% – 10%	*3% – 8%* ~~*3% – 5%*~~	3% – 5%	
	Maximum *Cross Slope*		15%	10%	8%	
Design Clearing	Height		*6' – 7'* ~~*5' – 6'*~~	*6' – 8'* ~~*6' – 7'*~~	*8' – 10'* ~~*8'*~~	
	Width (On steep side hills, increase clearing on uphill side by 6" – 12")		*60"* ~~*36" – 48"*~~ Some *light* vegetation may encroach into clearing area	*60" – 72"* ~~*8" – 12" outside of tread edge*~~	*72" - 96"* ~~*>\/=12" outside of tread edge*~~	
	Shoulder Clearance		*0" – 6"*	*6" – 12"*	*12" – 18"*	
Design Turn	Radius (Use climbing turns versus switchbacks for ATVs whenever possible)		6' – 8'	8' – 10'	*8' – 12'* ~~*>\/=10'*~~	

TABLE 13 – CHANGES TO THE CROSS-COUNTRY SKI DESIGN PARAMETERS

Designed Use CROSS-COUNTRY SKI		Trail Class 1	Trail Class 2	Trail Class 3	Trail Class 4	Trail Class 5
Design Groomed Width	***Single Lane*** ~~**One Lane**~~	Typically not designed or actively managed for cross-country skiing, although use may be allowed	*2' – 4'* ~~3' – 4'~~ *Typically not groomed* ~~If groomed, width of grooming equipment~~	6' – 8' (or ~~minimum~~ width of grooming equipment)	8'– 10" *(or width of grooming equipment)* ~~(but typically managed to accommodate two-way passage)~~	Typically not designed or actively managed for cross-country skiing, although use may be allowed
	Double Lane ~~**Two Lane**~~		*6' – 8'* ~~Typically not designed for two-lane travel, except in steep sections accommodate passing areas~~	*8' – 12'* ~~>/=8' (or min width of grooming equipment) and/or accommodate with passing areas 8' – 12' wide~~	*12' – 16'* ~~12' – 14'~~	
	Structures *(Minimum Width)*		*36"*	*36"*	*36"*	
Design Grooming and Surface[2]	**Type**		*Generally no machine grooming* ~~Coarse compaction;~~ ~~Occasional or no grooming (may be ski-packed); over-snow vehicle packing sufficient~~ ~~Tracklayer optional~~	*May receive occasional machine grooming for snow compaction and track setting* ~~Groomed or compacted using implements or tracklayer when packed surface is snow-covered, drifted, melted or skied out~~	*Regular machine grooming for snow compaction and track setting* ~~Well-groomed with tiller or other implements;~~ ~~Groomed frequently, and when groomed surface becomes degraded or buried~~	
	Protrusions		*No protrusions*	*No protrusions*	*No protrusions*	
	Obstacles *(Maximum Height)*		*12"* *Uncommon* ~~Dips, bumps, or ruts to 12" common and may be tightly spaced;~~ ~~Surface obstacles may occasionally require off-trail bypass~~	*8"* *Uncommon (no obstacles if machine groomed)* ~~Generally smooth;~~ ~~Dips, bumps, or ruts to 8" uncommon and widely spaced;~~ ~~Surface obstructions not present~~	*No obstacles* ~~Consistently smooth;~~ ~~Small, rolling bumps, dips and rises;~~ ~~Surface obstructions not present~~	

TABLE 13 – CHANGES TO THE CROSS-COUNTRY SKI DESIGN PARAMETERS (CONTINUED)

Designed Use CROSS-COUNTRY SKI		Trail Class 1	Trail Class 2	Trail Class 3	Trail Class 4	Trail Class 5
Design Grade[1 2]	Target Grade[2] ~~(>90% of Trail)~~		*5% – 15%* ~~<=15%~~	*2% – 10%* ~~<=10%~~	*0% – 8%* ~~<=8%~~	
	Short Pitch[3] Maximum (Up to 200' lengths)		25%	20%	12%	
	Maximum Pitch Density[4]		*10% – 20% of trail* ~~<10% of trail~~	*5% – 15% of trail* ~~<5% of trail~~	*0% – 10% of trail* ~~<5% of trail~~	
Design Cross Slope	Target ~~Range~~ *Cross Slope*		*0% – 10%* ~~<=10%~~	*0% – 5%* ~~<=5%~~	*0% – 5%* ~~<=5%~~	
	Maximum *Cross Slope* (For up to 50')		20%	15%	10%	
Design Clearing	Height (Above normal maximum snow level)		*6' – 8'* ~~>= 6' – 8'~~ ~~(or height of grooming machinery if used)~~	*8'* ~~>=8'~~ (or height of grooming machinery)	*8' – 10'* ~~10'~~	
	Width		*24" – 60"* ~~4' – 6' (or minimum width of grooming equipment, if larger);~~ Light vegetation may encroach into clearing area	*72" – 120"'* ~~>=1' outside of groomed edge;~~ Light vegetation may encroach ~~slightly~~ into clearing area	*96"' – 168"* ~~>=2' outside of tread edge;~~ Widen clearing at turns or if increased sight distance needed	
	Shoulder Clearance		*0" – 6"*	*0" - 12"*	*0" – 24"*	
Design Turn	Radius		8' – 10' ~~if not snowcat-groomed~~ ~~(provide sufficient radius for grooming equipment if used)~~	15' – 20' (~~provide sufficient radius for~~ *or width of* grooming equipment)	> = 25'	

TABLE 14 – CHANGES TO THE SNOWMOBILE DESIGN PARAMETERS

Designed Use SNOWMOBILE		Trail Class 1	Trail Class 2	Trail Class 3	Trail Class 4	Trail Class 5
Design Tread Width	***Single Lane*** ~~One Lane~~	Typically not designed or actively managed for snowmobiles, although use may be allowed	*4' – 6'* Typically not groomed ~~but commonly signed.~~ ~~If groomed, 4' – 6' (or minimum width of grooming equipment)~~	6' – 8' (or ~~minimum~~ width of grooming equipment). On tight-radius turns, increase groomed width to > = 10'	8' – 10' *(or width of grooming equipment)* On tight-radius turns, increase groomed width to > = 12'	Typically not designed or actively managed for snowmobiles, although use may be allowed
	Double Lane ~~Two Lane~~		*10'* Typically not groomed ~~but commonly signed~~ ~~If groomed, >/=8' groomed width~~	*10' – 12'* ~~>/=11' and/or accommodate with passing areas 12' – 14' wide~~	*12' – 20'* ~~12' – 16'~~ ~~On tight-radius turns, increase groomed width to >/=14'~~	
	Structures *(Minimum Width)*		*6'*	*12'*	*18'*	
Design Surface[2]	**Type**		*Generally no machine grooming* *Commonly rough and bumpy* ~~Occasional or no grooming or user-packed.~~ ~~Coarse compaction with cat or snowmobile;~~ ~~Use of implements optional~~	*May receive occasional machine grooming for snow compaction and conditioning* *Frequently rough and bumpy* ~~Groomed or compacted after significant snow accumulations or when moguled/rutted;~~ ~~Use of implements likely~~	*Regular machine grooming for snow compaction and conditioning* *Commonly smooth* ~~Well-groomed with tiller or other implements;~~ ~~Groomed frequently, soon after significant snow accumulations and before surface is degraded~~	
	Protrusions		*No protrusions*	*No protrusions*	*No protrusions*	
	Obstacles (Maximum Height)		*12"* *Uncommon* ~~Dips/bumps/ruts to 24" common and may be tightly spaced;~~ ~~Obstacles may occasionally require off-trail bypass~~	*6"* *Uncommon (no obstacles if machine groomed)* ~~Generally smooth;~~ ~~Dips, bumps, ruts to 12" infrequent and widely spaced.~~ ~~Surface obstacles not present~~	*No obstacles* ~~Consistently smooth.~~ ~~Small, rolling bumps, dips and rises.~~ ~~Surface obstacles not present~~	

TABLE 14 – CHANGES TO THE SNOWMOBILE DESIGN PARAMETERS (CONTINUED)

Designed Use SNOWMOBILE		Trail Class 1	Trail Class 2	Trail Class 3	Trail Class 4	Trail Class 5
Design Grade [2]	Target Grade[2] ~~(>90% of Trail)~~		*0% – 12%* ~~*</=20%*~~	*0% – 10%* ~~*</=15%*~~	*0% – 8%* ~~*</=10%*~~	
	Short Pitch Maximum[3] (Up to 200' lengths)		35%	25%	20%	
	Maximum Pitch Density[4]		*15% – 30% of trail* ~~*<10% of trail*~~	*10% – 20% of trail* ~~*<5% of trail*~~	*5% – 10% of trail* ~~*<5% of trail*~~	
Design Cross Slope	Target ~~Range~~ *Cross Slope*		*0% – 10%* ~~*</= 15%*~~	*0% – 5%* ~~*</=10%*~~	*0%* ~~*</=5%*~~	
	Maximum *Cross Slope*		*15%* ~~*25%*~~	*10%* ~~*15%*~~	*5%* ~~*10%*~~	
Design Clearing	Height (Above normal maximum snow level)		*6'* ~~>/=6'~~ ~~(provide sufficient clearance for grooming equipment if used)~~	*6' – 8'* ~~>/=7'~~ (provide sufficient clearance for grooming equipment)	*8' - 12'* ~~10'~~ (provide sufficient clearance for grooming equipment)	
	Width		*6' – 12'* ~~4' – 6' (or minimum width of grooming equipment if used);~~ Some *light* vegetation may encroach into clearing area	*8' – 14'* ~~>/=1' outside of groomed trail edge;~~ Light vegetation may encroach into clearing area	*10' - 22'* ~~>/=2' outside of groomed trail edge~~ Widen clearing at turns or if increased sight distance needed	
	Shoulder Clearance		*6" – 12"*	*12" – 18"*	*12" – 24"*	
Design Turn	Radius		8' – 10' ~~if not groomed.~~ ~~(provide sufficient radius for grooming equipment if used , typically 15' – 20')~~	15' – 20' (~~provide~~ *or* sufficient radius for grooming equipment)	*25' – 50'* ~~>/= 25'~~	

5. Regulatory Certifications

Environmental Impact

Section 31.12, paragraph 2, of FSH 1909.15 (67 FR 54622, August 23, 2002) excludes from documentation in an environmental assessment or environmental impact statement ''rules, regulations, or policies to establish Servicewide administrative procedures, program processes, or instructions.'' The agency has concluded that the interim final directives fall within this category of actions and that no extraordinary circumstances exist which would require preparation of an environmental assessment or environmental impact statement (*see Back Country Horsemen of America* v. *Johanns*, No. 05–0960 (ESH) (D.D.C. Mar. 29, 2006), slip op. at 15–20).

Regulatory Impact

These interim final directives have been reviewed under USDA procedures and Executive Order 12866, as amended by Executive Order 13422, on regulatory planning and review. The Office of Management and Budget has determined that these are not significant directives. These interim final directives cannot and may not reasonably be anticipated to lead to an annual effect of $100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or Tribal governments or communities; create a serious inconsistency or otherwise interfere with an action taken or planned by another agency; raise novel legal or policy issues; or materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights or obligations of beneficiaries of those programs. Accordingly, these interim final directives are not subject to OMB review under Executive Order 12866, as amended by Executive Order 13422.

These final interim directives have been considered in light of the Regulatory Flexibility Act (5 U.S.C. 602 *et seq.*). The agency has determined that these interim final directives will not have a significant economic impact on a substantial number of small entities as defined by the act because the interim final directives will not impose recordkeeping requirements on them; will not affect their competitive position in relation to large entities; and will not affect their cash flow, liquidity, or ability to remain in the market. The interim final directives will establish guidelines for trail survey, design, construction, maintenance, and assessment that will apply internally to the Forest Service and that will have no direct effect on small businesses.

No Taking Implications

The interim final directives have been analyzed in accordance with the principles and criteria contained in Executive Order 12630. It has been determined that these directives will not pose the risk of a taking of private property.

Civil Justice Reform

The interim final directives have been reviewed under Executive Order 12988 on civil justice reform. After adoption of the interim final directives, (1) all State and local laws and regulations that conflict with the interim final directives or that impede their full implementation will be preempted; (2) no retroactive effect will be given to the interim final directives; and (3) administrative proceedings will not be required before parties can file suit in court challenging their provisions.

Unfunded Mandates

Pursuant to Title II of the Unfunded Mandates Reform Act of 1995 (2 U.S.C. 1531–1538), which the President signed into law on March 22, 1995, the agency has assessed the effects of the interim final directives on State, local, and Tribal governments and the private sector. The interim final directives will not compel the expenditure of $100 million or more by any State, local, or Tribal government or anyone in the private sector. Therefore, a statement under section 202 of the act is not required.

Federalism and Consultation and Coordination With Indian Tribal Governments

The agency has considered the interim final directives under the requirements of Executive Order 13132 on federalism and has determined that these directives conform with the federalism principles set out in this Executive Order; will not impose any compliance costs on the States; and will not have substantial direct effects on the States, the relationship between the Federal government and the States, or the distribution of power and responsibilities among the various levels of government. Therefore, the agency has determined that no further assessment of federalism implications is necessary.

Moreover, the interim final directives will not have Tribal implications as defined by Executive Order 13175, ''Consultation and Coordination with Indian Tribal Governments,'' and therefore advance consultation with Tribes is not required.

Energy Effects

The interim final directives have been reviewed under Executive Order 13211 of May 18, 2001, ''Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use.'' The agency has determined that the interim final directives will not constitute a significant energy action as defined in the Executive order.

Controlling Paperwork Burdens on the Public

The interim final directives do not contain any recordkeeping or reporting requirements or other information collection requirements as defined in 5 CFR part 1320 that are not already required by law or not already approved for use. Accordingly, the review provisions of the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 *et seq.*) and its implementing regulations at 5 CFR part 1320 do not apply.

6. Access to the Interim Final Directives

The Forest Service organizes its directive system by alphanumeric codes and subject headings. The intended audience for this direction is Forest Service employees charged with trail management and construction of NFS trails. The full text of FSM 2350 and FSH 2309.18 is available electronically on the World Wide Web at *http://www.fs.fed.us/im/directives/*. The interim final directives (that is, excerpts from FSM 2350 and FSH 2309.18) and this **Federal Register** notice are available electronically on the World Wide Web at *http://www.fs.fed.us/recreation/*.

Dated: October 7, 2008.

Sally D. Collins,

Associate Chief.

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