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July 23, 2004

Trail Management Plan Proposed Action  
Inyo National Forest  
351 Pacu Lane, Suite 200  
Bishop, CA 93514

Comments on Proposed Action for Trail Management Plan for the John Muir, Ansel Adams and Dinkey Lakes Wildernesses.

1. The Proposed Action would assign a Trail Class 1 (Designed Use as Hiker Pedestrian by the USFS Trail Design Parameters, see Attachment 1) to trails in 58% (485,568 acres) of these wildernesses (Recreational Category 1). The same Trail Design Parameters state that Trail Class 1 is “NOT APPLICABLE: Not designed for equestrians as primary user, although equestrians may be present.”

The proposed action of using the Recreational Category to determine the Trail Class, and the subsequent maintenance level, would over time, zone these wildernesses to a specific user. The FEIS (Chapter 2, page 2) under System Trails Goals and Objectives: “Provide a transportation system that ensures suitable access for the types and numbers of trail users...” (My emphasis added).

These wilderness areas have been managed for Pack and Saddle Stock since their designation as wilderness.

2. The USFS Official Trail Definitions states “Designed Use: The intended use that controls the desired geometric design of the trail, and determines the subsequent maintenance parameters for the trail.” (See Attachment 2, my emphasis added.) The document further states “...the Designed Use is most often the Managed Use that requires the highest level of development. (i.e.: Pack & Saddle stock require much higher and wider clearance than a trail designed for Hikers).”

Again, pack and saddle stock has been a managed use in these wildernesses since inception. Furthermore, the Wilderness Plan states that no new trails will be built in these wildernesses, consequently, the issue at hand is the maintenance of existing routes of travel for the use of pack and saddle stock.

3. The TRACS Trail Management Objectives Form (TMO) Instructions state “Establishing and documenting Trail Management Objectives (TMOs) prior to

executing a trail condition survey is critical to getting high quality results...” (See Attachment 3.) The “Trail Condition Assessment and Survey Matrix” states “Trail Management Objectives (TMOs): A key step that establishes or identifies the trail standard before the condition survey is conducted. This important tool helps focus and validate field survey efforts.”

The Sierra and Inyo NFs have used a Trail Assessment form which is a “condition survey” assigning a Trail Class and a Recreational Category WITHOUT first determining the Trail Management Objective “Designed Use” (managed use), the critical first stage necessary before field surveys and assigning a Trail Class.

4. Even though the ROD direction states “Adjusts trail maintenance level to reflect recreation categories and desired conditions.” (page 3), there is no direction in the ROD that a Trail Class 1 was intended to be applied to any trails in these wildernesses. Clearly, the managed use of the trail for pack and saddle stock would require a minimum Trail Class 2 maintenance level.
5. Proposed Action states that some trails would be identified as “Not Recommended for Stock”, based on various factors, such as...maintenance considerations.” (page 3)

We believe there has to be a disconnect between the managed use of trails for pack and saddle stock and the “maintenance considerations” (which we assume is the funding available for the maintenance of these trails.) The maintenance requirement of trails for recognized users remains the same regardless of the funding available.

6. The Purpose and Need section states “There is also a need to...align trail management designations for each trail to the most current national definitions of Trail Management Classes.”

David G. Holland, Director of Recreation and Heritage Resource, has made it clear in a letter to Kevin Garden, attorney for the BCHC, Kern Sierra Unit, that the national effort to inventory and enter standardized trail information to INFRA is not designation process. He states that “No trails currently designated for pack and saddle stock use, including those in wilderness areas, will be designated as falling under Trail Class 1...”

7. We have checked trails listed below on the SNF that have been assigned a Trail Class 1, the General Criteria is that the trail “tread is intermittent and often indistinct” and the trail “may require route finding” (Proposed Action Table 2 National Trail Management Classes) and found without exception that these trails do not fit a Trail Class 1, regardless of their Recreational Category.
  - Feather Lake 28E20A -- (was a service level 3 in Appendix C of the FEIS). This trail is clearly defined and used by stock

- Rogers Creek 29E05—is a clearly defined trail to Tehipite and used by stock. Should be at least a TC 2.
- Cirque Lake 28E23—is a clearly defined trail used by stock.
- Volcanic Knob 28E18—is a clearly defined trail used by stock.
- California Riding and Hiking Trail—is clearly defined, an historic trail, and all sections should be maintained for Pack and Saddle Stock as its name implies.

We request that Table 1 in the Proposed Action be re-issued with the minimum trail maintenance standard of a Trail Class 2 assigned to most of the trails (a Trail Class 1 would be the exception.)

Sincerely,

Barbara J. Ferguson

Cc: Ed Cole, Supervisor, Sierra National Forest  
Jeff Bailey, Supervisor, Inyo National Forest  
Jack Blackwell, Regional Forester  
John Keyes, President, BCHC  
Steve Didier, President, BCHA  
Ann Lange, Public Lands Liaison, Kern Sierra Unit, BCHC  
Toby Horst, Chairman, California Equestrian Trails & Land Coalition

USFS Trail Design Parameters (6/18/2002)

Trail Design Parameters provide guidance for the assessment, survey and design, construction, repair and maintenance of trails, based on the Trail Class and Designed Use of the trail. Exceptions and variances to these parameters can occur, however, when site-specific circumstances demand such exceptions.

Designed Use <b>HIKER-PEDESTRIAN</b>		<b>Trail Class 1</b>	<b>Trail Class 2</b>	<b>Trail Class 3*</b>	<b>Trail Class 4*</b>	<b>Trail Class 5*</b>
<b>Design Tread Width</b>	<b>Wilderness</b>	0" – 12"	6" – 18"	12" – 24" Exceptions: May be 36-48" at switchbacks, turnpikes, fords and steep side slopes.	24" Exceptions: May be 36-48" at switchbacks, turnpikes, fords and steep side slopes.	Not applicable
	<b>Non-Wilderness</b>	0" – 12"	6" – 18"	18" – 48"	32" – 96"	36" – 120"
<b>Design Surface</b>	<b>Type</b>	Native, un-graded. Intermittent, rough.	Native with limited grading. Continuous, rough.	Native with some on-site borrow or imported materials.	Imported materials or hardening is common.	Uniform, firm, and stable.
	<b>Obstacles</b>	Roots, rocks, logs, steps to 24".	Roots, rocks and log protrusions to 6"; steps to 14".	Generally clear. Protrusions to 3"; steps to 10".	Smooth, few obstacles. Protrusions 2-3"; steps to 8".	Smooth, no obstacles. Protrusions <2".
<b>Design Grade**</b>	<b>Target Range (&gt;90% of Trail)</b>	< 25%	< 18%	< 12%	< 10%	< 5%
	<b>Short Pitch Max (Up to 200' lengths)</b>	40%	35%	25%	15%	10%
	<b>Max Pitch Density***</b>	< 10% of trail	< 5% of trail	< 5% of trail	< 3% of trail	< 3% of trail
<b>Design Cross-Slope</b>	<b>Target Range</b>	Not applicable	5 – 20%	5 – 10%	3 – 7%	2 – 3% (or crowned)
	<b>Maximum</b>	Up to natural side-slope.	Up to natural side-slope	15%	10%	3%
<b>Design Clearing</b>	<b>Width</b>	Sufficient to define trail corridor.	24" – 36", with some encroachment into clearing area.	12" – 18" outside of tread edge.	12" – 18" outside of tread edge	12" – 24" outside of tread edge.
	<b>Height</b>	6'	6' – 7'	8'	8'	> 8'
<b>Design Turns</b>	<b>Radius</b>	No minimum.	2' – 3'	3' – 6'	4' – 8'	6' – 12'

\* Trail Classes 3, 4 and 5 may potentially provide accessible passage. If assessing or designing trails for accessibility, refer to current Agency trail accessibility guidance.

\*\* Grade variances should be based upon soils, hydrological conditions, use levels, and other factors contributing to surface stability and erosion potential.

\*\*\* Maximum pitch density refers to the percentage of the trail that is within 5% (+/-) of the Short Pitch Maximum Grade.

## USFS Trail Design Parameters (6/18/2002)

Trail Design Parameters provide guidance for the assessment, survey and design, construction, repair and maintenance of trails, based on the Trail Class and Designed Use of the trail. Exceptions and variances to these parameters can occur, however, when site-specific circumstances demand such exceptions.

Designed Use <b>PACK AND SADDLE</b>		<b>Trail Class 1</b>	<b>Trail Class 2</b>	<b>Trail Class 3</b>	<b>Trail Class 4</b>	<b>Trail Class 5</b>
<b>Design Tread Width</b>	<b>Wilderness</b>	Not Applicable: Not designed for equestrians as primary user, although equestrians may be present.	12" – 18" Exceptions: May be to 48" at switchbacks, turnpikes, fords and steep side slopes.	12" – 24" Exceptions: May be to 48" at switchbacks, turnpikes, fords and steep side slopes. Up to 60" along precipices.	24" Exceptions: May be to 48" at switchbacks, turnpikes, fords and steep side slopes. Up to 60" along precipices.	Not Applicable: Not designed for equestrians as primary user. Equestrians generally not present.
	<b>Non-Wilderness</b>		12"-18" (With above exceptions)	18" – 48" (With above exceptions)	48" – 96"	
<b>Design Surface</b>	<b>Type</b>		Native, w/ limited grading.	Native with some on-site borrow or imported materials.	Native with some imported materials or stabilization.	
	<b>Obstacles</b>		Roots, rocks, logs to 12"	Generally clear. Occasional protrusions to 6".	Smooth, few obstacles. Occasional protrusions 2-3".	
<b>Design Grade*</b>	<b>Target Range</b> (>90% of Trail)		< 20%	< 12%	< 10%	
	<b>Short Pitch Max</b> (Up to 200' lengths)		30%	20%	15%	
	<b>Max Pitch Density***</b>		< 5% of trail	< 5% of trail	< 3% of trail	
<b>Design Cross-Slope</b>	<b>Target Range</b>		5 – 10%	5%	5%	
	<b>Maximum</b>		Natural side-slope	10%	10%	
<b>Design Clearing</b>	<b>Width</b>		36" – 48"	60" – 78"	72" – 96"	
	<b>Height</b>	8' – 10'	10'	10' - 12'		
<b>Design Turns</b>	<b>Radius</b>	4' – 5'	5' – 6'	6' – 10'		

\* Grade variances should be based upon soils, hydrological conditions, use levels, and other factors contributing to surface stability and erosion potential. Due to effects of use on tread and erosion, steeper pitches should be carefully evaluated based on potential effects of these various factors.

\*\* Maximum pitch density refers to the percentage of the trail that is within 5% (+/-) of the Short Pitch Maximum Grade.

## USFS

**Trail Planning and Management Fundamentals****Trail Type ▪ Trail Class ▪ Managed Use ▪ Designed Use ▪ Design Parameters**

7/31/2003

In FY02, with the national introduction of the Infra 5.0 Trails Module Linear Events and TRACS (Trail Assessment and Condition Surveys), five fundamental concepts were introduced as cornerstones of Forest Service trail planning and management:

- Trail Type
- Trail Class
- Managed Use
- Designed Use
- Design Parameters

Although not entirely new, these revised concepts provide an updated and expanded means to consistently record and communicate the intended design and management guidelines for trail design, construction, maintenance and use. Before completing documentation for TRACS Trail Management Objectives (TMO), editing these Linear Events in the Infra Trails Module, or applying these concepts in trail management, it is essential that their intent is clearly understood.

**Trail Type**

*A fundamental trail category that indicates the predominant trail surface or trail foundation, and the general mode of travel the trail accommodates.*

Trail Types are exclusive, that is there can only be one Trail Type assigned per trail or trail segment. This allows managers to identify specific trail Design Parameters (technical specifications), management needs and the cost of managing the trail for particular types of uses and/or seasons, by trail or trail segment.

When one Trail Type “overlaps” another, identify each trail or trail segment with it’s respective Trail Type as a separate route, with its own Trail Name and Trail Number. The “Shared System” data attribute in the Infra Trails Module will allow you to flag the route as also being used as a different type of route or Trail Type, (presumably during a different time of the year). For example, Canyon Ridge Trail 106 may be categorized as a Standard/Terra Trail from MP 0.0 to its end termini at MP 7.4. The fist three miles of that same route may also function as a Snow Trail during the winter, in which case a separate record would be established for Canyon Creek Snow Trail #206 from MP 0.0 to MP 3.0. In another

example, Breezy Trail 413 may be categorized as a Standard/Terra Trail and managed as a National Forest System Trail during the summer months, but inventoried and managed as National Forest System Road 1413 during fall and winter months.

Trails Types include Standard/Terra Trail, Snow Trail, and Water Trail:

**Standard/Terra Trail:** *The predominant foundation of the trail is ground (as opposed to snow or water); and that is designed and managed to accommodate ground-based trail use.*

**Snow Trail:** *The predominant foundation of the trail is snow (as opposed to ground or water); and that is designed and managed to accommodate snow-based trail use.*

**Water Trail:** *The predominant foundation of the train is water (as opposed to ground or snow); and that is designed and managed to accommodate trail use by water craft.*

### **Trail Class**

*The prescribed scale of trail development, representing the intended design and management standards of the trail.*

- There is only one Trail Class identified per trail or trail segment.
- The National Trail Classes provide a chronological classification of trail development on a scale ranging from Trail Class 1 to Trail Class 5 (see Attachment A: Trail Class Matrix):
  - ♦ Trail Class 1: Primitive/Undeveloped
  - ♦ Trail Class 2: Simple/Minor Development
  - ♦ Trail Class 3: Developed/Improved
  - ♦ Trail Class 4: Highly Developed
  - ♦ Trail Class 5: Fully Developed
- Each Trail Class is defined in terms of applicable Tread and Traffic Flow, Obstacles, Constructed Feature and Trail Elements, Signs, Recreation Environment and Experience.
- Trail Class descriptions define “typical” scenarios or combined factors, and exceptions may occur for any factor. In applying Trail Classes, choose the one that most closely matches the managed objective of the trail.
- Trail prescriptions describe the desired management of each trail, based on Forest Plan direction. These prescriptions take into account user preferences, setting, protection of sensitive resources, and other management activities. To meet prescription, each trail is assigned an appropriate Trail Class.
- These general categories are used to identify applicable Trail Design Parameters and to identify basic indicators used for determining the cost to meet national quality standards.

**Managed Use:** *Modes of travel that are actively managed and appropriate, considering the design and management of the trail.*

- There may be more than one Managed Use per trail or trail segment.

- Managed Use indicates a management decision or intent to accommodate and/or encourage a specified type of trail use.

**Designed Use:** *The intended use that controls the desired geometric design of the trail, and determines the subsequent maintenance parameters for the trail.*

- There is only one Designed Use per trail or trail segment.
- Although the trail may be actively managed for more than one use, and numerous uses may be allowed, only one use is identified as the critical design driver. The Designed Use determines the technical specifications for the design, construction and maintenance of the trail or trail segment. For each Designed Use and applicable Trail Class, there is a corresponding set of nationally standardized technical specifications or Design Parameters.
- Of the actively Managed Uses that the trail is developed and managed for, the Designed Use is the single design driver that determines the technical specifications for the trail. This is somewhat subjective, but the Designed Use is most often the Managed Use that requires the highest level of development. (ie: Pack & Saddle stock require much higher and wider clearance than a trail designed for Hikers). In addition to Designed Use, managers must also determine the desired development scale or Trail Class, with Trail Class 1 being the lowest level of development and Trail Class 5 the highest. On a TC1 Hiker trail, the trail is basically a deer path and in places may disappear and be reacquired later. Level 5 is most often paved, or at least hardened, and is associated with a highly developed ROS.

**Designed Use / Managed Use Types:**

- ALL TERRAIN VEHICLE
- SNOW ALL TERRAIN VEHICLE
- BICYCLE
- DOGSLED
- HIKER/PEDESTRIAN
- MOTORCYCLE
- PACK AND SADDLE
- SNOWMOBILE
- SNOWSHOE
- WATERCRAFT
- MOTORIZED WATERCRAFT
- NON-MOTORIZED WATERCRAFT
- CROSS COUNTRY SKI

**Design Parameters:** *Technical specifications for trail construction and maintenance, based on the Designed Use and Trail Class.*

The national Design Parameters represent a standardized set of commonly expected construction and maintenance specifications based on Designed Use and Trail Class. Local deviations to the Design Parameters may be established based on specific trail conditions, topography and other factors, providing that the variations continue to reflect the general intent of the national Trail Classes.

Design Parameters include:

- Tread Width
- Surface
- Grade
- Cross-Slope
- Clearing
- Turns

## TMO Form

### *Instructions*

Establishing and documenting Trail Management Objectives (TMOs) prior to executing a trail condition survey is critical to getting high quality results— results that will benefit trail management efforts for years to come.

The instructions below explain how to complete each field on the TRACS TMO Form. Refer also to the attached TMO Form and TMO Example Form. Additional guidance on definitions and standards can also be found in FSH 2309.18, on the Trails section of the Recreation Integrated Business Management website, and in the TRACS References section of this *User Guide*.

(From TMO-4)

Designed Use: *The intended use that controls the desired geometric design of the trail, and determines the subsequent maintenance parameters for the trail.*

The Designed Use must be identified for each trail or trail segment. The Designed Use identifies the single use or limiting factor that drives technical design parameters for the trail (i.e. tread width, grade, turning radius, etc.). The Designed Use is necessary to establish the trail's geometric design standards from which the trail is designed, constructed, operated, and maintained. While several Managed Uses may occur on the trail, there is only one Designed Use for any given trail or trail segment.

- ✓ Select only one Designed Use per trail or trail segment.

Design Parameters: *Technical specifications for trail construction and maintenance, based on the Designed Use and Trail Class.*

Design Parameters identify the technical specifics that drive trail design, construction, maintenance, and subsequent reconstruction. Choose these carefully. Other criteria (back slope angle for example) are also important but generally are site-specific and require sound engineering judgment to fulfill the objectives.

- ✓ Assign a value for each of the Design Parameter variables listed. This is not intended to be an all-encompassing list of specifications, but a list of only the dominant criteria that most define the geometric shape of the trail.
- ✓ Add any additional fields and values that are deemed important to this specific segment of trail and are necessary for achieving the trail objectives.