

# Appendix A

## Jake and Bull Mountain Trail System Maps

Map 1: Current Trail System

Map 2: Trail Conditions and Management Prescriptions

Map 3: Trail Closures and Proposed New Trail Alignments for Relocations

Map 4: Ideal Trail System and Proposed New Trail Alignments

Map 5: Recommended Closures and Ideal Trail System with Proposed New Trail Alignments

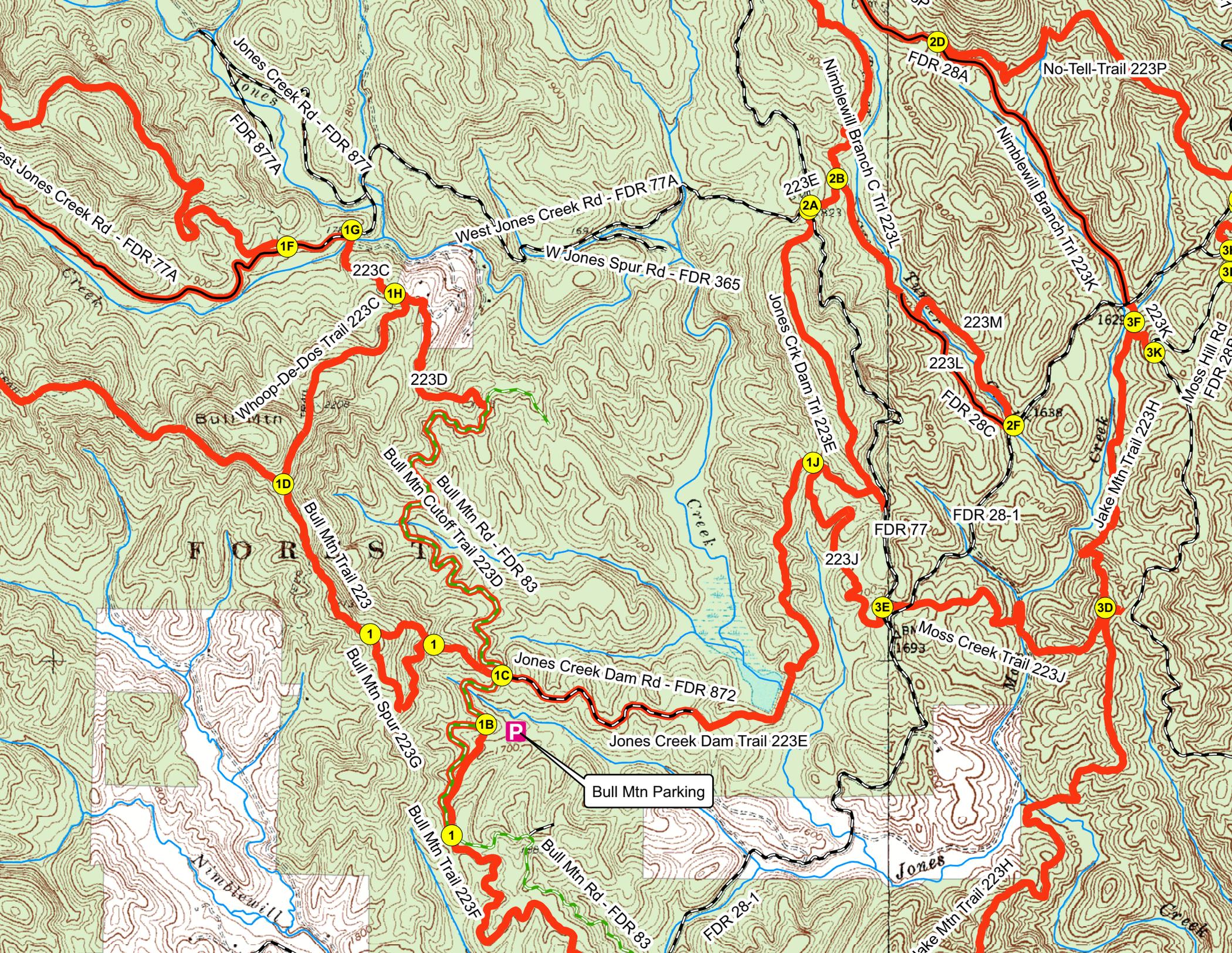
Map 6: Current Trail System and GPS Data Points

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Jones Creek Rd - FDR 877A  
FDR 877A

West Jones Creek Rd - FDR 77A  
FDR 77A

West Jones Creek Rd - FDR 77A  
W Jones Spur Rd - FDR 365

Whoop-De-Dos Trail 223C  
223C

Whoop-De-Dos Trail 223C  
223D

Bull Mtn Trail 223  
223D

Bull Mtn Rd - FDR 83  
FDR 83

Bull Mtn Cutoff Trail 223D  
223D

Bull Mtn Spur 223G  
223G

Bull Mtn Trail 223F  
223F

Bull Mtn Trail 223F  
223F

Bull Mtn Trail 223F  
223F

Bull Mtn Rd - FDR 83  
FDR 83

Nimblewill Branch C Trl 223L  
223L

FDR 28A  
FDR 28A

No-Tell-Trail 223P  
223P

FDR 77  
FDR 77

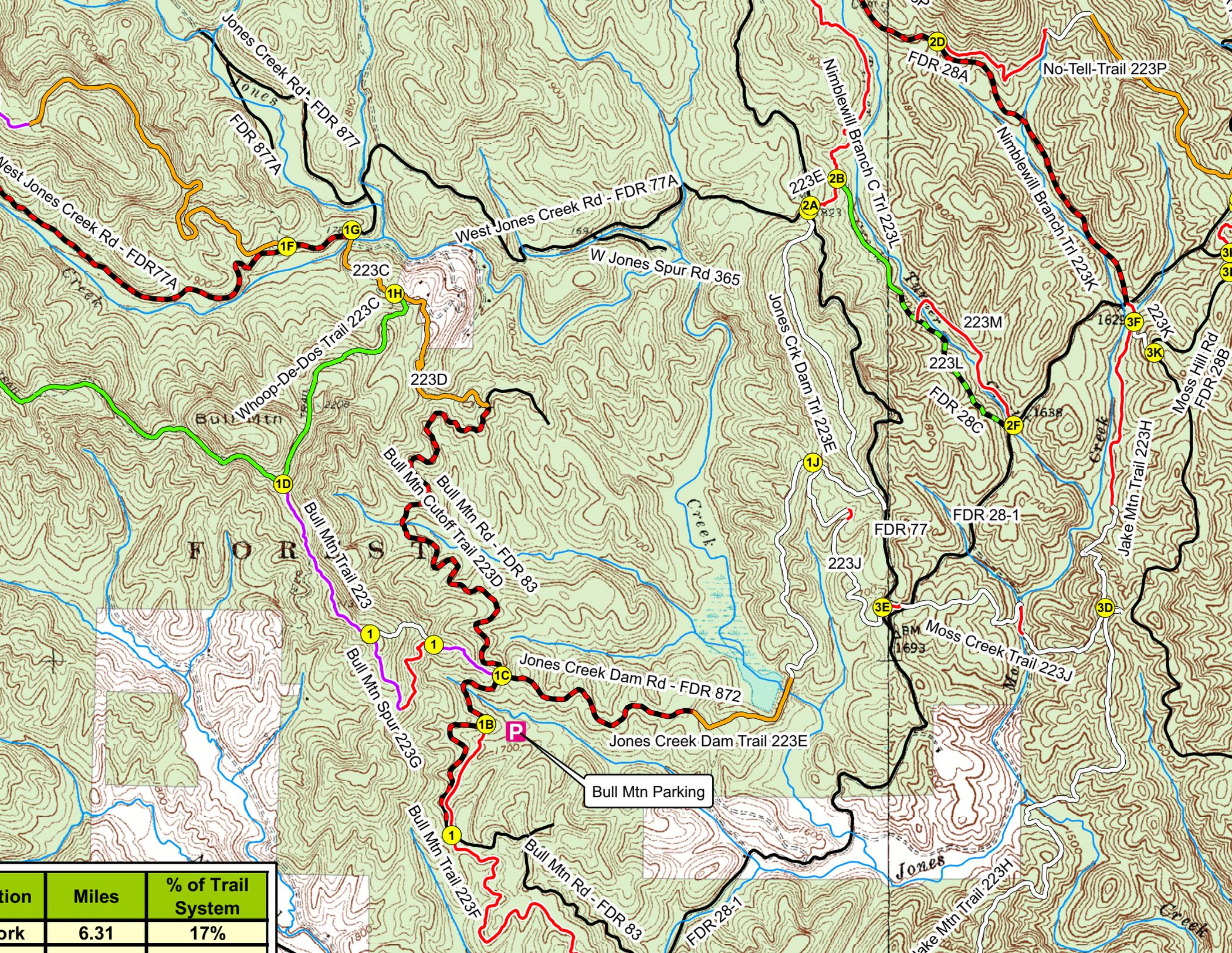
FDR 28-1  
FDR 28-1

Moss Creek Trail 223J  
223J

Jake Mtn Trail 223H  
223H

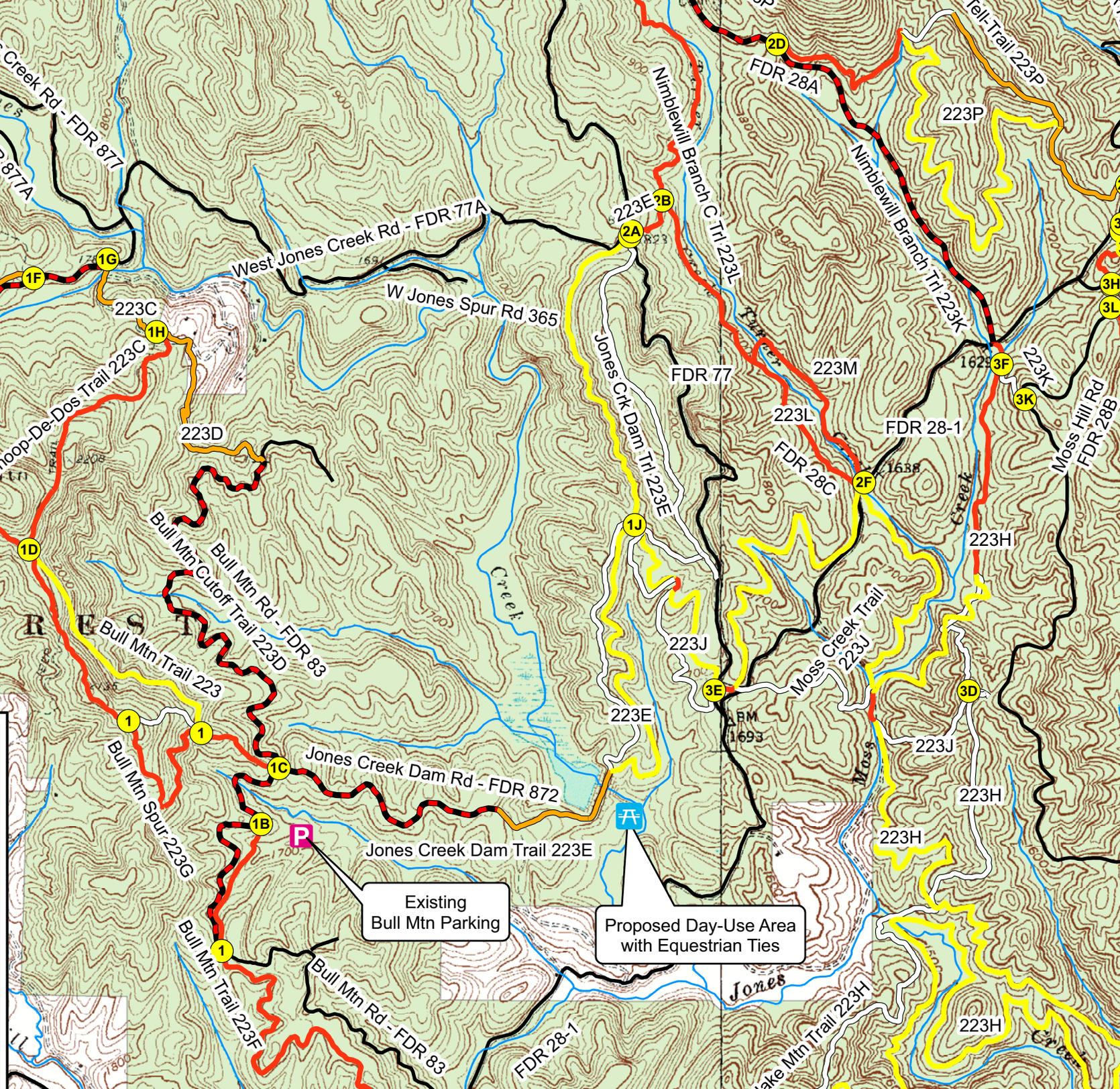
Moss Hill Rd  
FDR 28F

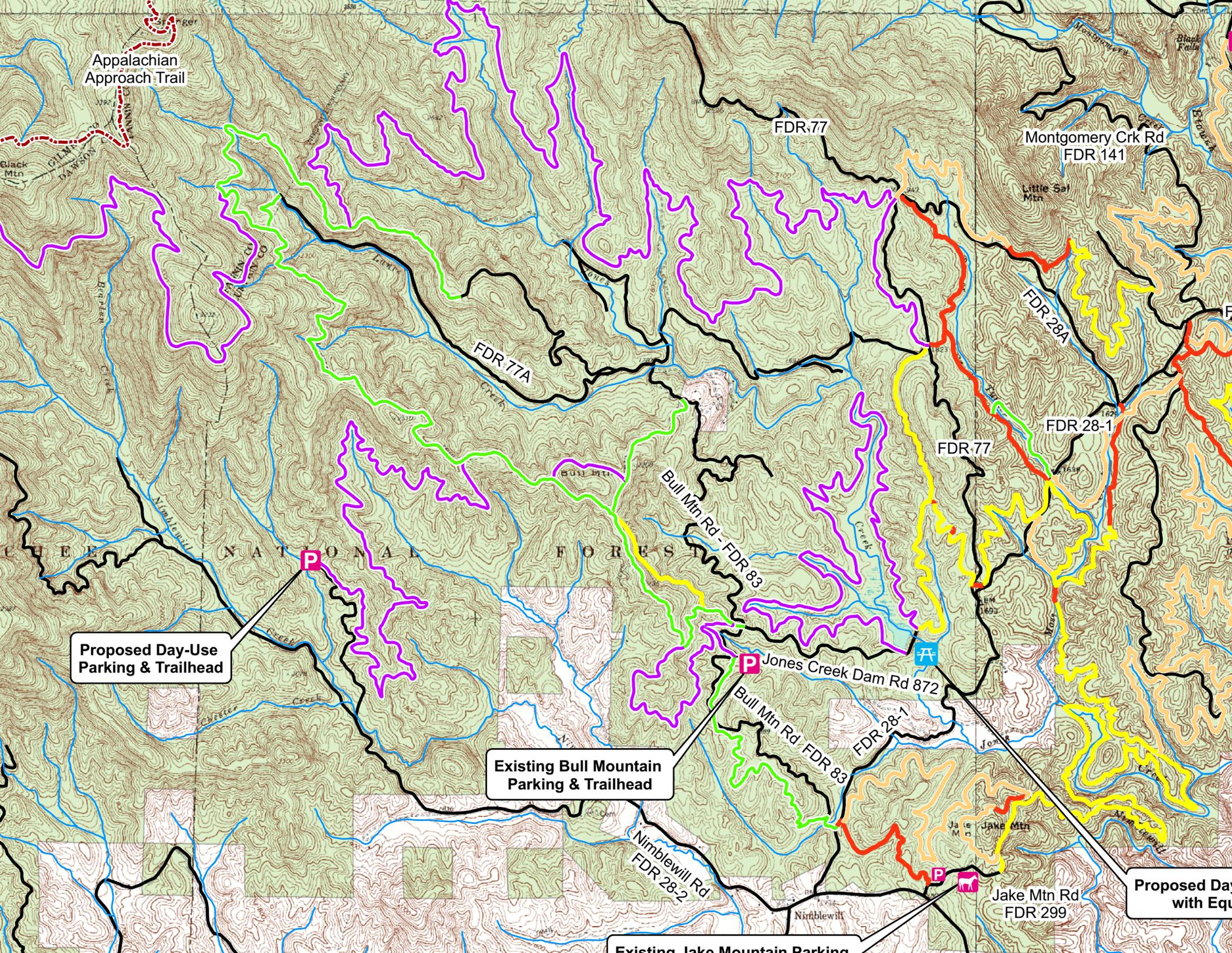
Bull Mtn Parking



Location	Miles	% of Trail System
Bull Mountain	6.31	17%

Description	Miles	% of Trail System
...	7	19%
...	0.61	2%
...	7.5	21%
...	3.46	9%
...	18.57	51%
...	17.69	49%





Appalachian Approach Trail

FDR 77

Montgomery Crk Rd  
FDR 141

FDR 77A

FDR 28A

FDR 28-1

FDR 77

BULL MOUNTAIN NATIONAL FOREST

Bull Mtn Rd - FDR 83

Proposed Day-Use  
Parking & Trailhead

Jones Creek Dam Rd 872

Existing Bull Mountain  
Parking & Trailhead

Bull Mtn Rd - FDR 83

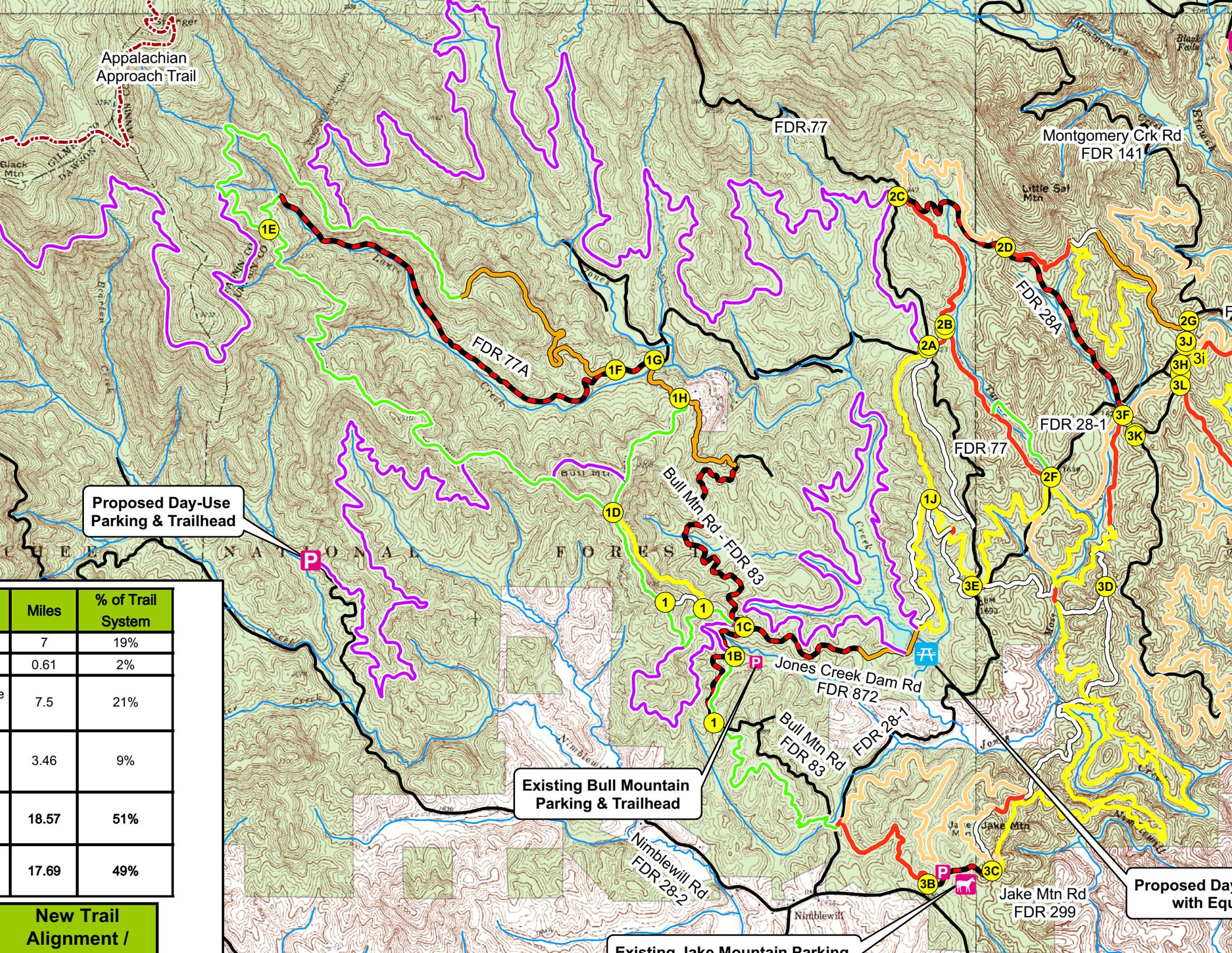
FDR 28-1

Nimblewill Rd  
FDR 28-2

Jake Mtn Rd  
FDR 299

Proposed Day-Use  
with Equ

Existing Jake Mountain Parking



Proposed Day-Use  
Parking & Trailhead

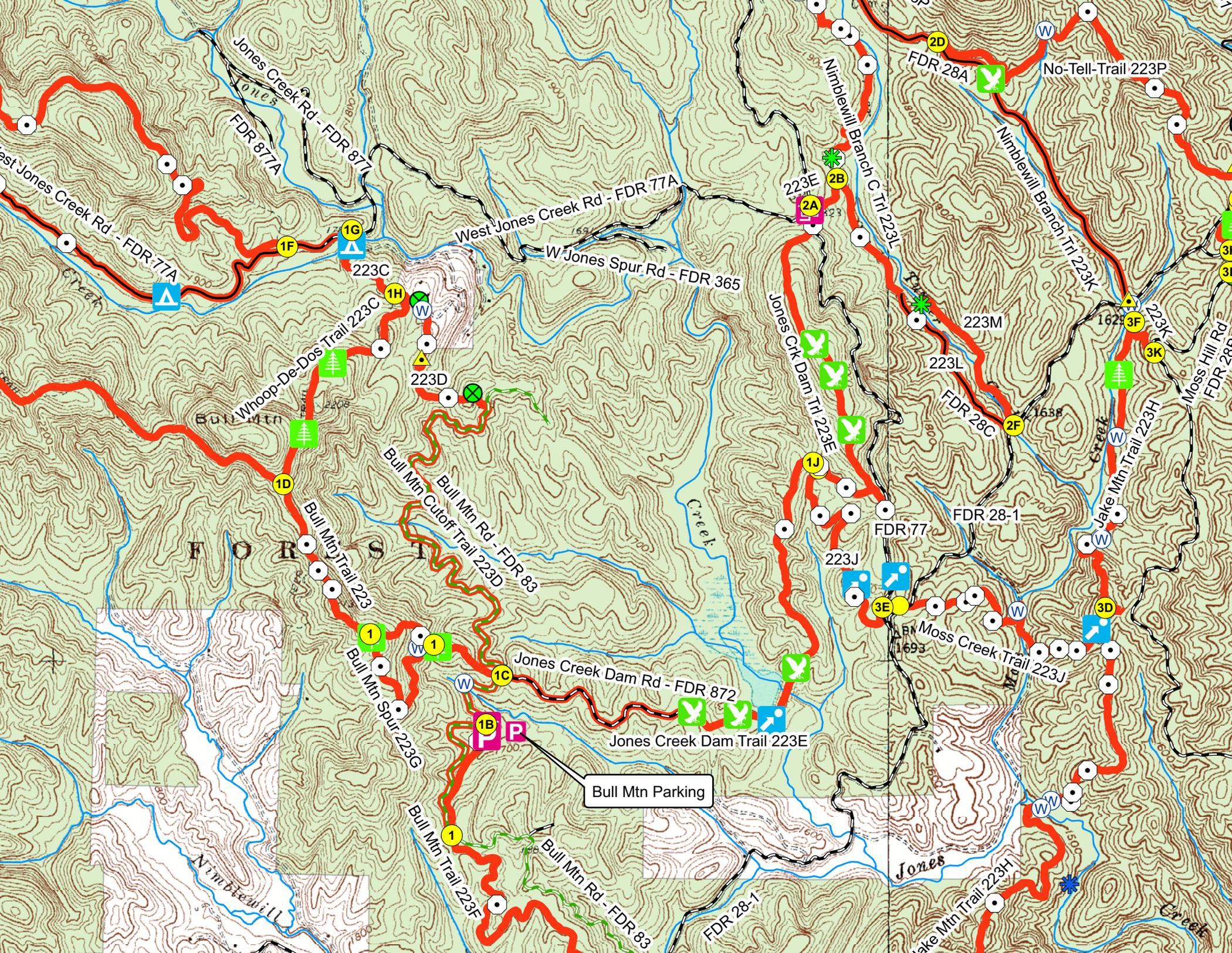
Existing Bull Mountain  
Parking & Trailhead

Proposed Day-Use  
with Equ

Miles	% of Trail System
7	19%
0.61	2%
7.5	21%
3.46	9%
18.57	51%
17.69	49%

**New Trail  
Alignment /**

Existing Bull Mountain  
Parking



Bull Mtn Parking

FORST

Jones Creek Rd - FDR 877A

West Jones Creek Rd - FDR 77A

W Jones Spur Rd - FDR 365

Whoop-De-Dos Trail 223C

Bull Mtn Trail 223

Bull Mtn Cutoff Trail 223D

Bull Mtn Spur 223G

Jones Creek Dam Rd - FDR 872

Jones Creek Dam Trail 223E

Bull Mtn Trail 223F

Bull Mtn Rd - FDR 88

Jones Ck Dam Trl 223E

FDR 77

FDR 28-1

Moss Creek Trail 223J

Jake Mtn Trail 223H

Jake Mtn Trail 223I

Jake Mtn Trail 223J

Jake Mtn Trail 223K

Jake Mtn Trail 223L

Jake Mtn Trail 223M

Jake Mtn Trail 223N

Jake Mtn Trail 223O

Jake Mtn Trail 223P

Jake Mtn Trail 223Q

Jake Mtn Trail 223R

Jake Mtn Trail 223S

Jake Mtn Trail 223T

Jake Mtn Trail 223U

Jake Mtn Trail 223V

Jake Mtn Trail 223W

Jake Mtn Trail 223X

Jake Mtn Trail 223Y

Jake Mtn Trail 223Z

# Appendix B

## **CTHA Vision Statement for the Jake and Bull Mountain Trail System**

Chattahoochee Trail Horse Assoc. envisions a time when the Jake & Bull Mountain trail system is recognized as a well-managed system that considers the needs of all user groups. It would be a system that is in balance with the environment, where users can enjoy the wildlife and scenery. Where user groups are committed to working with the Forest Service to preserve the eco-system while developing the system into the premier multi-use trail network for the state of Georgia.

The trails would be sustainable and hydrologically invisible, created on the contour of the land. Users would have destinations (waterfalls, views, unusual sights) to ride to. The trails would be hard-packed dirt surfaces that wouldn't damage equine feet. There would be specific stopping points where users could safely tie their horses to installed high-tie cables and enjoy a rest at picnic areas. The trails would be marked in various colors for various length loops with corresponding maps available at the trail heads. This would allow users to pick the length of miles they want to ride/walk and stay on that color trail, knowing they will end up back at the trail head. The average equine rider is out for 2 to 5 hours so over lapping loop trails gives all users numerous choices, depending on how long they plan to be out. There would be signs at various intersections of the trail to advise users the distance to a destination or trail head. There would also be signs to remind users of the right-of-way rules. Signs located at food plots would help to inform new users to stay on the trail.

The Jake Mountain parking/camping area would have one parking area for vehicles only (preferably the existing one) and one designated for horse trailer rig day use parking only. This rig parking lot would be designed and built to allow maneuvering of large rigs (40' at least) so that everyone is clear on where/how to park while leaving room for others to enter & park too. The camping spurs would be designated for overnight horse trailer rig use only. Additional camping spurs would be added after the upcoming logging project. The existing camping spurs would be widened where needed for 2 rigs to be side-by-side (so users could drive thru). There would be picnic tables, fire rings and lantern poles in each site (some spurs have more than one site). Professionally made signs would be in each site to remind users of the basic horse camping "rules". A sweet-smelling toilet in the middle of the camping area would be much appreciated by all users!

There would be camping sites built into the trees along the edge of the Bull Mountain parking area. Picnic tables, fire rings and lantern poles would also be added. A sweet-smelling toilet in that parking area would also be very nice.

Road signs would be added along FS28 and FS83 to advise all users that bicycles and horses use/cross the road. Speed limit signs should be added along with signs advising drivers to use caution in the curves – there are other people coming from the other direction!

## CTHA JAKE/BULL MTN. "WISH LIST"

1. Port-a-potty located in front day parking area behind the bulletin board. Estimated cost is \$72/month = \$864/year. Could CTHA's yearly commitment to the Forest Service of \$1,000 be used to cover this cost?
2. CTHA to do maintenance work on the Beaver Pond and Black Branch trails. Beaver Pond trail is from 3D to 3F @ FS28.
3. CTHA to pay for materials and install additional high tie areas in the camping area. There are not enough areas to tie or corral horses.
4. CTHA to pay for and install Forest Service approved fire rings in the camping sites.
5. CTHA to pay for materials and install trail signage. We would like to pay for materials and install pressure treated wooden signs that indicate trail names, directions to FS roads and parking lots as well as mileage. CTHA would also be willing to pay for materials and work on the trail color marking system mentioned by Tina Tilley. We could incorporate the color scheme into the wooden signs. Each trail should have a different color. CTHA's trail committee would like to meet with the Forest Service to work up a signage and trail marking proposal.
6. CTHA to work with the Forest Service to name each trail (will make it easier for people to NOT get lost). Most trails are already GPS'd (Larry Lockett may have that info). Get a trail map created that includes trail names, colors, alpha/numeric coordinates and mileage. Create and post a large scale map at Jake & Bull parking lots and provide maps to users (possibly for a small (\$0.50 or \$1.00) donation?) either at trail heads, via websites or e-mail or phone request
7. Create additional camping spurs/pull-thru's in the back area of Jake Mtn. camping area once the logging operation is completed this spring.
8. CTHA to move the Jake Mtn. trail-head entrance out of the parking lot area so that it goes around the base of the parking area and you enter the trail from the road going down into the camp, just past the bulletin board.
9. Create an additional parking lot at Jake Mtn., or just off of FS28 in a location close to the trail, to allow more parking and to disperse trail-head traffic.
10. CTHA to repair all existing trails to the point that minimal maintenance is needed (only storm related damage would require work).
11. CTHA to pay for and install new connector trails to make a few shorter loops and to move horses off of FS roads 28 & 77A.
  - a) Connector trail along FS 28 to connect that ends of the 3 Turner Creek trails.
  - b) Connector trail from 3A @ FS28 to the Jake Mtn. trail where it crosses Jones Creek. This connector was flagged a few years ago by Sharon King & Keith McFadden.
  - c) Connector trail on north side of FS77A to connect 2A on the Turner Creek trail to 1G at Lance Creek.
  - d) Connector trail from II at end of Bull Mtn. road over towards 1J on the Jones Ridge Trail.
12. Install a well in the day parking area of Jake Mtn.

# Appendix C

## **SORBA Vision Statement for Bull and Jake Mountain**

Contributing Authors:

- Steve Houghton
- Eddie O'Dea
- Keith McFadden
- David Muse

SORBA envisions the Bull/Jake Trail System as a sustainable, multi-use trail system featuring diverse trail experiences, in a hospitable environment.

### **Sustainability**

The Bull/Jake trails should present a consistent user experience, should not degrade as years pass, should require relatively low levels of maintenance and should have a minimal environmental impact that is acceptable to the USFS.

Modern trail-building techniques should be applied to the Bull/Jake area with the goal of improving potentially sustainable trails and rerouting unsustainable trails, while preserving the flavor and diversity of the existing trail system to the greatest extent possible. Improving user flow and usage dispersment through new trails and trail connections should be considered critical for both maintenance and sustainability as much as trail-tread improvements. Many of the existing problems in the trail system are due to concentrated uses on short sections of trail, the lack of alternatives, as well as poorly designed trail. One goal should be to minimize the need for users traveling on FS system roads.

### **Multi-Use Trails**

Bull/Jake should continue to be a destination for mountain bikers interested in long, challenging, "epic" rides. A highly successful mountain bike endurance race (the Fools Gold) and mountain bike festival (the Nimblewill Festival) depend on having long loops available. SORBA would prefer to keep as many miles of trail available to mountain bikers as possible rather than segregate the system into fewer miles of single-use trails.

A small number of single-use trails such as beginner loops (for equestrians or mountain bikers) or fast downhill runs would be acceptable, provided that the total number of miles open to mountain bikers don't decline.

Mountain bikers and equestrians at Bull/Jake typically have friendly encounters. SORBA has a good relationship with the organized equestrian community. If Bull/Jake remains a successful multi-use system, it will continue to promote cooperation and good will between the user groups and set an example for others to follow. On the other hand, re-designating trails as single-use will influence some riders to poach them, introducing user conflicts where none existed before. Many of the trails in the Bull/Jake traditionally used by equestrians are heavily damaged. The damage is a function of bad trail placement though and is not intrinsic to equestrian use. The issue should be resolved through trail improvements and reroutes rather than single-use designation. For

mountain bikers who do not want to ride with equestrians, there are numerous trail systems open for mountain biking in Georgia, including several in the Chattahoochee National Forest that are not open to horses.

### **Diverse Trail Experiences**

The Bull/Jake trail system should feature a variety of trail types over diverse terrain with varying levels of difficulty. Currently, the trail system consists of forest roads, old roadbed, double-track, and single-track, each with a distinctive feel. Some trails are open, others are tight. Some are strenuous, others are mild. Some are rough and "technical", others are smooth and easy to ride. Trails that are potentially sustainable should be improved to the point of sustainability, while preserving the existing character of the trail as much as possible. Bull/Jake should be a destination for riders interested in doing long, epic rides, but should also provide shorter, easier routes for riders who haven't graduated to that level yet. Shorter, easier loops should be located close to the parking lots and could be designated single-use.

### **New trail opportunities**

- SORBA would like new trails leading from PR Gap (the gap on FS77 south of Winding Stair Gap) down to FS877, FS77A and/or around to Bear Hare.
- A connection should be made from the upper Turner Creek trail, crossing 77, and down to the Lance Creek area to connect with the lower portion of Bare Hare and Bull Mountain This would alleviate the need for users to ride FS77A.
- A connection from Nimblewill Gap to Bull Mountain trail. This would connect the Bull Mountain system to Amicalola State Park (with camping/lodging) via new single-track and existing FS roads, and potentially to new extensions of the Pinhoti Trail, much of which is open to biking.
- Trails connecting some of the forest roads in the greater Blue Ridge WMA north of the Bull/Jake system, such as Lovinggood Creek and Rock Creek.
- Bull/Jake could potentially become a Ride Center:  
[http://www.imba.com/news/news\\_releases/08\\_07/08\\_30\\_ride\\_centers.html](http://www.imba.com/news/news_releases/08_07/08_30_ride_centers.html)

### **Hospitable Environment**

Restroom facilities at the Bull and Jake Mountain parking lots and near the camp sites along Jones and Lance creeks would be an excellent addition.

Signage reminding bike riders to yield to equestrians and both to yield to hikers would be a welcome addition to the brown fiberglass stakes that mark each intersection. Large signage, visible from within a vehicle as you drive up to the Jake Mountain parking lot describing how cars should park so that they don't interfere with horse trailers would also be welcome.

# Appendix D

## Jake and Bull Mountain Trail System 2008 User Survey Summary Results

# of Comments Received: 74

1. What is your Primary Activity on the Trails?		
Walking / Hiking		10
Running / Jogging		3
Biking		10
Horseback Riding		64
Other Activity (Specify)		
Trail Work		1
CTHA		1

2. How often, on average, do you use the trails?		
Daily		0
3 - 6 times a week		3
1 - 2 times a week		11
A few times a month		27
A few times a year		32
Not at all		0

3. Generally, when do you use the trails?		
Weekdays		7
Weekends		31
Both		45

4. What time of day do you generally use the trails?		
Morning		32
Afternoon		24
Evenings		2
Anytime		35

5. How much time do you generally spend on the trails during each visit?		
Less than 1 hour		0
1 - 2 hours		2
2 - 5 hours		58
5+ hours		14

6. Would you consider your use of the trails to be for...		
Recreation		60
Health and Exercise		30
Fitness Training		12
Other (specify)		
Enjoy the outdoors, Beauty of Forest, friends		2
Horse Training		1

<b>7. How did you find out about the Jake and Bull trails?</b>		
Word of mouth		48
Internet website		1
Travel guide		0
Visitor Center / Chamber of Commerce		0
Forest Service		6
Other (Please Specify)		
CTHA		17
SORBA		2
Books - Mountain Biking N.G.A. Off the Beaten Path		1
Don't Remember (Long time user)		3
Live near by		1

<b>8. How often, on average, do you camp within the Jake and Bull Mountain area?</b>		
A few times a month		11
A few times a year		39
Not at all		23

<b>9. Which trail access point do you generally use when you visit the trails?</b>		
Jake Mountain parking lot		55
Bull Mountain parking lot		11
Other (please specify parking location)		
Varies		2
Jones Creek		1
Game Check Station		1
Nimblewill Church		1
Mt. Zion Church		1
Would Use Bull more if road in better condition		1

<b>10. In your opinion, the maintenance of the trails is...</b>		
Excellent		14
Good		37
Fair		11
Poor		3

<b>11. In your opinion, the safety and security along the trails is...</b>		
Excellent		13
Good		41
Fair		7
Poor		1
Don't Know		1

<b>12. In your opinion, the cleanliness of the trails is...</b>		
Excellent		24
Good		37
Fair		4
Poor		0

**13. Do you have any ideas, comments, or concerns you would like to make about the trail system?**

Need more miles and places to horse camp. Loop Trails are preferable

1. Toilets needed at 877-77A (very heavily used by drive-in camping)
2. Lance Creek crossing to private land road bed (Jones Crk Inholding) is not maintained → silts
3. “No Camping” signage needed at Lance Creek is not maintained
4. Law Enforcement visits are few → 877 campsites heavily used
5. ATV – 4 wheeler – dirt bike abuse is frequent; mud-bogging problems
6. “No hunting” buffer on west (uphill) side of Jones Creek in holding/trail intersection would be helpful

Separate bikes and horses

Open up old road beds to provide more trail

Many of the trails are now in very bad shape due to horses riding them when wet.

The trails need to be closed after rain.

The campsites need bathrooms. There is way too much use not to have them (Jones Creek)

The trail system needs to be expanded.

Jones Creek needs bathrooms!

Horses and bikers need to be taught to stay off the trail when it is wet

Connection trails -- Bull Mtn to Nimblewill Gap Rd (77 (Farm Rd) to 77A)

Possibly split usage. Horses on Jake Mtn to 28-1 & Bikes on Bull Mtn to 28-1

Need work to prevent further erosion!

**NEED MORE TRAILS !**

You are doing a great job! Thank you for being here! My hope for the system is in order of priority:

- 1) Fix problem areas with re-routes and make them sustainable
- 2) Increase trail mileage including more loops, both long and short.
- 3) Improve Jake Mtn horse camp with toilet and water, and make it horse only and charge a fee to camp
- 4) Improve the Bull Mtn Parking area with toilet and water, charge a fee to day use parking
- 5) Expand or add a second parking area to day use parking at Jake Mtn so bikes are better accommodated and charge a fee to park.
- 6) Toilet / water facilities would be nice if something like at Watson Mill Bridge State Park (Bath House Combo)

Beautiful area! Love to Ride There !

**13. Do you have any ideas, comments, or concerns you would like to make about the trail system? (continued...)**

The trails offer an excellent opportunity for me to ride my horse in the woods. Please continue the Forest Service's relationship with CTHA. We are willing to do what it takes to continue to use our public land in a way that protects the water and soil and allows trail riding.

Really appreciate the horse trails and would love to see more.

Should be designated for one user group or another. Multi-use trails always tend toward precluding one type of user. In my opinion multi-use types are not compatible together.

Making the road access to Jake Parking lot is needed. It is almost impossible for two trailers to pass each other.

This is a wonderful place to camp and trail ride. It is strenuous enough to give our horses a good workout, but is not so difficult as to be dangerous. My family loves going there.

Water source for Jake Mtn & Bull Mtn Parking areas for Horses

Would be nice to have water and toilets at Jake camping area

It is a beautiful place. I only can make the journey there once or twice a year as its too far and expensive. I come when CTHA is having a ride to improve trails. I would hate to see this place restrict horses permanently. We must ALL WORK TOGETHER. I understand conservation, delicate plants and diverting trails to save endangered species. I am for all of that! And some equine people do not try to preserve or understand some trails need to be moved to allow for delicate plants and avoid erosion (run-off). I appreciate your survey and I hope you get good feedback and continued support so ALL can enjoy.

Horse (equine) folks need to educate horses and desensitize them to joggers, bikes, children and dogs. Most do not. Horses are prey animals and flight animals and very unpredictable.

Great Trails!! Would love to see more!

I understand there's a process which needs to be followed in maintenance of trails. However, it would be nice if the process could be speeded up if an area on the trail was becoming dangerous to travel.

More maps and markers along the way. I have been lost and confused several times!!

**13. Do you have any ideas, comments, or concerns you would like to make about the trail system? (continued...)**

Jake day lot is not "horse trailer friendly." Use it for cars and build new one designed and exclusive for horse trailer rigs (See lot design at Little Mulberry Gwinnett Co Park) Usage is increasing, meaning there are not enough camping spurs. Since logging is to take place in back half of camp, how about adding additional pull thru site.

A better parking lot for trucks and horse trailers is needed. Bull Mtn camping and parking area is nice but improvements such as widening and possibly lengthen the area would be good. There is a horse parking trail system in the Gwinnett County area that is highly spoken of.

More split off trails to take pressure off existing trails

Separate bike parking area. Need shorter area.

Need color pattern for trail markers

Trail washout - trails have become worn down. Separate bike parking from trailer parking.

Many areas are washed out and deeply need work

Instead of closing down trails, the equestrian community works hard maintaining what is available and are willing to take any new areas given.  
WORK WITH US -- WE WILL WORK WITH YOU !

Separate bike parking

Some of the trails need more maintenance than volunteer CTHA workers can do by hand. Machinery needed in badly washed out areas or reroute trails.  
Need a shorter loop and trails to destinations.  
Need to separate bike parking

A destination trail to the waterfalls would be great. More loop trails of about 2 - 3 hours would be great. Like a 2 hour trail, a 3 hour trail, a 5 hour trail, etc...  
A bathroom would be great. Electric and water would be great

Not opposed to riding on open graveled roads if roads are posted correctly so that cars slow down. Also need an edge so can get horses out of the rock.

Water in campsites would be great!

### **13. Do you have any ideas, comments, or concerns you would like to make about the trail system? (continued...)**

Fix problem areas, making them sustainable (trails)  
Increase mileage including more loops close to parking  
Add horse trailer parking to disperse use  
Improve Jake Horse Camp with toilet and water and charge camping fee and make it horse only  
Improve Bull Parking with toilet and water and charge a fee for parking or camping  
Expand or add a second day use parking area at Jake to accommodate bikes and charge a fee.

Some areas eroded and need work. Campground should be restricted to people with horses since they can't camp at regular campgrounds.

Trails need maintenance in spots.  
Since there are so few places people can camp with their horses, it would be nice if the Jake Mtn campground could be restricted to campers with horses.

Concerted effort through RTP grant funding to improve the existing trail system – sustainability factor is key to keeping a quality recreation experience for a multi-use trail system.

Look at re-routing the badly eroded trail sections – sure all trails will be ranked through assessment – on ground – as to viable condition.

Continue strong partnership outreach – good harmony with equestrian & bike groups.

Wet weather closure possibility? Close access points to trails...

A wonderful trail system that needs attention; reroutes, maintenance

- I'd like to see the trails maintain their same "flavor" after the work is done, sustainable, but not "sanitized".
- I would like to see all of the existing trails remain multi-use
- Many mountain bikers love Bull/Jake because you can ride a very long time (6+ hours) without backtracking and without mostly riding roads. We would be happy with trails that are multi-use and not optimized for cycling in order to preserve the distance.
- I would like to see more trails opened up north of Bull/Jake in the greater Blue Ridge WMA.

**13. Do you have any ideas, comments, or concerns you would like to make about the trail system? (continued...)**

- As an avid backpacker I believe multi-use trails ultimately don't work! I have hiked several shared trails with equestrian and bike use including Jake and Bull Mountain and find that invariably the more "active" uses of horse and bike win out and essentially preclude hiking. Now I totally avoid multi-use trails because the hiking experience is entirely degraded by other uses. I believe these multiple uses just are not compatible with each other.
- As forest use continues to increase due to population growth I think user conflicts will only get worse. Of course, I have a particular interest in hiking and will be biased towards that use. Others have their own biases towards bikes and horses. In the long run I think more of each kind of trail will need to be developed on the forest and single use trails rather than multi-use trails should be developed for each in order to reduce user conflicts.
- I suggest that **hiking only** trails should still predominate and more should be made available since it is the most popular recreational activity on the forest and it is the least expensive and least damaging recreational activity on the forest. Since bikers and horses always dominate multi-use trails I suggest that hiking is really not even a factor for them. There will need to be more bike only and horse only trails that are segregated from other uses and placed in less sensitive areas they tend to cause more resource damage.

Extended Equestrian Survey Questions (# of responses = 33)

14. How many people do you ride with?		
One Rider (Alone)		2
Two Riders		5
Two - Five Riders		23
Five - Ten Riders		10
Ten - Fifteen Riders		1
More than Fifteen Riders		2

15. When riding on a trail, do you prefer to ride:		
Single File		31
Two - Three Riders side-by-side with each other		10

16. What is your preferred trail width to ride?		
Single track (tight corridor)		21
Closed Road (Wide Corridor)		14
Other (Please Specify)		
Anything		1
Variety		5

17. Are you opposed to riding on open graveled roads?		
Yes		14
No		19
Not opposed but do not prefer		1

**18. When you spend time at Jake and Bull Mountain, describe what you would consider to be your ideal "Equestrian Trail Riding Experience".**

See water (creeks, water falls, Lakes)

Be able to see well into the woods and have a good overlook.

The way it is now.

It is just fine the way it is now.

Wide roads, less rocky, and less blown up walking horses

Any weather, anytime - people being polite - Quietness of the woods - riding through the water is wonderful

Any day on a horse is a good one

Beautiful Scenery. Waterfalls, Birds, Butterflies, Woods

The views of the mountains, water, wildlife. And everyone coming in safe.

**18. When you spend time at Jake and Bull Mountain, describe what you would consider to be your ideal "Equestrian Trail Riding Experience". (continued...)**

As long as I am on the back of my horse. We love these trails!

Wide trails, not too many rocks

Excellent - Thank you for all the hard work and the many trails

Relieves my stress. Good Therapy. Makes me forget my problems at home.

Excellent!

Trails in woods, creek crossings, Hilly Trails

When I ride at Jake & Bull Mtn I love the beautiful views. The varied trail types make it more exciting. There are places to "giddy-up-go" as well as meandering through the woods. It's my church.

Good weather, friends, and no problems with horses

Beautiful scenery, safe trails that are not too difficult, wildlife, shade on a sunny day. No gravel roads, water on trail for horses to drink

Ride, sit by fire and eat good food

Arrive for a long weekend and have a roomy campsite with clean horse area and site. Be able to ride varying lengths of trails with water for horses and views or destinations for me. The trails would be natural footing - rock or dirt. They would not be really steep. Be able to safely drive to Bull Mtn without fear of vehicles coming from opposite direction - especially in blind curves. Having high-tie areas with picnic tables at destination spots.

Good Trails

A safe day without getting lost!!

**Tell us something about yourself (optional)**

1. What is your zip code?					
30004	2	30107	2	30522	1
30012	1	30134	1	30533	8
30022	1	30114	2	30534	8
30028	1	30115	1	30536	1
30040	1	30127	1	30548	1
30041	4	30183	3	30559	2
30044	1	30252	1	30564	3
30052	2	30501	1	30566	1
30062	1	30506	5	30606	1
30067	1	30512	1	30620	1
30075	1	30513	1	30650	2

2. Please identify your age group	
1 to 10	0
11 to 13	0
14 to 18	1
19 to 25	3
26 to 40	8
41 to 65	51
65 +	3

3. Gender	
Male	21
Female	37

# Appendix E

## **Trail Planning, Design, Construction and Management Reference Books and Publications**

### **Standard Details of Pre-Engineered Bridges for Mountain Bike Trails**

Copyright 2004 by John Waldo P.E. Jonesborough TN

### **Trails Design and Management Handbook- Open Space and Trails**

Program for Pitkin County Colorado

1994 Troy Scott Parker – Natureshape, LLC.

### **Natural Surface Trails by Design- Physical and Human Design Essentials of Sustainable, Enjoyable Trails**

2004 - Troy Scott Parker – Natureshape, LLC.

### **Trail Planning, Design, and Development Guidelines**

Copyright 2006 Minnesota Dept. of Natural Resources (DNR)

### **Trail Construction and Maintenance Notebook 2007 Edition**

USDA Forest Service – Missoula Technology and Development Center

### **Lightly on the Land- The SCA Trail Building and Maintenance Manual**

By: Robert Birby for The Student Conservation Association 1996

Published by The Mountaineers

### **Fences, Gates and Bridges and How to Build Them**

George Martin 1999

Published by The Lyons Press

### **The Complete Guide to Trail Building and Maintenance - Appalachian Mountain Club**

Carl Dembrow and David Slaisbury

1981 by the Appalachian Mountain Club

### **Trail Quotes: From Advocacy to Wilderness**

2001 by Jim Schmid with the SC Dept of Parks, Recreation and Tourism

**Trails Primer - A Glossary of Trails, Greenway, and Outdoor Recreation Terms and Acronyms**

2001 by Jim Schmid with the SC Dept of Parks, Recreation and Tourism

**Equestrian Design Guidebook for Trails, Trailheads and Campgrounds**

December 2007 - USDA Forest Service Technology and Development Program; 0723-2816-MTDC

**Recreational Horse Trails in Rural and Wildland Areas**

2007 - Gene Wood - Department of Forestry and Natural Resources  
Clemson University

**Appalachian Trail- Design, Construction, and Maintenance**

2000 William Birchard and Robert Proudman –Appalachian Trail Conference

**Roanoke Valley, Blue Ridge Parkway Trail Plan**

2004 - Blue Ridge Parkway/National Park Service

**Risk and Trails**

2004 - D.R. Wyseman Municipal Risk Services Limited

**Desert Trails- Designing and Building Trails in a Harsh and Demanding Environment**

2007- Mark Flint Arizona State Parks

**Sustainable Mountain Trails Sketchbook-Tools and Techniques for Successful Trails Advocacy**

2006 Danny Basch, Hugh Duffy, John Giordanengo and Greg Seabloom National Park Service

**Best Management Practices for Road Rehabilitation- Roads to Trails Conversion**

2003- Brian Merrill and Ethan Casaday California State Parks

**A Guide to the Impacts of Non-Motorized Trail Use**

2000 Don Weir and Associates

**Mountain Biking in the Canadian Rocky Mountain: A Situational Analysis**

Jan Mosedale- A Report for Parks Canada

**Oakridge and Westfir Community Trails Plan**

2007 The Oakridge/Westfir Trails Committee and Chamber of Commerce with assistance from the National Park Service

**Trail Development and Management Manual**

1999 Virginia Dept. of Conservation and Recreation- Division of State Parks

**Recommended Standardized Trail Terminology for Use in Colorado**

2005 Colorado Outdoor Training Initiative

**COTI Instructor's Guide to Teaching Crew Leadership for Trails**

2005 Colorado Outdoor Training Initiative

**Building Better Trails- Designing, Constructing and Maintaining Outstanding Trails**

2001- International Mountain Bicycling Association

**Trail Solutions- IMBA's Guide to Building Sweet Single Track**

2004- International Mountain Bicycling Association

**Wetland Trail Design and Construction**

2001- Brian Vachowski USDA Forest Service

**Benefits of Bicycling and Walking to Health**

1992 - Federal Highways Administration

**Stabilized Engineered Wood Fiber for Accessible Trails**

2004- Theodore Laufenberg USDA Forest Service

**Planning Trails with Wildlife in Mind- A Handbook for Trail Planners**

1998 Trails and Wildlife Task Force- Colorado State Parks

**The Environmental Benefits of Bicycling and Walking**

1993 - US- Dept. of Transportation

**Managing Degraded Off- Highway Vehicle Trails on Wet, Unstable and Sensitive Environments**

2002- Kevin Meyer- National Park Service and USDA Forest Service

**Handtools for Trail Work**

1988 Richard Hallman- USDA Forest Service

# Appendix F

## USFS

### Trail Planning and Management Fundamentals

#### **Trail Type ▪ Trail Class ▪ Managed Use ▪ Designed Use ▪ Design Parameters**

Updated: 1/2004

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 uses and/or seasons by trail or trail segment.

When one Trail Type “overlaps” another, identify each trail or trail segment with its 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 first 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. The actual naming and numbering of trails (i.e. Standard/Terra Trails versus Snow Trails) should be consistent with local unit identification protocols.

The three fundamental Trails Types include:

**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 trail is water (as opposed to ground or snow); and that is designed and managed to accommodate trail use by water craft. There may be ground-based Portage segments of Water Trails.*

## 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: 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 is defined in terms of applicable Tread and Traffic Flow, Obstacles, Constructed Feature and Trail Elements, Signs, Typical 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 actively managed trail uses, user preferences, setting, protection of sensitive resources, and other management activities. To meet prescription, each trail is assigned an appropriate Trail Class.
- There is a direct relationship between Trail Class and Managed Use (defined below), and one cannot be determined without consideration of the other.
- These general categories are used to identify applicable Trail Design Parameters (defined below) and to identify basic indicators used for determining the cost to meet national quality standards.
- Trail Classes represent a refinement and expansion of the previously used Forest Service Management Classes: Mainline/Primary, Secondary and Way Trails.

## 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 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 Trail Class 1 Hiker trail, the trail is basically a deer path and in places may disappear and be reacquired later. Trail Class 5 is most often paved, or at least hardened, and is associated with a highly developed Recreation Opportunity Spectrum classification (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 Trail 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 are a refinement and expansion of the previously used “Easiest, More Difficult, and Most Difficult” trail categories for communicating Forest Service construction, maintenance and management specifications.

Design Parameters include technical specifications regarding:

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

# Appendix G

## USFS Trail Management Objectives (February 2007)



### TMO: Setting the Standard

Trail Management Objectives (TMOs) are fundamental building blocks for trail management. TMOs tier from and reflect forest plan, travel management and/or trail-specific management direction. TMOs synthesize and document, in one convenient place, the management intention for the trail, and provide basic reference information for subsequent trail planning, management, condition surveys, and reporting.

The documentation of TMOs for each system trail makes good management sense, and is a prerequisite for completing a TRACS Survey.

### Why TMOs?

A trail can not be effectively managed or a determination made of what's needed to meet standard until basic questions like these have been answered: What is the purpose of the trail? What type of use is the trail being managed for? What is the intended level of development of the trail? In the past, some trails have been managed based largely on the type or amount of use they were currently getting, without sufficient consideration of the intended use or future trends and needs. This sometimes resulted in managing a trail for a type or level of use that was not compatible with the trail management direction, design, or location. Establishing and communicating the intended TMOs for each system trail is a proactive step that prevents this from occurring.

### Developing Effective TMOs

Each TMO should be approved by a line officer after review and recommendation from the unit trail manager. For districts, it is recommended that the forest planning group and trail coordinator review these objectives prior to district ranger approval. This will ensure that the objectives for a trail are consistent with the forest plan, district and forest travel management plans, and anticipated future land management actions. This will also ensure consistency between units so that one trail will not be motorized on one district then switch to pack and saddle stock at the district boundary.

TMOs should be established for every trail, or trail segment when TMO variables change along the trail. Instructions and reference material for developing TMOs are provided on the following pages of this section, in applicable sections of the TRACS User Guide, and on the USFS website for Recreation, Heritage and Wilderness Resources Integrated Business Systems ([www.fs.fed.us/3/measures/trails.htm](http://www.fs.fed.us/3/measures/trails.htm)).

# TMO Form

## Instructions

Establishing and documenting Trail Management Objectives (TMOs) prior to doing 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 on the following pages. Additional guidance and TMO reference materials can be found in the TRACS User Guide Appendices, Infra Trails documentation, and on the USFS website for Recreation, Heritage and Wilderness Resources Integrated Business Systems ([www.fs.fed.us/3/measures/trails.htm](http://www.fs.fed.us/3/measures/trails.htm)).

## Overall Trail Information

Region / Forest / District: Enter the Region number, Forest name (or number), and District name (or number).

Trail Name & Trail Number: Enter the official trail name and trail number. These should correspond exactly to the Trail Name and Trail Number recorded in Infra Trails. Double-check for correct spelling and use of spaces.

Trail Beginning & Ending Termini: Enter a brief narrative description identifying the location of the beginning and ending trail termini. These should correspond exactly with what is recorded in Infra Trails.

Beginning & Ending Mileposts: Enter the beginning milepost or measure point, and the ending milepost for the trail. These should correspond exactly with what is recorded in Infra Trails.

Trail Inventory Length: Enter the length of the trail in miles. This mileage should match what is recorded in Infra Trails. Mileage accuracy recorded on the TMO should correspond to the method of collection (Trail Mileage Source):

- ✓ Wheel: If the length was wheeled with a cyclometer, use three decimal places (i.e.3.641).  
[Note: 0.001 miles equals approx. 5 feet]
- ✓ GPS: If the length was collected by GPS, use two decimal places (i.e. 3.64).
- ✓ Map or Unknown: If the actual length is unknown, or was determined by cartographic feature file (CFF) or by vehicle, use no more than one decimal place of accuracy (i.e. 3.6).

Trail Mileage Source: Check the box that corresponds to the source of the mileage above. This is the mileage metadata for reference.

## TMO Trail Section

Some trails may have more than one set of objectives. Normally this occurs when a TMO variable changes along distinct segments of the trail, such as between junctions or destinations. Examples can include changes in Trail Class, ROS, Design Parameters, or Prohibited Uses. If applicable, use the TMO Trail Section block to identify multiple TMOs by trail section. If not applicable, leave this section blank.

**Section #:** Enter a number or letter to sequentially identify the trail section and corresponding TMO (i.e. Segment #: 1, 2, 3, etc.).

**Section Beginning & Ending Termini:** Enter a brief narrative description identifying the location of the beginning and ending termini for this trail segment.

**Section Beginning & Ending Milepost:** Enter the beginning milepost or measure point, and the ending milepost for this trail segment.

## Designed Use Objectives

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

The Trail Type differentiates between the three basic kinds of trails: Standard/Terra, Snow, or Water. Each Trail Type is stored in the Infra database as a separate record, even when, for example, a Snow Trail mostly or totally overlaps a Standard/Terra Trail.

✓ Assign one Trail Type for the trail.

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

The National Trail Management Classes are outlined in the National Trails Management Class Matrix, which are posted on the IBS website ([www.fs.fed.us/r3/measures/trails.htm](http://www.fs.fed.us/r3/measures/trails.htm)).

✓ Assign the most appropriate Trail Class for the trail or trail segment. If more than one Trail Class is assigned to the trail, identify each Trail Class by individual trail segment (see TMO Trail Section above).

**ROS/WROS Class:** The Recreational Opportunity Spectrum (ROS) class has likely been assigned to the area by the forest plan and helps ensure the transportation system is managed accordingly. ROS and Wilderness ROS (WROS) classes are mutually exclusive.

✓ Locate and refer to the forest ROS and/or Wilderness classification maps.

✓ Assign the appropriate ROS/WROS to this segment of the trail. If multiple ROS/WROS classes exist along the trail, consider either segmenting the trail or using the dominant class (see TMO Trail Section above).

Note: Pending finalization of nationally standardized definitions for WROS categories, refer to regional protocols for WROS definitions, with WROS 1 representing the most pristine and WROS 5 representing the most modified end of the WROS spectrum. The WROS 6 category can be used for Other.

**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.

For an expanded explanation of Designed Use, refer to Trail Fundamentals in Appendix G and posted on the IBS website ([www.fs.fed.us/r3/measure/trails.htm](http://www.fs.fed.us/r3/measure/trails.htm)).

- ✓ 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 specifications that drive trail design, construction, maintenance, and subsequent reconstruction.

For each combination of Designed Use and Trail Class, there is a corresponding set of nationally established Design Parameters. These nationally established Design Parameters, which are included in Appendix I and are also posted on the IBS website, should be used as a basis for determining specific Design Parameters for a trail or trail segment. Additional design criteria are also important, such as back slope angle for example, but are not included in the national Design Parameters as they tend to be very site-specific and require sound engineering judgment to define.

Some of the national Design Parameters are presented as specific values or narrative descriptions, while others are presented as an appropriate range of values. For those values presented as numeric ranges, a trail-specific value that falls within the range should be identified and recorded on the TMO form. For example, on a Hiker/Pedestrian Trail Class 4, the nationally established Design Tread Width is listed as 32 to 96 inches to reflect single-to-multilane trails. The trail-specific Design Tread Width, however, should be recorded as a specific value appropriate for the trail (i.e. 48 inches).

Local deviations to any national Design Parameter may be established based on specific trail conditions, topography and other factors, provided that the variations continue to reflect the general intent of the national Trail Classes.

- ✓ Assign a specific value for each Design Parameter variable 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.
- ✓ Footnote any trail-specific exceptions to the national Design Parameters in the corresponding Design Parameter field, and explain or justify the exception in the Remarks section of the TMO.
- ✓ Add any additional Design Parameter factors and corresponding values that are deemed important to this specific segment of trail and are necessary for achieving the trail objectives.

**Target Frequency:** Target Frequency indicates how often a routine task should be completed in order to maintain the trail to standard. Each trail requires a recurring interval for routine maintenance tasks in order to keep the trail functional, stable and useable. For example, brush grows at a certain rate and to keep a trail operational, the brush must be cut at fairly regular intervals. These intervals, which vary by trail and by task, are generally site or area-specific and require local experience to define.

- ✓ For the applicable tasks, define the maintenance interval that best reflects the frequency necessary to keep this trail or trail segment to standard. Any period within that interval should be considered “to standard”.
- ✓ The interval is expressed in years.

Examples:

<b>Task:</b>	<b>Frequency:</b>	<b>Recorded As:</b>		
Trail Opening	once every year	1.0		
Brushing	once every 3 years	0.33		
Logging Out	two times per year	2.0		

## Travel Management Strategies

Travel Management Strategies are very important for effective and efficient trail management. Establishing Travel Management Strategies for major trail uses helps the manager balance the needs of conflicting uses, guides the manager on operational tradeoffs, and assist maintenance crews to efficiently target maintenance efforts to only necessary tasks. This section of the TMO form documents basic information that should also be recorded in the ATM portion of Infra Trails.

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

Managed Use indicates a management decision or intent to accommodate and/or encourage a specified type of trail use. Accommodating the Managed Use frequently results in user-specific trail maintenance and/or signing needs and costs.

- ✓ Record each use that is actively managed on the trail or trail segment. There may be more than one Managed Use per trail or trail segment.
- ✓ For each Managed Use, document the dates during which that use is actively managed for that use. If there is more than one season of use for a particular Managed Use, record that using the blank space provided under the list of Managed Uses.

Managed Season of Use (To/From): The Managed Season of Use specifically defines the period of the time that the trail is available and managed in a safe and sufficient state for the defined user. It is intended to bracket the times that the Forest is responsible for providing that opportunity.

Examples:

- One obvious example would be when a trail is covered by snow and outside of the Managed Season of Use. During this time, the Forest does not intend to provide an accessible tread as this would require snow removal and is not part of the managed trail opportunity. Conversely, during the Managed Season of Use, the Forest intends to maintain the accessible tread in a safe and functional condition.
- A less obvious example would be if the trail has a Hiker Travel Management Strategy of Encourage with a Managed Season of Use from March 1 to November 15. In this case, the Forest would be responsible for providing stream crossings during high water in June (i.e. trail bridges). Changing the Managed Season of Use for the same example to June 30 to November 15, thus bypassing the June run-off, would alleviate this conflict and clearly define management expectations.

Prohibited Use: Mode of travel prohibited by official legal order.

- ✓ Record any use that is prohibited by an official prohibition or closure order.
- ✓ Document the dates during which the use is prohibited.
- ✓ Footnote and cite the specific CFR under Remarks / Reference Information.

Other Use: This section is provided to document additional trail-specific information and Travel Management Strategies as needed.

- ✓ If applicable, record other Travel Management Strategies for the trail that were not captured under Managed Use or Prohibited Use. Check whether the use is Accepted (allowed, while not actively managed for), Discouraged, or Eliminated.

## Special Considerations

Use this section to identify any additional considerations that trail managers, design, construction or maintenance personnel should be aware of.

- ✓ Check any applicable special consideration for the trail or trail segment, underlining the appropriate clarifier shown in parenthesis.
- ✓ Footnote the consideration, and provide details and/or reference for corresponding direction or decision documents under Remarks / Reference Information.

## Remarks / Reference Information

Use this area to provide additional information or clarification, or to cite reference decisions and materials related to information documented earlier in the TMO. When clarifying information documented in previous sections of the TMO, it is recommended that a footnote be added next to the TMO entry, followed by a footnoted explanation in the Remarks / Reference section.

Example:

<b>Footnoted Items in TMO Sections:</b>			
	<u>Design Parameters</u>		
	Basic Tread Width, inches	24"	
	<u>Maintenance Frequency</u>		
	Trail Opening	1 <sup>2</sup>	
	<u>Special Considerations</u>		
	T&E or Sensitive Species Present	X <sup>3</sup>	
<b>Footnote Explanations in Remarks:</b>			
	<u>Remarks / Reference Information</u>		
	<sup>1</sup> Tread width exceptions allowed at existing wood trail structures. <sup>2</sup> Complete annual Trail Opening by 6/15. <sup>3</sup> Goose grass sedge, sensitive plant, located in 1 <sup>st</sup> mile of trail, refer to 3/15/1999 BE for Smith Ridge Trail for mitigation specifications.		

## Line Officer Approval

Having the District Ranger or line officer approve Trail Management Objectives is essential. The TMO pulls together and documents management direction and expectations for the trail. A documented, approved TMO provides the trail manager and the trail maintenance crews with the key tool they need to confidently work on the trail without having to second-guess operational and maintenance choices.

The TMO establishes the base standards against which trail condition surveys and prescriptions are measured and completed. It also ensures a management framework of continuity and consistency over time and through personnel changes. Succinctly put, the TMO pulls it all together.

# TMO Forms



## TRACS Trail Management Objectives

Region:  Forest:  District:

Trail Name:  Trail Number:

Trail Beginning Termini:  Beg. Milepost:

Trail Ending Termini:  End. Milepost:

Trail Inventory Length:  Miles Trail Mileage Source:  Wheel  GPS  Map  Unknown

### TMO Trail Section

Section Beg. Termini:  Beg. Milepost:

Sec. # Section End. Termini:  End. Milepost:

### Designed Use Objectives

**Trail Type** (Check one)

Standard Terra Trail

Snow Trail

Water Trail

**Trail Class** (Check one)

1 (Primitive/Undeveloped)

2 (Simple/Minor Development)

3 (Developed/Improved)

4 (Highly Developed)

5 (Fully Developed)

**ROS/WROS Class** (Check one)

**ROS**

Urban

Rural

Roaded Modified

Roaded Natural

Semi-Primitive Motorized

Semi-Primitive NonMotorized

Primitive

**WROS**

WROS 1

WROS 2

WROS 3

WROS 4

WROS 5

WROS 6

**Designed Use** (Check one)

Hiker / Pedestrian

Pack & Saddle

Bicycle

Wheelchair

Motorcycle

All Terrain Vehicle (ATV)

\_\_\_\_\_

Cross-Country Ski

Snowshoe

Dog Sled

Snowmobile

\_\_\_\_\_

Watercraft - NonMotorized

Watercraft - Motorized

**Design Parameters** (Fill in all that apply)

Tread Width (inches)

Grade: Target Range (%) (>30% of TMO segment)

Grade: Short Pitch Max (%) (up to 200' length)

Cross-Slope (%)

Clearing Width (feet)

Clearing Height (feet)

Switchback Radius (feet)

\_\_\_\_\_

**Target Frequency Per Year** (Fill in all that apply)

Trail Opening

Tread Repair

Drainage Cleanout

Logging Out

Brushing

Snow Trail Grooming

Condition Survey

\_\_\_\_\_



# TRACS Trail Management Objectives

Trail Name:  Trail Number:

## Travel Management Strategies FSM 2353.13

### Managed Use

(Fill in all that apply)

	From Date (mm/dd)	To Date (mm/dd)
<input type="checkbox"/> Hiker / Pedestrian		
<input type="checkbox"/> Pack & Saddle		
<input type="checkbox"/> Bicycle		
<input type="checkbox"/> Wheelchair		
<input type="checkbox"/> Motorcycle		
<input type="checkbox"/> All Terrain Vehicle (ATV)		
<input type="checkbox"/> _____		
<input type="checkbox"/> Cross-Country Ski		
<input type="checkbox"/> Snowshoe		
<input type="checkbox"/> Dog Sled		
<input type="checkbox"/> Snowmobile		
<input type="checkbox"/> _____		
<input type="checkbox"/> Watercraft-NonMotorized		
<input type="checkbox"/> Watercraft - Motorized		

### Prohibited Use

(Check if applicable)

	From Date (mm/dd)	To Date (mm/dd)
<input type="checkbox"/> All Motorized Use		
(Or, fill in all that apply)		
<input type="checkbox"/> Hiker / Pedestrian		
<input type="checkbox"/> Pack & Saddle		
<input type="checkbox"/> Bicycle		
<input type="checkbox"/> Wheelchair		
<input type="checkbox"/> Motorcycle		
<input type="checkbox"/> All Terrain Vehicle (ATV)		
<input type="checkbox"/> _____		
<input type="checkbox"/> Cross-Country Ski		
<input type="checkbox"/> Snowshoe		
<input type="checkbox"/> Dog Sled		
<input type="checkbox"/> Snowmobile		
<input type="checkbox"/> _____		
<input type="checkbox"/> Watercraft - NonMotorized		
<input type="checkbox"/> Watercraft - Motorized		

### Other Use

(Optional: Check any that apply)

	Accept	Discourage	Eliminate
<input type="checkbox"/> Hiker / Pedestrian			
<input type="checkbox"/> Pack & Saddle			
<input type="checkbox"/> Bicycle			
<input type="checkbox"/> Wheelchair			
<input type="checkbox"/> Motorcycle*			
<input type="checkbox"/> All Terrain Vehicle (ATV)*			
<input type="checkbox"/> _____			
<input type="checkbox"/> Cross-Country Ski			
<input type="checkbox"/> Snowshoe			
<input type="checkbox"/> Dog Sled			
<input type="checkbox"/> Snowmobile			
<input type="checkbox"/> _____			
<input type="checkbox"/> Watercraft - NonMotorized			
<input type="checkbox"/> Watercraft - Motorized			

### Special Considerations

(Check any that apply. Underline appropriate clarifier in parenthesis. Provide specifics and reference information below.)

<input type="checkbox"/> Shared System (shared with other system road or trail)
<input type="checkbox"/> Accessible per Current Agency Guidelines
<input type="checkbox"/> Mechanized Tools or Equipment Prohibited
<input type="checkbox"/> T&E or Sensitive Species Present ( <u>Plant / wildlife</u> )
<input type="checkbox"/> Heritage Resource Present
<input type="checkbox"/> Easement across Non-FS Land ( <u>Existing / Needed</u> )
<input type="checkbox"/> Existing Permit or Agreement ( <u>Trail-Specific / Area</u> )
<input type="checkbox"/> _____

### Remarks / Reference Information

(Use continuation sheet if needed.)

Line Officer: Name   
 Title

Signature   
 Date



## TRACS Trail Management Objectives

Trail Name:  Trail Number:

**Remarks / Reference Information** (Continuation Sheet)

(Type notes over this message. To insert spaces between lines of text in Excel, press Alt and Enter.)

# Trail Management Objective Form Example 1

## TRACS Trail Management Objectives

Region:  Forest:  District:

Trail Name:

Trail Beginning Termini:

Trail Ending Termini:

Trail Inventory Length:  Miles

Trail Number:

Beg. Milepost:

End. Milepost:

Trail Mileage Source:  Wheel  GPS  Map  Unknown

### TMO Trail Section

<input type="text"/>	Section Beg. Termini: <input type="text"/>	Beg. Milepost: <input type="text"/>
Sec. #	Section End. Termini: <input type="text"/>	End. Milepost: <input type="text"/>

### Designed Use Objectives

**Trail Type** (Check one)

Standard Terra Trail

Snow Trail

Water Trail

**Trail Class** (Check one)

1 (Primitive/Undeveloped)

2 (Simple/Minor Development)

3 (Developed/Improved)

4 (Highly Developed)

5 (Fully Developed)

**ROS/WROS Class** (Check one)

ROS	WROS
<input type="checkbox"/> Urban	<input type="checkbox"/> WROS 1
<input type="checkbox"/> Rural	<input type="checkbox"/> WROS 2
<input type="checkbox"/> Roaded Modified	<input type="checkbox"/> WROS 3
<input checked="" type="checkbox"/> Roaded Natural	<input type="checkbox"/> WROS 4
<input type="checkbox"/> Semi-Primitive Motorized	<input type="checkbox"/> WROS 5
<input type="checkbox"/> Semi-Primitive NonMotorized	<input type="checkbox"/> WROS 6
<input type="checkbox"/> Primitive	

#### Designed Use

(Check one)

Hiker / Pedestrian

Pack & Saddle

Bicycle

Wheelchair

Motorcycle

All Terrain Vehicle (ATV)

\_\_\_\_\_

Cross-Country Ski

Snowshoe

Dog Sled

Snowmobile

\_\_\_\_\_

Watercraft - NonMotorized

Watercraft - Motorized

#### Design Parameters

(Fill in all that apply)

Tread Width (inches)

Grade: Target Range (%) (> 90% of TMO segment)

Grade: Short Pitch Max (%) (up to 200' lengths)

Cross-Slope (%)

Clearing Width (feet)

Clearing Height (feet)

Switchback Radius (feet)

\_\_\_\_\_

#### Target Frequency Per Year

(Fill in all that apply)

Trail Opening

Tread Repair

Drainage Cleanout

Logging Out

Brushing

Snow Trail Grooming

Condition Survey

\_\_\_\_\_



# TRACS Trail Management Objectives

Trail Name: **Sweet Grass Trail**

Trail Number: **122**

## Travel Management Strategies FSM 2353.19

### Managed Use

(Fill in all that apply)

	From Date (mm/dd)	To Date (mm/dd)
<input checked="" type="checkbox"/> Hiker / Pedestrian	5/1	10/31
<input checked="" type="checkbox"/> Pack & Saddle	5/1	10/31
<input type="checkbox"/> Bicycle		
<input type="checkbox"/> Wheelchair		
<input type="checkbox"/> Motorcycle		
<input type="checkbox"/> All Terrain Vehicle (ATV)		
<input type="checkbox"/> _____		
<input type="checkbox"/> Cross-Country Ski		
<input type="checkbox"/> Snowshoe		
<input type="checkbox"/> Dog Sled		
<input type="checkbox"/> Snowmobile		
<input type="checkbox"/> _____		
<input type="checkbox"/> Watercraft-NonMotorized		
<input type="checkbox"/> Watercraft - Motorized		

### Prohibited Use

(Check if applicable)

	From Date (mm/dd)	To Date (mm/dd)
<input type="checkbox"/> All Motorized Use		
(Or, fill in all that apply)		
<input type="checkbox"/> Hiker / Pedestrian		
<input type="checkbox"/> Pack & Saddle		
<input type="checkbox"/> Bicycle		
<input type="checkbox"/> Wheelchair		
<input type="checkbox"/> Motorcycle		
<input type="checkbox"/> All Terrain Vehicle (ATV)		
<input type="checkbox"/> _____		
<input type="checkbox"/> Cross-Country Ski		
<input type="checkbox"/> Snowshoe		
<input type="checkbox"/> Dog Sled		
<input type="checkbox"/> Snowmobile		
<input type="checkbox"/> _____		
<input type="checkbox"/> Watercraft - NonMotorized		
<input type="checkbox"/> Watercraft - Motorized		

### Other Use

(Optional: Check any that apply)

	Accept	Discourage	Eliminate
<input type="checkbox"/> Hiker / Pedestrian			
<input type="checkbox"/> Pack & Saddle			
<input type="checkbox"/> Bicycle			
<input type="checkbox"/> Wheelchair			
<input type="checkbox"/> Motorcycle*			
<input type="checkbox"/> All Terrain Vehicle (ATV)*			
<input type="checkbox"/> _____			
<input type="checkbox"/> Cross-Country Ski			
<input type="checkbox"/> Snowshoe			
<input type="checkbox"/> Dog Sled			
<input type="checkbox"/> Snowmobile			
<input type="checkbox"/> _____			
<input type="checkbox"/> Watercraft - NonMotorized			
<input type="checkbox"/> Watercraft - Motorized			

### Special Considerations

(Check any that apply. Underline appropriate clarifier in parenthesis. Provide specifics and reference information below.)

- Shared System (shared with other system road or trail)
- Accessible per Current Agency Guidelines
- Mechanized Tools or Equipment Prohibited
- T&E or Sensitive Species Present (Plant / Wildlife)
- Heritage Resource Present
- Easement across Non-FS Land (Existing / Needed)
- Existing Permit or Agreement (Trail-Specific / Area)
- \_\_\_\_\_

### Remarks / Reference Information

(Use continuation sheet if needed.)

Line Officer: Name **Grant Marnier**

Signature *Grant Marnier*

Title **District Ranger**

Date **1/15/2007**

## Trail Management Objective Form Example 2



### TRACS Trail Management Objectives

Region:  Forest:  District:

<b>Trail Name:</b> <input type="text" value="Sweet Grass X-Ski Trail"/>		<b>Trail Number:</b> <input type="text" value="Sno-122"/>	
<b>Trail Beginning Termini:</b> <input type="text" value="West Boulder Trailhead (# 12905)"/>		<b>Beg. Milepost:</b> <input type="text" value="0.000"/>	
<b>Trail Ending Termini:</b> <input type="text" value="Dead End"/>		<b>End. Milepost:</b> <input type="text" value="2.870"/>	
<b>Trail Inventory Length:</b> <input type="text" value="2.870"/> Miles	<b>Trail Mileage Source:</b> <input checked="" type="checkbox"/> Wheel <input type="checkbox"/> GPS <input type="checkbox"/> Map <input type="checkbox"/> Unknown		

#### TMO Trail Section

<b>1</b>	<b>Section Beg. Termini:</b> <input type="text" value="West Boulder Trailhead"/>	<b>Beg. Milepost:</b> <input type="text" value="0.000"/>
<b>Sec. #</b>	<b>Section End. Termini:</b> <input type="text" value="Wilderness Boundary"/>	<b>End. Milepost:</b> <input type="text" value="2.260"/>

#### Designed Use Objectives

<p><b>Trail Type</b> (Check one)</p> <p><input type="checkbox"/> Standard Terra Trail</p> <p><input checked="" type="checkbox"/> Snow Trail</p> <p><input type="checkbox"/> Water Trail</p> <p><b>Trail Class</b> (Check one)</p> <p><input type="checkbox"/> 1 (Primitive/Undeveloped)</p> <p><input type="checkbox"/> 2 (Simple/Minor Development)</p> <p><input checked="" type="checkbox"/> 3 (Developed/Improved)</p> <p><input type="checkbox"/> 4 (Highly Developed)</p> <p><input type="checkbox"/> 5 (Fully Developed)</p>	<p><b>ROS/WROS Class</b> (Check one)</p> <table style="width: 100%;"> <tr> <td style="width: 50%; vertical-align: top;"> <p><b>ROS</b></p> <p><input type="checkbox"/> Urban</p> <p><input type="checkbox"/> Rural</p> <p><input type="checkbox"/> Roaded Modified</p> <p><input checked="" type="checkbox"/> Roaded Natural</p> <p><input type="checkbox"/> Semi-Primitive Motorized</p> <p><input type="checkbox"/> Semi-Primitive NonMotorized</p> <p><input type="checkbox"/> Primitive</p> </td> <td style="width: 50%; vertical-align: top;"> <p><b>WROS</b></p> <p><input type="checkbox"/> WROS 1</p> <p><input type="checkbox"/> WROS 2</p> <p><input type="checkbox"/> WROS 3</p> <p><input type="checkbox"/> WROS 4</p> <p><input type="checkbox"/> WROS 5</p> <p><input type="checkbox"/> WROS 6</p> </td> </tr> </table>	<p><b>ROS</b></p> <p><input type="checkbox"/> Urban</p> <p><input type="checkbox"/> Rural</p> <p><input type="checkbox"/> Roaded Modified</p> <p><input checked="" type="checkbox"/> Roaded Natural</p> <p><input type="checkbox"/> Semi-Primitive Motorized</p> <p><input type="checkbox"/> Semi-Primitive NonMotorized</p> <p><input type="checkbox"/> Primitive</p>	<p><b>WROS</b></p> <p><input type="checkbox"/> WROS 1</p> <p><input type="checkbox"/> WROS 2</p> <p><input type="checkbox"/> WROS 3</p> <p><input type="checkbox"/> WROS 4</p> <p><input type="checkbox"/> WROS 5</p> <p><input type="checkbox"/> WROS 6</p>
<p><b>ROS</b></p> <p><input type="checkbox"/> Urban</p> <p><input type="checkbox"/> Rural</p> <p><input type="checkbox"/> Roaded Modified</p> <p><input checked="" type="checkbox"/> Roaded Natural</p> <p><input type="checkbox"/> Semi-Primitive Motorized</p> <p><input type="checkbox"/> Semi-Primitive NonMotorized</p> <p><input type="checkbox"/> Primitive</p>	<p><b>WROS</b></p> <p><input type="checkbox"/> WROS 1</p> <p><input type="checkbox"/> WROS 2</p> <p><input type="checkbox"/> WROS 3</p> <p><input type="checkbox"/> WROS 4</p> <p><input type="checkbox"/> WROS 5</p> <p><input type="checkbox"/> WROS 6</p>		

<p><b>Designed Use</b> (Check one)</p> <p><input type="checkbox"/> Hiker / Pedestrian</p> <p><input type="checkbox"/> Pack &amp; Saddle</p> <p><input type="checkbox"/> Bicycle</p> <p><input type="checkbox"/> Wheelchair</p> <p><input type="checkbox"/> Motorcycle</p> <p><input type="checkbox"/> All Terrain Vehicle (ATV)</p> <p><input checked="" type="checkbox"/> Cross-Country Ski</p> <p><input type="checkbox"/> Snowshoe</p> <p><input type="checkbox"/> Dog Sled</p> <p><input type="checkbox"/> Snowmobile</p> <p><input type="checkbox"/> _____</p> <p><input type="checkbox"/> Watercraft - NonMotorized</p> <p><input type="checkbox"/> Watercraft - Motorized</p>	<p><b>Design Parameters</b> (Fill in all that apply)</p> <p><input type="text" value="72"/> Tread Width (inches)</p> <p><input type="text" value="10%"/> Grade: Target Range (%) (&gt;30% of TMO segment)</p> <p><input type="text" value="15%"/> Grade: Short Pitch Max (%) (up to 200' lengths)</p> <p><input type="text" value="5%"/> Cross-Slope (%)</p> <p><input type="text" value="8'"/> Clearing Width (feet)</p> <p><input type="text" value="8'"/> Clearing Height (feet)</p> <p><input type="text" value="NA"/> Switchback Radius (feet)</p> <p><input type="text" value=""/> _____</p>	<p><b>Target Frequency Per Year</b> (Fill in all that apply)</p> <p><input type="text" value="1"/> <sup>1</sup> Trail Opening</p> <p><input type="text" value="NA"/> Tread Repair</p> <p><input type="text" value="0.5"/> <sup>1</sup> Drainage Cleanout</p> <p><input type="text" value="0.5"/> <sup>1</sup> Logging Out</p> <p><input type="text" value="0.5"/> <sup>1</sup> Brushing</p> <p><input type="text" value="9"/> Snow Trail Grooming</p> <p><input type="text" value="0.2"/> Condition Survey</p> <p><input type="text" value=""/> _____</p>
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# TRACS Trail Management Objectives

Trail Name: **Sweet Grass X-Ski Trail**

Trail Number: **Sno-122**

## Travel Management Strategies FSM 2353.13

### Managed Use

(Fill in all that apply)<sup>1</sup>

	From Date (mm/dd)	To Date (mm/dd)
<input type="checkbox"/> Hiker / Pedestrian		
<input type="checkbox"/> Pack & Saddle		
<input type="checkbox"/> Bicycle		
<input type="checkbox"/> Wheelchair		
<input type="checkbox"/> Motorcycle		
<input type="checkbox"/> All Terrain Vehicle (ATV)		
<input checked="" type="checkbox"/> Cross-Country Ski	12/1	3/31
<input checked="" type="checkbox"/> Snowshoe	12/1	3/31
<input type="checkbox"/> Dog Sled		
<input type="checkbox"/> Snowmobile		
<input type="checkbox"/> _____		
<input type="checkbox"/> Watercraft-NonMotorized		
<input type="checkbox"/> Watercraft - Motorized		

### Prohibited Use

(Check if applicable)

	From Date (mm/dd)	To Date (mm/dd)
<input type="checkbox"/> All Motorized Use		
(Or, fill in all that apply)		
<input type="checkbox"/> Hiker / Pedestrian		
<input type="checkbox"/> Pack & Saddle		
<input type="checkbox"/> Bicycle		
<input type="checkbox"/> Wheelchair		
<input type="checkbox"/> Motorcycle		
<input type="checkbox"/> All Terrain Vehicle (ATV)		
<input type="checkbox"/> _____		
<input type="checkbox"/> Cross-Country Ski		
<input type="checkbox"/> Snowshoe		
<input type="checkbox"/> Dog Sled		
<input type="checkbox"/> Snowmobile		
<input type="checkbox"/> _____		
<input type="checkbox"/> Watercraft - NonMotorized		
<input type="checkbox"/> Watercraft - Motorized		

### Other Use

(Optional: Check any that apply)<sup>1</sup>

	Accept	Discourage	Eliminate
<input type="checkbox"/> Hiker / Pedestrian			
<input type="checkbox"/> Pack & Saddle			
<input type="checkbox"/> Bicycle			
<input type="checkbox"/> Wheelchair			
<input type="checkbox"/> Motorcycle*			
<input type="checkbox"/> All Terrain Vehicle (ATV)*			
<input type="checkbox"/> _____			
<input type="checkbox"/> Cross-Country Ski			
<input type="checkbox"/> Snowshoe			
<input type="checkbox"/> Dog Sled			
<input type="checkbox"/> Snowmobile			
<input type="checkbox"/> _____			
<input type="checkbox"/> Watercraft - NonMotorized			
<input type="checkbox"/> Watercraft - Motorized			

### Special Considerations

(Check any that apply. Underline appropriate clarifier in parenthesis. Provide specifics and reference information below.)

<input type="checkbox"/>	Shared System (shared with other road or trail)
<input type="checkbox"/>	Accessible per Current Agency Guidelines
<input type="checkbox"/>	Mechanized Tools or Equipment Prohibited
<input type="checkbox"/>	T&E or Sensitive Species Present ( <u>Plant / Wildlife</u> )
<input type="checkbox"/>	Heritage Resource Present
<input type="checkbox"/>	Easement across Non-FS Land ( <u>Existing / Needed</u> )
<input checked="" type="checkbox"/>	<sup>2</sup> Existing Permit or Agreement ( <u>Trail-Specific / Area</u> )
<input type="checkbox"/>	_____

### Remarks / Reference Information

<sup>1</sup>Target task frequency for BMP 0.000 - EMP 2.260 applied to Sweet Grass Trail 122 (standard/terra trail)

<sup>2</sup> Special use permit with Big Timber Cross Country Ski Club to maintain the trail for x-skiing.

Line Officer: Name **Grant Marnier**

Signature *Grant Marnier*

Title **District Ranger**

Date **1/15/2007**



# TRACS Trail Management Objectives

Region:  Forest:  District:

Trail Name:  Trail Number:

Trail Beginning Termini:  Beg. Milepost:

Trail Ending Termini:  End. Milepost:

Trail Inventory Length:  Miles Trail Mileage Source:  Wheel  GPS  Map  Unknown

## TMO Trail Section

Section #  Section Beg. Termini:  Beg. Milepost:

Section End. Termini:  End. Milepost:

## Designed Use Objectives

Trail Type (Check one)

Standard Terra Trail

Snow Trail

Water Trail

Trail Class (Check one)

1 (Primitive/Undeveloped)

2 (Simple/Minor Development)

3 (Developed/Improved)

4 (Highly Developed)

5 (Fully Developed)

ROS/WROS Class (Check one)

ROS		WROS	
<input type="checkbox"/>	Urban	<input type="checkbox"/>	WROS 1
<input type="checkbox"/>	Rural	<input type="checkbox"/>	WROS 2
<input type="checkbox"/>	Roaded Modified	<input checked="" type="checkbox"/>	WROS 3
<input type="checkbox"/>	Roaded Natural	<input type="checkbox"/>	WROS 4
<input type="checkbox"/>	Semi-Primitive Motorized	<input type="checkbox"/>	WROS 5
<input type="checkbox"/>	Semi-Primitive NonMotorized	<input type="checkbox"/>	WROS 6
<input type="checkbox"/>	Primitive		

Designed Use (Check one)

Hiker / Pedestrian

Pack & Saddle

Bicycle

Wheelchair

Motorcycle

All Terrain Vehicle (ATV)

Cross-Country Ski

Snowshoe

Dog Sled

Snowmobile

Watercraft - NonMotorized

Watercraft - Motorized

Design Parameters (Fill in all that apply)

Tread Width (inches)

Grade: Target Range (%) (> 30% of TMO segment)

Grade: Short Pitch Max (%) (up to 200' length)

Cross-Slope (%)

Clearing Width (feet)

Clearing Height (feet)

Switchback Radius (feet)

Target Frequency Per Year (Fill in all that apply)

Trail Opening

Tread Repair

Drainage Cleanout

Logging Out

Brushing

Snow Trail Grooming

Condition Survey



# TRACS Trail Management Objectives

Trail Name: **Sweet Grass X-Ski Trail**

Trail Number: **Sno-122**

## Travel Management Strategies FSM 2353.19

Managed Use		From Date	To Date
<small>(Fill in all that apply)</small>		<small>(mm/dd)</small>	<small>(mm/dd)</small>
<input type="checkbox"/>	Hiker / Pedestrian		
<input type="checkbox"/>	Pack & Saddle		
<input type="checkbox"/>	Bicycle		
<input type="checkbox"/>	Wheelchair		
<input type="checkbox"/>	Motorcycle		
<input type="checkbox"/>	All Terrain Vehicle (ATV)		
<input type="checkbox"/>	_____		
<input checked="" type="checkbox"/>	Cross-Country Ski	12/1	3/31
<input checked="" type="checkbox"/>	Snowshoe	12/1	3/31
<input type="checkbox"/>	Dog Sled		
<input type="checkbox"/>	Snowmobile		
<input type="checkbox"/>	_____		
<input type="checkbox"/>	Watercraft-NonMotorized		
<input type="checkbox"/>	Watercraft - Motorized		

Prohibited Use		From Date	To Date
<small>(Check if applicable)</small>		<small>(mm/dd)</small>	<small>(mm/dd)</small>
<input checked="" type="checkbox"/>	All Motorized Use	1/1	12/31
<small>(Or, fill in all that apply)</small>			
<input type="checkbox"/>	Hiker / Pedestrian		
<input type="checkbox"/>	Pack & Saddle		
<input type="checkbox"/>	Bicycle		
<input type="checkbox"/>	Wheelchair		
<input type="checkbox"/>	Motorcycle		
<input type="checkbox"/>	All Terrain Vehicle (ATV)		
<input type="checkbox"/>	_____		
<input type="checkbox"/>	Cross-Country Ski		
<input type="checkbox"/>	Snowshoe		
<input type="checkbox"/>	Dog Sled		
<input type="checkbox"/>	Snowmobile		
<input type="checkbox"/>	_____		
<input type="checkbox"/>	Watercraft - NonMotorized		
<input type="checkbox"/>	Watercraft - Motorized		

Other Use		Accept	Discourage	Eliminate
<small>(Optional: Check any that apply)</small>				
<input type="checkbox"/>	Hiker / Pedestrian			
<input type="checkbox"/>	Pack & Saddle			
<input type="checkbox"/>	Bicycle			
<input type="checkbox"/>	Wheelchair			
<input type="checkbox"/>	Motorcycle*			
<input type="checkbox"/>	All Terrain Vehicle (ATV)*			
<input type="checkbox"/>	_____			
<input type="checkbox"/>	Cross-Country Ski			
<input type="checkbox"/>	Snowshoe			
<input type="checkbox"/>	Dog Sled			
<input type="checkbox"/>	Snowmobile			
<input type="checkbox"/>	_____			
<input type="checkbox"/>	Watercraft - NonMotorized			
<input type="checkbox"/>	Watercraft - Motorized			

Special Considerations	
<small>(Check any that apply. Underline appropriate clarifier in parenthesis. Provide specifics and reference information below.)</small>	
<input type="checkbox"/>	Shared System (shared with other road or trail)
<input type="checkbox"/>	Accessible per Current Agency Guidelines
<input checked="" type="checkbox"/>	<sup>2</sup> Mechanized Tools or Equipment Prohibited
<input type="checkbox"/>	T&E or Sensitive Species Present ( <u>Plant / Wildlife</u> )
<input type="checkbox"/>	Heritage Resource Present
<input type="checkbox"/>	Easement across Non-FS Land ( <u>Existing / Needed</u> )
<input checked="" type="checkbox"/>	<sup>3</sup> Existing Permit or Agreement ( <u>Trail-Specific / Area</u> )
<input type="checkbox"/>	_____

Remarks / Reference Information	
<sup>1</sup> Motorized use prohibited year-round (CFR.)	
<sup>2</sup> Primitive tools only.	
<sup>3</sup> Special use permit with Big Timber Cross Country Ski Club to maintain the trail for x-skiing.	

Line Officer: Name **Grant Marnier**  
 Title **District Ranger**

Signature *Grant Marnier*  
 Date **1/15/2007**

# Appendix H

## USFS Trail Design Parameters Updated: 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 HIKER-PEDESTRIAN		Trail Class 1	Trail Class 2	Trail Class 3*	Trail Class 4*	Trail Class 5*
Design Tread Width	Wilderness	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
	Non-Wilderness	0" – 12"	6" – 18"	18" – 48"	32" – 96"	36" – 120"
Design Surface	Type	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.
	Obstacles	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".
Design Grade**	Target Range (>90% of Trail)	< 25%	< 18%	< 12%	< 10%	< 5%
	Short Pitch Max (Up to 200' lengths)	40%	35%	25%	15%	10%
	Max Pitch Density***	< 10% of trail	< 5% of trail	< 5% of trail	< 3% of trail	< 3% of trail
Design Cross-Slope	Target Range	Not applicable	5 – 20%	5 – 10%	3 – 7%	2 – 3% (or crowned)
	Maximum	Up to natural side-slope.	Up to natural side-slope	15%	10%	3%
Design Clearing	Width	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.
	Height	6'	6' – 7'	8'	8'	> 8'
Design Turns	Radius	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 Updated: 1/31/2005

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 PACK AND SADDLE		Trail Class 1	Trail Class 2	Trail Class 3	Trail Class 4	Trail Class 5
<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" – 24" (With above exceptions)	18" – 48" (With above exceptions)	36" – 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 (&gt;90% of Trail)</b>		< 20%	< 12%	< 10%	
	<b>Short Pitch Max (Up to 200' lengths)</b>		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 Design Parameters Updated: 1/31/2005

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 BICYCLE		Trail Class 1	Trail Class 2	Trail Class 3	Trail Class 4	Trail Class 5
Design Tread Width	One Lane	6" – 12"	12" – 24"	18" – 30"	24" – 48"	36" – 60"
	Two Lane	Not applicable.	Not applicable.	48" – 60" Accommodate two-lane travel with passing lanes.	60" – 84"	72" – 120"
Design Surface	Type	Native. Rough, unstable or soft tread.	Native, with limited grading. Unstable or soft sections likely.	Native with some on-site borrow or imported materials. Some soft areas.	Likely imported or stabilized tread. Few, if any, loose or soft surfaces.	Firm, hardened surface.
	Obstacles	Rocks, logs and roots up to 6–12" common. Forced portages likely.	Embedded rock, protrusions to 6". Some portages may be needed.	Generally smooth with few protrusions exceeding 3".	Smooth, few obstacles. 1 – 2" protrusions.	No obstacles to wheeled transport.
Design Grade*	Target Range (>90% of Trail)	15% – 18%	< 12%	< 10%	< 8%	< 5%
	Short Pitch Max (Up to 200' lengths)	30% 50% on downhill-only travel.	25% 35% on downhill-only travel.	15%	10%	8%
	Max Pitch Density***	< 10% of trail	< 5% of trail	< 5% of trail	< 3% of trail	< 3% of trail
Design Cross-Slope	Target Range	5% – 10%	5% – 10%	5%	3% – 5%	3% – 5%
	Maximum					
Design Clearing	Width	24" – 36" Some vegetation may encroach into clearing area.	36" – 48" Some light vegetation may encroach into clearing area.	12" – 18" outside of tread edge.	12" – 18" outside of tread edge.	18" – 24" outside of tread edge.
	Height	6' – 7"	7' – 8"	8'	8' - 9'	8' - 9'
Design Turns	Radius	3' - 4'	4' – 6'	6' – 8'	8' – 10'	8' - 12'

\* 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.

# Appendix I

## National Trail Management Classes

Updated 1/31/2005

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

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

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

Trail Attributes	Trail Class 1 Minimal/Undeveloped Trail	Trail Class 2 Simple/Minor Development Trail	Trail Class 3 Developed/Improved Trail	Trail Class 4 Highly Developed Trail	Trail Class 5 Fully Developed Trail
<b>General Criteria</b>					
Physical Characteristics to be Applied to All National Forest System Trails					
<b>Tread and Traffic Flow</b>	<ul style="list-style-type: none"> <li>♦ Tread intermittent and often indistinct</li> <li>♦ May require route finding</li> <li>♦ Native materials only</li> </ul>	<ul style="list-style-type: none"> <li>♦ Tread discernible and continuous, but narrow and rough</li> <li>♦ Few or no allowances constructed for passing</li> <li>♦ Native materials</li> </ul>	<ul style="list-style-type: none"> <li>♦ Tread obvious and continuous</li> <li>♦ Width accommodates unhindered one-lane travel (occasional allowances constructed for passing)</li> <li>♦ Typically native materials</li> </ul>	<ul style="list-style-type: none"> <li>♦ Tread wide and relatively smooth with few irregularities</li> <li>♦ Width may consistently accommodate two-lane travel</li> <li>♦ Native or imported materials</li> <li>♦ May be hardened</li> </ul>	<ul style="list-style-type: none"> <li>♦ Width generally accommodates two-lane and two-directional travel, or provides frequent passing turnouts</li> <li>♦ Commonly hardened with asphalt or other imported material</li> </ul>
<b>Obstacles</b>	<ul style="list-style-type: none"> <li>♦ Obstacles common</li> <li>♦ Narrow passages; brush, steep grades, rocks and logs present</li> </ul>	<ul style="list-style-type: none"> <li>♦ Obstacles occasionally present</li> <li>♦ Blockages cleared to define route and protect resources</li> <li>♦ Vegetation may encroach into trailway</li> </ul>	<ul style="list-style-type: none"> <li>♦ Obstacles infrequent</li> <li>♦ Vegetation cleared outside of trailway</li> </ul>	<ul style="list-style-type: none"> <li>♦ Few or no obstacles exist</li> <li>♦ Grades typically &lt;12%</li> <li>♦ Vegetation cleared outside of trailway</li> </ul>	<ul style="list-style-type: none"> <li>♦ No obstacles</li> <li>♦ Grades typically &lt;8%</li> </ul>

Trail Attributes	Trail Class 1 Minimal/Undeveloped Trail	Trail Class 2 Simple/Minor Development Trail	Trail Class 3 Developed/Improved Trail	Trail Class 4 Highly Developed Trail	Trail Class 5 Fully Developed Trail
<b>General Criteria</b> Physical Characteristics to be Applied to All National Forest System Trails					
<b>Constructed Features and Trail Elements</b>	<ul style="list-style-type: none"> <li>Minimal to non-existent</li> <li>Drainage is functional</li> <li>No constructed bridges or foot crossings</li> </ul>	<ul style="list-style-type: none"> <li>Structures are of limited size, scale, and number</li> <li>Drainage functional</li> <li>Structures adequate to protect trail infrastructure and resources</li> <li>Primitive foot crossings and fords</li> </ul>	<ul style="list-style-type: none"> <li>Trail structures (walls, steps, drainage, raised trail) may be common and substantial</li> <li>Trail bridges as needed for resource protection and appropriate access</li> <li>Generally native materials used in Wilderness</li> </ul>	<ul style="list-style-type: none"> <li>Structures frequent and substantial</li> <li>Substantial trail bridges are appropriate at water crossings</li> <li>Trailside amenities may be present</li> </ul>	<ul style="list-style-type: none"> <li>Structures frequent or continuous; may include curbs, handrails, trailside amenities, and boardwalks</li> <li>Drainage structures frequent; may include culverts and road-like designs</li> </ul>
<b>Signs</b>	<ul style="list-style-type: none"> <li>Minimum required</li> <li>Generally limited to regulation and resource protection</li> <li>No destination signs present</li> </ul>	<ul style="list-style-type: none"> <li>Minimum required for basic direction</li> <li>Generally limited to regulation and resource protection</li> <li>Typically very few or no destination signs present</li> </ul>	<ul style="list-style-type: none"> <li>Regulation, resource protection, user reassurance</li> <li>Directional signs at junctions, or when confusion is likely</li> <li>Destination signs typically present</li> <li>Informational and interpretive signs may be present outside of Wilderness</li> </ul>	<ul style="list-style-type: none"> <li>Wide variety of signs likely present</li> <li>Informational signs likely (outside of Wilderness)</li> <li>Interpretive signs possible (outside of Wilderness)</li> <li>Trail Universal Access information likely displayed at trailhead</li> </ul>	<ul style="list-style-type: none"> <li>Wide variety of signage is present</li> <li>Information and interpretive signs likely</li> <li>Trail Universal Access information is typically displayed at trailhead</li> </ul>
<b>Typical Recreation Environments and Experience<sup>2</sup></b>	<ul style="list-style-type: none"> <li>Natural, unmodified</li> <li>ROS: Often Primitive setting, but may occur in other ROS settings</li> <li>WROS: Primitive</li> </ul>	<ul style="list-style-type: none"> <li>Natural, essentially unmodified</li> <li>ROS: Typically Primitive to Semi-Primitive setting</li> <li>WROS: Primitive to Semi-Primitive</li> </ul>	<ul style="list-style-type: none"> <li>Natural, primarily unmodified</li> <li>ROS: Typically Semi-Primitive to Roded Natural setting</li> <li>WROS: Semi-Primitive to Transition</li> </ul>	<ul style="list-style-type: none"> <li>May be modified</li> <li>ROS: Typically Roded Natural to Rural setting</li> <li>WROS: Transition</li> </ul>	<ul style="list-style-type: none"> <li>Can be highly modified</li> <li>ROS: Typically Rural to Urban setting</li> <li>Commonly associated with Visitor Centers or high-use recreation sites</li> <li>Not present in Wilderness</li> </ul>

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

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

## Additional Criteria

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

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

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

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

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

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

## Trail Operation and Maintenance Considerations

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

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

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

# Appendix J

## GPS Data Point Field Notes

Point Reference Folder	Photo Number	Feature	Sign Name	Comments
223_BullMtn	5285 - 5286	Xsection Marker	1C	Xsection Marker 1C
	5286 - 5287	Photo Point		Needs Armoring
	5299	Downed Tree		downed tree
	5325 - 5326 and 5328	Photo Point		add berm and grade reversals
	5333 - 5335	Photo Point		All soil is settling out and not draining - splash erosion - surf the ridge by adding undulations and meanders - grade reversals
	5336 - 5347	Photo Point		trail tread watershed is too long - needs grade reversal to drain water off and shorten trail tread watersheds
	5350 - 5353	Xsection Marker	1D	confluence of 3 trails
223_BullMtn_1E_1D	5897	Xsection Marker	1E	Xsection Marker 1E
	5899	Photo Point		water off - knick
	5902 - 5909	Water Crossing		Needs Rock Armoring
	5913	Photo Point		inside trench w/ rock - capture b4 gets in tread
	5914 - 5916	Photo Point		Need to Open Line of Sight
	5918	Photo Point		View
	5921	Photo Point		View of Nice Sideslope
	5924	Photo Point		Mud Spot
	5927 - 5928	Point of Interest		Old Truck
	5942 - 5947	Photo Point		Needs Undulation and Meanders to improve drainage
223_BullMtn_HorseOnly	5303	Xsection Marker	1	Split with Bikes and Horses
	5959	Xsection Marker	1	Split with Bikes and Horses
	5969	Photo Point		Horse Only Section - Bad Trail Condition
223A_WestJonesCrk		Camp Site		Camp Site
	5268	Downed Tree		Downed Tree

Point Reference Folder	Photo Number	Feature	Sign Name	Comments
223A_WestJonesCrk	5272	Photo Point		View of FDR 77A - Inventoried road bed that contours with the landscape
	5273	Photo Point		View of FDR 77A - Inventoried road bed that contours with the landscape
	5274	Photo Point		View of FDR 77A - Inventoried road bed that contours with the landscape
	5276 - 5281	Camp Site		Camp Stovewood
	5355	Photo Point		View of Old Road Bed which has cobble and rock to provide armoring to protect from erosion
	5358	Gate		Gate
	5360	Water Crossing		Water Crossing
	5361	Waterfall		stream w waterfall
	5366	Waterfall		Waterfall
	5367	Photo Point		sediment in creek
223B_BearHare_SaddleBack	5282	Xsection Marker	1F	Xsection Marker 1F
	5283	Xsection Marker	1G	Gate and Marker 1G
	5287 - 5289	Photo Point		Erosion on Active Uninventoried Road Bed
	5290 - 5291	Photo Point		Erosion on Active Uninventoried Road Bed
	5295 - 5299	Photo Point		End Uninventoried Road Bed - becomes singletrack
	5301	Photo Point		some erosion taking place along the Bear Hare Trail
	5306	Downed Tree		tree needs removal
	5308 - 5309	Photo Point		Volunteers from SORBA and CTHA discussing trail alignment along the Bear Hare Trail
	5310 - 5312	Photo Point		Needs Drainage
	5315 - 5317	Photo Point		22pct grade - slight rolling realignment
	5320 - 5321	Photo Point		This section has natural ruggedness users desire -- Surf the ridge with undulations and meanders - grade reversals
	5324 - 5325	Photo Point		Needs Undulation and Meander
	5330	Photo Point		View of an old extraction corridor that takes off from the Bear Hare Trail
5331 - 5333	Water Crossing		Needs Armoring	

Point Reference Folder	Photo Number	Feature	Sign Name	Comments
223B_BearHare_SaddleBack	5334	Sign		Bear Hare Trail Sign
	5335	Waterfall		Waterfall
	5336	Water Crossing		Needs Armoring
	5337 - 5339	Water Crossing		Needs Armoring
	5340 - 5341	Photo Point		move trail 4 feet to edge for drainage
	5346	Water Crossing		Needs Armoring
	5347	Photo Point		grade reversal
	5348 - 5349	Water Crossing		Needs Armoring
223C_WhoopDeDos	5358	Downed Tree		tree fall
	5362 - 5367	Downed Tree		treefall & meander around tree for drainage gatewa
	5374 - 5376	Photo Point		roads to trail conversion create und and meander
	5387 - 5391	Xsection Marker	1H	Confusing signage
	5401	Water Crossing		Lance Creek
	5896	Camp Site		Camp Site at Lance Creek
223D_BullMtnCutoff	5405 - 5406	Photo Point		Road Bed
	5407 - 5413	Photo Point		Booger Hollar
	5414 - 5415	Sign	No Horses - No Bikes	Sign marking no horses on the old cutoff trail that has been closed
	5983 and 5988 - 5991	Water Crossing		Sediment loading in stream and into private proper
	5987	Gate		Gate
	5992 - 5993	Sign		Boundary Sign
223E_JonesCreekDam	5163	Wildlife Opening		Wildlife Opening - Food Plot
	5167 - 5168	Wildlife Opening		Road above food plot - rolling dips filling in - surface harden area from a roads budget
	5169 - 5172	Point of Interest		Jones Creek Dam
	5176 - 5179	Wildlife Opening		Eroding road and trail within wildlife clearing - Relocate trail onto a sustainable grade
	5181	Photo Point		Mud Hole - Do positive drainage work where problem originated - Surface Work for drainage - Knick at point where mud hole exists

Point Reference Folder	Photo Number	Feature	Sign Name	Comments
223E_JonesCreekDam_1J_2B	5698	Point of Interest		Game check station
	5699	Photo Point		trail head has no section marker
	5701 - 5702	Photo Point		This section has undulations and meanders and is in good condition
	5703	Photo Point		This section needs dips
	5705 - 5707	Wildlife Opening		Wildlife Opening - beginning
	5708 - 5710	Wildlife Opening		Wildlife Opening - has great views
	5711	Wildlife Opening		Wildlife Opening - end
	5723 - 5730	Photo Point		Steep section of trail descends to road with no positive drainage - Relocate this section
	5731	Xsection Marker	1K	Xsection Marker 1K
	5732 - 5736	Kiosk		Kiosk at intersection of Marker 1K and 2A and FDR77A
	5737 - 5740	Xsection Marker	2A	Intersection of Marker 2A with FDR77A
	5744 - 5749	Xsection Marker	2B	End of 223E Jones Creek Dam Trail and Intersection with 223L Nimblewill Branch C Trail
223F_BullMtnConnector	5136	Road Crossing		Rd 83 Xing
	5136 - 5141	Photo Point		Surface Harden - Rolling Dips
	5143	Photo Point		Knick
	5149-1	Xsection Marker	1	Intersection of FDR83 and Horse Only Segment
	5151	Photo Point		Horse Only Section Ends in Bull Mtn Parking
	5154 - 5156	Photo Point		Needs Armoring
	5157 and 5160	Kiosk		Kiosk
	5160	Gate		Gate
	5160 and 5157	Xsection Marker	1B	Bull Mtn Parking Kiosk at Rd 83

Point Reference Folder	Photo Number	Feature	Sign Name	Comments
223F_BullMtnConnector	5161 - 5162	Water Crossing		Road point source pollution into stream
	IMG_1893	Xsection Marker	3B	Xsection Marker 3B
223G_BullMtnSpur	5304 - 5306	Water Crossing		remove culvert and add armoring
	5318 - 5320	Photo Point		Add berm on banked corner and knick low spot to drain better
	5321	Photo Point		needs grade reversal
	5323	Downed Tree		Downed Tree
223H_JakeMtn_3D_3C		Waterfall		It would enhance the trail experience to locate a new trail along this sideslope to both hear and view the waterfall
		Xsection Marker	3C	road barrier
	2077 - 2093	Water Crossing		Jones Creek Crossing - Geotextile Failing - Recommend Armoring
	2103 - 2105	Photo Point		mud problem - drainage
	5246 - 5248	Photo Point		Old Road Bed - Mud Holes at bottom of long grades with no positive drainage - needs grade reversals
	5249 - 5252	Photo Point		Old Road Bed - Mud Holes at bottom of long grades with no positive drainage - needs grade reversals
	5253 - 5256 and 2050 - 2056	Photo Point		Old Road Bed - Mud Holes at bottom of long grades with no positive drainage - needs grade reversals
	5257 and 2058 - 2060	Photo Point		Old Road Bed - Mud Holes at bottom of long grades with no positive drainage - needs grade reversals
	5258 - 5260	Photo Point		Steep grade that is severely eroded with no positive drainage turnouts - Recommend closure and relocation
	5261 - 5265	Water Crossing		Geotextile Failing at stream crossing - Needs Armoring
223H_JakeMtn_3D_3F	5469 - 5472	Photo Point		Severe Erosion with Mass Soil Loss
	5477 - 5480	Photo Point		Severe Erosion with Mass Soil Loss that is settling at bottom of steep grade
	5482 - 5483	Water Crossing		small stream crossing needs rock armoring

Point Reference Folder	Photo Number	Feature	Sign Name	Comments
223H_JakeMtn_3D_3F	5490	Photo Point		end of flagged relocation
	5499 - 5501	Water Crossing		muddy creek xing - needs armoring
	5511	Downed Tree		Downed Tree needs to be removed
	5515 - 5516	Xsection Marker	3F	Intersection of Jake Mtn Trail and Nimblewill Branch 223K Trail - Marker 3F
223J_MossCreek_1J_3E	5182	Xsection Marker	1J	Intersection of 1J
	5183 - 5185	Xsection Marker	1	Drop the trail and spread forks out - anchor turn around maple tree - come between twin white pine
	5186	Photo Point		Needs Drainage - Create Grade Reversal by pulling trail back to the spoilage
	5187	Photo Point		View a decent section of the Moss Creek Trail
	5188 - 5190	Photo Point		Solve problem uphill from bottom where sediment is settling and moving
	5191 - 5193	Point of Interest		DNR Equipment Shed
	5194 - 5198	Photo Point		Steep Grade with Sinkhole Hazards - Needs relocation
223J_MossCreek_3E_3D	5201 - 5208	Xsection Marker	3E	Marker 3E - Trail crosses FDR 28-1 and FDR77 - Near Game Check Station
	5206 and 5206-1	Xsection Marker	3E	Xsection Marker 3E
	5210 - 5211	Photo Point		Entire segment needs relocation - Mud Holes full with sediment - No positive drainage
	5215 - 5216	Photo Point		Entire segment needs relocation - Steep Grade with no positive drainage
	5217 - 5226 and 5424 - 5428 and 2009 - 2015	Photo Point		Entire segment needs relocation - Steep Grade - 1000 plus linear feet with no positive drainage
	5227 - 5234 and 5429 - 5442 and 2015 - 2034	Water Crossing		Moss Creek - Sediment loading in Moss Crk causing resource damage - Geotextile fabric failed
	5235 - 5237	Photo Point		Relocate entire section - Climbing steep unsustainable grade out of Moss Creek
	5238 - 5244 and 5445 - 5446	Photo Point		Relocate entire section - Climbing steep unsustainable grade out of Moss Creek
	5420 - 5422	Photo Point		Entire segment needs relocation - Steep Grade with no positive drainage
5443 - 5444	Photo Point		Relocate section - Climbs steep grade out of Moss Creek	

Point Reference Folder	Photo Number	Feature	Sign Name	Comments
223J_MossCreek_3E_3D	5447 - 5452	Point of Interest		old vista
	5453	Xsection Marker	3D	intersection of Moss Creek Trail with Jake Mtn Trail - beaver pond trail
223K_NimblewillBranch	5850 - 5851	Xsection Marker	2D	Xsection Marker 2D
	5854	Wildlife Opening		Trail co-located with road which is used to access this wildlife clearing
223K_NimblewillBrch_3K_3F	5517 - 5520	Water Crossing		Small Water Crossing of Moss Creek - Geotextile is failing - Replace with rock armoring
	5684	Xsection Marker	3K	Intersection of Marker 3K with FDR28B
223L_NimblewillBranch_C	5752 - 5753	Photo Point		need to get water off at low spot
	5754 - 5761	Bridge		Bridge is not safe for horses - has no center stringer and boards are wobbly - board spacing should be wider to allow water to drain through
	5769	Photo Point		end of relocation that SORBA did the work for
	5770 - 5771	Photo Point		Need to provide better drainage here with knicks and a grade reversal
	5774 - 5775	Photo Point		This spot has courderoy - rock armoring would work better to also elevate the user
	5777	Photo Point		Steep Slope meander trail tread towards outslope to improve drainage
	5778	Photo Point		This section needs armoring
	5781	Xsection Marker	2C	Marker 2C and Gate for FDR28A
	5784	Photo Point		Trail co-located with uninventoried road bed
	5785	Photo Point		Intersection of Nimblewill Branch C Trail 223L and C Spur Trail 223M
223M_NimblewillBrch_CSpur	5786 - 5789	Bridge		Bridge crossing Turner Creek is in good condition
223N_BlackBranch_3H_3J		Downed Tree		Downed Tree
	5678	Downed Tree		Downed Tree
	5680	Xsection Marker	3J	Intersection of Marker 3J
223N_BlackBranch_FR28F	5538	Xsection Marker	3i	INFRA has road coded as FDR 28G and open -- On the ground this road is marked FDR 28F and road is closed with a permanent barricade

Point Reference Folder	Photo Number	Feature	Sign Name	Comments
223N_BlackBranch_FR28F	5545 - 5546	Photo Point		Old Road Bed that is cupped in the middle and below grade - Recommend a Roads to Trail Conversion to create grade reversals with undulations and meanders - improve drainage and reduce erosion
	5553 - 5554	Photo Point		
	5557	Photo Point		
	5560 - 5562	Photo Point		
	5563 - 5566	Downed Tree		This area has several trees which have fallen over the trail which needs removal
	5572 - 5573 and 5577 - 5581	Photo Point		Old road bed that appears to be single track - This trail appears to experience less use and has leaf litter to protect from severe erosion - Road to Trail Conversion would improve drainage
	5574 - 5576	Water Crossing		Small stream crossing - Rock Armoring is ideal - could use a half round culvert
	5582 - 5584	Photo Point		needs swale
	5585 - 5589	Downed Tree		knick or wingditch - treefall
	5590	Photo Point		great spot for training for ditch witch
	5591 - 5593	Photo Point		Severe Erosion - Relocate this section
	5594 - 5595	Photo Point		avoidance trail
	5604	Photo Point		x with private rd
	5606	Sign		property boundary sign
	5607 - 5610	Downed Tree		down tree
	5611 - 5620	Photo Point		Steep grade which descends from FDR28F for 1000 plus feet towards Black Branch Creek with no positive drainage - Relocate this section of trail
	5621 - 5634	Water Crossing		Stream Crossing at Black Branch Creek - Geotextile has failed - Remove Geotextile and replace with rock armoring
5635 - 5637	Water Crossing			
223N_BlackBranch_FR28G	5638 - 5644	Photo Point		Steep grade which descends from FDR28G for 1000 plus feet towards Black Branch Creek with no positive drainage - Relocate this section of trail
	5645 - 5650	Photo Point		This section has rolling broad based dips but missed the knicks -- Undulations and meanders would work better to drain water

Point Reference Folder	Photo Number	Feature	Sign Name	Comments
223N_BlackBranch_FR28G	5655 - 5659	Photo Point		Old Road Bed that is cupped in the middle and below grade - Recommend a Roads to Trail Conversion to create grade reversals with undulations and meanders - improve drainage and reduce erosion
	5661 - 5665	Photo Point		mud hole within active road bed
	5666	Sign		Sign marking road as FDR28G - INFRA shows FDR28F and 28G to be flip-flopped - This needs to be updated
	5667 - 5670	Xsection Marker	3H	Confusing signage for Marker 3H
	5681 - 5682	Sign		FDR28B
	5697	Xsection Marker	3L	Xsection Marker 3L
223P_NoTell	5819	Photo Point		Mud spot - a knick would help this to drain
	5825	Photo Point		Co-located with uninventoried road bed - steep grade
	5829	Photo Point		Road ends and trail begins
	5836	Water Crossing		small stream crossing
BullMtn_Parking	5126 - 5129 and 5152 - 5155	Parking		Bull Mtn Parking and Horse-Tie out area
	5529 - 5530	Sign		Bull Mountain Parking Sign
Jake Campground	5521 - 5524 and 5881 - 5885 and 5891 - 5893	Horse Camp		Jake Horse Camp and turnaround
	5525 - 5527 and 5886 - 5890 and 5894	Parking		Parking area not adequate to accommodate heavy use for horse trailers & passenger cars -- Improvements needed to accommodate higher use
	5525 and 5886 - 5888	Kiosk		Kiosk
	5528	Sign		Jake Mtn Parking Lot and Horse Camp Sign
	5531 - 5532	Sign		USFS Sign @ State Rte 52 & Nimblewill Church Rd
N/A	No Photo	Gate		Gate
		Xsection Marker	2F	Xsection Marker 2F
		Xsection Marker	2G	Xsection Marker 2G