United States Department of the Interior

NATIONAL PARK SERVICE
Great Smoky Mountains National Park
Gatlinburg, Tennessee 37738

IN REPLY REFER TO:
N1623

January 28, 1986

Memorandum

To: All Park Employees

From: Superintendent

Subject: Backcountry Management Plan Implementation

The Backcountry Management Plan for Great Smoky Mountains National Park was approved and signed by me on December 20, 1985. Copies of this comprehensive plan are being distributed to all divisions, ranger stations, and key staff members.

The plan involved considerable input and review from all divisions and from interested parties from the private sector. While any document of this nature may need some adjustments during and after its first year of implementation, I believe that this represents a concerted and conscientious effort on the part of the authors to improve and document an already commendable backcountry management program.

The success of this program will rely entirely on your knowledge and compliance with the established policies and procedures described in the plan. It is especially important, therefore, that supervisors ensure that their staff have the opportunity to become familiar with the Backcountry Management Plan, particularly as it relates to your operation.

Implementation of the plan designates individual as well as collective responsibilities in various aspects of backcountry management. Attached is a summary of assigned tasks with references to those responsible for action and proposed due dates.

John E. Cook

Enclosure

BACKCOUNTRY MANAGEMENT PLAN ACTIVITIES SUMMARY
Great Smoky Mountains National Park
December 20, 1985

Section 2.6 MONITORING IMPACTS

1. All campsites will be evaluated once every other year.

   -Responsibility : Appropriate district ranger personnel
   -Completion Date: Between June 1 and September

Section 2.12 SHELTER MANAGEMENT

2. Evaluate all shelters not on the Appalachian Trail with regard to maintaining them as a part of the backcountry system.

   -Responsibility : District backcountry rangers
   -Completion Date: December 20, 1986

3. Develop regulatory signs and coordinate posting in all shelters.

   -Responsibility : District backcountry rangers
   -Completion Date: June 1, 1986

4. Fireplaces in all shelters will be permanently sealed or removed.

   -Responsibility : Facility managers
   -Completion Date: December 20, 1986

5. Survey and evaluate possible alterations to resolve trash accumulation and wire bunk problems in shelters. Initiate tests in selected sites and monitor results.

   -Responsibility : Backcountry rangers and trail crew foremen
   -Completion Date: December 20, 1986 (Implementation)
   December 20, 1988 (Final report)

Section 2.15 HORSE USE

6. Develop mandatory trail maintenance schedule for each horse concession permittee.

   -Responsibility : Management Assistant
   -Completion Date: As permits are renewed

7. An annual permittee/concessioner maintenance accomplishment report will be submitted to the Management Assistant.

   -Responsibility : Horse concession permittees
   -Completion Date: Contingent upon item #6 above

15. Review prioritized trail maintenance program annually for two years. Where necessary, refine prioritization program.

    -Responsibility: Facility managers
    -Completion Date: December 15, 1987

16. Provide an annual written report of all trail work accomplishment.

    -Responsibility : Chief of Maintenance
    -Completion Date: Incorporated in division annual report to Superintendent

Section 4 BACKCOUNTRY STRUCTURES

17. All backcountry structures should be reviewed on an annual basis to ascertain the justification for continued intrusion on the wilderness of the park.

    -Responsibility : Backcountry Use Committee
    -Completion Date: December 20, 1986

Section 6 DAY USE

18. A day use monitoring system is needed; a survey of the market and test of devices should be initiated.

    -Responsibility : Backcountry rangers
    -Completion Date: August 29, 1986 (implementation)
    December 20, 1987 (end of test period)

Section 9 UPDATING THE PLAN

19. The Backcountry Management Plan will be reviewed annually.

    -Responsibility : Assigned review committee
    -Completion Date: December

BACKCOUNTRY MANAGEMENT PLAN

GREAT SMOKY MOUNTAINS NATIONAL PARK

November 1985

Prepared by: _____ 11-14-85
Natural Resource Specialist — Date

Reviewed by: _____ 11-27-85
Chief, Resource Management Division — Date

_____ 11-29-85
Assistant Superintendent
Resource Management and Science — Date

Approved by: _____ 12/20/85
Superintendent — Date

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1. INTRODUCTION

Since its authorization in 1926, Great Smoky Mountains National Park has become the most popular of all national parks, attracting as many as nine million visitors in a single year. The 800 square miles of parkland contain some of the loftiest mountains of the East, a world-renowned abundance of plantlife, and sparkling streams and waterfalls. In 1978, the park was designated an International Biosphere Reserve because of its great diversity of relatively undisturbed populations of native plants and animals.

The dominant topographic feature of the park is the northeast trending ridgeline of the Great Smoky Mountains. Along this ridge, 20 peaks rise above 6,000 feet in elevation. The moderately sharp-crested, steep-sided ridges are separated by deep, V-shaped valleys. Slopes of 50 percent are common along the sides of ridges. Elevation ranges from 840 feet at the mouth of Abrams Creek to 6,643 feet at Clingman's Dome. So steep is the land that less than 10 percent of the surface area of the Great Smoky Mountains is found on slopes of less than 10 degrees. The variability of the terrain is a scenic asset and forms the structural matrix upon which the park's diverse biota is distributed.

The forests of the Great Smoky Mountains have been described as the most complex and diverse in North America. Major plant communities include cove hardwoods, hemlock, closed oak, northern hardwood, pine and oak, beech forests, and spruce-fir forests. Over 400 heath and several grassy balds are also located in the park.

Great Smoky Mountains National Park is an important refuge for a wide variety of rare native plant species, including three species which are strictly endemic to the park, and about 50 which are endemic to the Southern Appalachians. Approximately 10 percent of the park's native vascular plants are listed on state or national rare plant species lists. Many of these plants are sensitive to unnatural disturbance, and populations may be reduced or exterminated by human interference. Several of these plants have been proposed for listing as either endangered or threatened species at the Federal level.

Rainfall in the park is high, averaging over 64 inches annually. Precipitation is significantly greater at higher elevations. Due to the amount of precipitation, thinner soil, lower pH, and shorter growing season associated with higher elevations, these areas are fragile zones which are quick to show impact and slow to recover from them.

Over 600 miles of foot and horse trails were built and rebuilt in the park during the Civilian Conservation Corps (CCC) period from 1933 to 1943. Among these is a segment of the Appalachian Trail (AT) that follows the mountains' spine across the park from east to west.

Changes over the past several years have critically affected the maintenance of trails in the park. While the number of maintained miles has increased 66 percent in the past 10 years (based on 1970 and 1980 trail inventories),

there have occurred concurrently cutbacks in money and manpower, restrictions on the use of motorized equipment, and limitations on backcountry overnight travel for trail crews. Some trails have worn out through overuse and will have to be rebuilt or relocated.

There are 101 backcountry campsites, including 18 trail shelters. Backcountry overnight visits increased by well over 400 percent during the past two decades. This increased popularity of backcountry camping resulted in overuse of some campsites and decreasing opportunities to find solitude. The trend in backcountry visitation during the past two to four years, however, has shown a decline in visitation.

Implementation of a backcountry use permit and reservations system in the mid- to late 1970's, in addition to other localized adjustments affecting visitor use, has caused a noticeable decline in the level of human impact that was evidenced in soil compaction and loss of ground vegetation at backcountry campsites.

Certain characteristics of the backcountry, particularly the size of the area (414,000 acres), make it difficult for management, supervisors, and research personnel to observe a great deal of changes firsthand. As a result, backcountry has the potential for sustaining a great deal of abuse or other changes undetected. This abuse, coupled with the above stated circumstances, necessitates a management plan. This plan serves as an Action Plan in the Appendix of the Resource Management Plan for Great Smoky Mountains National Park.

1.1 OBJECTIVES

The primary objective of this plan is to provide for visitor enjoyment of the backcountry resources without unacceptable deterioration of the natural resources. Of utmost concern are the following key elements:

-To document backcountry hiking, horseback riding, and camping policies that will hold resource impacts to an acceptable level for a proposed wilderness area while providing the backcountry user with a high quality wilderness experience.

-To document an accountable trail maintenance program, the first priority of which is to bring the tread of park trails up to National Park Service/Great Smoky Mountains National Park standards.

-To document policies and procedures for opening, closing, and monitoring backcountry campsites.

-To provide guidelines for management and maintenance of the Appalachian Trail in conjunction with volunteer organizations and other involved state and Federal offices.

-To document policy governing structures in the backcountry.

1.2 FUNCTION

The Backcountry Management Plan will have the following functions:

-Serve as an "action plan" for the park staff in their day-to-day management of backcountry use.

-Ensure effective compliance with administrative policies.

-Serve as an "action plan" to identify and justify appropriate and needed programs which should be incorporated in the budgetary process.

1.3 GUIDELINES

The plan is written within the framework of existing legal and administrative guidelines, including the park's enabling legislation, National Park Service management policies, the Superintendent's Statement for Management, Code of Federal Regulations-Title 36, the National Trails System Act of 1978 (PL 90-543), and the General Management Plan for Great Smoky Mountains National Park.

1.4 REVIEW

An annual review of this plan will be scheduled by the Backcountry Use Committee. Composition of the committee will include the Natural Resource Specialist (chairperson) and representatives of all divisions as set forth in the Smoky Mountains Operating Procedures (SMOP). Committee meetings are open to all staff members and interested individuals.

Public participation in the management of the backcountry will be encouraged. Efforts will be made to encourage involvement of the U.S. Forest Service and other interested Federal and state agencies, local conservation organizations, and other interested parties. News releases will be utilized to summarize proposed changes.

1.5 WILDERNESS PROPOSALS

The 1974 Wilderness Recommendation proposed that 390,500 acres within the park be designated wilderness, and it was transmitted to Congress by President Ford on December 4, 1974, accompanied by the Draft Environmental Statement 74-104 (DES 74-104). The recommendation was revised in January 1978, increasing wilderness to 425,384 acres and adding 52,286 acres as potential wilderness.

Assistant Secretary Herbst, by letter of May 11, 1978, to the Speaker of the House of Representatives and to the President of the Senate, recommended that Congress defer action on the wilderness proposal until the 1943

agreement between the Department of the Interior, the Tennessee Valley Authority, State of North Carolina, and Swain County, North Carolina, was resolved. The 1943 agreement is summarized in Appendix A of the park's General Management Plan.

Unlike the 1974 wilderness recommendation, which proposed the use of small motorized equipment for maintenance of the Appalachian Trail and the immediate removal of backcountry shelters, the General Management Plan states that visitor uses and park management practices are to be of a transient nature and nonmotorized except in extreme emergencies involving either human safety or critical resource protection needs. Trail shelters will be retained except where environmental deterioration is severe or where need is lowest.

Until Congressional approval of the wilderness recommendation occurs, backcountry related management activities will be in accordance with the principles set forth in the Wilderness Act.

2. VISITOR USE LIMITS AND ACTIVITIES

2.1 GENERAL

Like many other national parks, the Great Smoky Mountains National Park has experienced a tremendous increase in visitation over the past decade. Overall visitation climbed to 8.4 million in 1981, roughly a 14 percent increase over the travel figures for 1971. The national interest in backpacking and wilderness recreation resulted in a disproportionately large increase in backcountry camping. During the same 10-year period (1971-1981), the park experienced an increase of 27 percent in backcountry use.

The plan should provide for optimum use based on a management capacity. It is realized that additional studies will be necessary to determine day use versus overnight backcountry capacities and improve methods of regulation.

Backcountry use permits (Appendix J) are required for all overnight use of the backcountry and must be in possession at all times. The backcountry camping system consists of those designated campsites and shelters listed and designated on the Great Smoky Mountains Trail Map (Appendix K). Except for those individuals whose primary interest is crosscountry hiking, camping is permitted only at these designated campsites and shelters.

The total overnight backcountry capacity is not a fixed number since establishing new campsites and closing heavily impacted sites is a necessary ongoing process. The total nightly backcountry campsite capacity will be maintained between 900 to 1,000. When all available sites are reserved, no additional permits will be issued until such time as space again becomes available for reservations.

Each campsite should contain an appropriate number of designated fire rings to accommodate the carrying capacity of the site. Backcountry users should be encouraged to use established fire rings rather than making their own. Park employees should regularly destroy surplus fire rings as they are discovered.

2.2 PERMIT SYSTEM (36 CFR 1.6)

A backcountry use permit, developed for use within the national park system, provides a registration process and statistical data base for backcountry use.

Tag use should be as follows:

-The original tag (front page) should be attached to the backpack while the party is hiking and to the tent when camp is established.

-The white copy (second page) of the permit should be forwarded to the Backcountry Reservations Office on a weekly basis.

-The pink copy (last page) may be kept as a station reference copy.

2.3 THE RESERVATION SYSTEM (36 CFR 1.5)

Since its inception in 1978, the reservation system has gained public acceptance and the number of backcountry users making reservations has increased substantially.

The current reservations policy allows for backcountry campsite and shelter reservations to be made up to 30 days prior to the beginning of the trip. Reservations can be made by telephone between 8:00 a.m. and 4:00 p.m., Monday through Friday, except holidays. The backcountry use permit must be picked up in person no earlier than 24 hours prior to starting out on the trail. If the permit is not picked up by 12:00 noon on the first day of the scheduled trip, reservations for the entire trip will be cancelled.

Although backcountry use permits may be issued out of all ranger stations, it is possible that local staff may not always be available. Consequently, backcountry users should be encouraged to obtain their permits during scheduled operating hours at Sugarlands and Oconaluftee visitor centers, and the Cades Cove, Elkmont, or Smokemont campground offices. During the winter months, the visitor centers are open until 4:30 p.m. only. The campground offices and ranger stations are open intermittently throughout the year. Backcountry use permits may be issued outside of these hours at the discretion of the individual employees.

2.4 CAMPSITE MANAGEMENT

All designated campsites will be identified by a campsite marker (Appendix L). Campsites are also readily recognizable by the bare soil and trampling consistent with concentrated visitor use. The only improvements permitted at a backcountry campsite are: fire rings; single-pole hitchracks; food storage devices; and, under extreme circumstances, pit toilets.

Length of stay in the backcountry is limited to not more than one consecutive night per shelter, or more than three consecutive nights per campsite, and no more than 14 consecutive nights for the total trip.

While party size is generally limited to a maximum of eight people, campsite capacities of fewer than eight people may be established for environmentally sensitive areas in order to keep impacts at an acceptable level. Groups composed of more than eight individuals must divide into smaller parties with different camping itineraries.

Established fire rings at each campsite are available on a first-come, first-served basis. As a matter of routine, rangers should eliminate surplus and/or illegally established fire rings in order to control campsite sprawl. Parties should be encouraged to pitch their tent or sleep within the impacted area that outlines the bounds of established visitor use for the site.

Several backcountry visitor impact studies conducted in the park during the mid- to late 1970's identified the zone above 4,000 feet, and its associated soils and plant communities, as being particularly sensitive to backcountry use. This sensitivity must be considered in relation to continued use, whether it is reflected in maintenance of established campsites, relocation of sites, or addition of new campsites to the backcountry inventory. Provisions made for visitor use must not preempt our mandate to preserve and protect the natural resources of the park's backcountry areas.

Recommendations to install or remove campsite improvements (fire rings, hitchracks, etc.) will be initiated at the subdistrict level through the campsite evaluation (Appendix M) and are subject to approval by the Chief Park Ranger. Pit toilets will be installed only as a last resort after all other alternatives have proved unsuccessful (see 2.18 SANITATION).

2.5 NEW CAMPSITES

New campsite proposals will generally be initiated at the subdistrict level and should be submitted early enough in the fall so as to reach the Resource Management Office by November 1 each year. The Subdistrict Ranger will recommend a campsite capacity based on the vegetation type and topography of the area, and management objectives. Recommendations will include:

-A completed "Campsite Criteria" form (Appendix N).

-A brief narrative (approximately one typewritten page) summarizing the reasoning process which resulted in the chosen location.

-A standard backcountry map and a copy of the topographical map showing the proposed location;

-At least four color photographs (not slides) of the proposed campsite.

Recommendations for new campsites may be submitted by any employee; however, the following people must be included in the review:

Subdistrict Ranger
District Backcountry Ranger
Assistant Chief Ranger (from appropriate state)
Facility Manager
Chief, Ranger Activities
Science Division
Backcountry Use Committee

The final determination will be made by the Superintendent.

2.6 MONITORING IMPACTS

All campsites will be evaluated once every other year, by the appropriate District ranger personnel, between June 1 and September 15. This evaluation will include:

-A "Backcountry Campsite Evaluation" form (Appendix M).
-A plane table map (scale: 1 foot = 1 mm).
-Color photographs (not slides) taken from the same photo-points each survey.

Assistant Chief Rangers (TN and NC) are responsible for ensuring the timely completion of backcountry campsite evaluations. The evaluation files will be maintained at the district level and an annual report summarizing updated findings will be submitted to the Resource Management Office by November 1.

2.7 CAMPSITE CLOSURES - PERMANENT (36 CFR 1.5, 1.7)

Consistent with applicable legislation and Federal administrative policies, the Superintendent has the authority to establish use limitations and area closures.

Recommendations for permanent closures of backcountry campsites will be submitted early enough in the fall so as to reach the Resource Management Office by November 1 each year. Closure recommendations will be initiated at the Subdistrict level and must include:

-"Recommendation for Backcountry Campsite Closure" form (Appendix O).

-"Backcountry Campsite Criteria" form (Appendix N) which was filled out when the campsite was established (or the form completed in 1980).

-The most recent "Backcountry Campsite Evaluation" form (Appendix M) including color photographs.

Recommendations for permanent closures will be reviewed by the appropriate Subdistrict, District Backcountry and Assistant Chief Rangers; Facility Manager; Chief, Ranger Activities; and the Backcountry Use Committee. The final decision to close a campsite will be made by the Superintendent. All closures will be carried out in accordance with applicable Federal regulations.

As soon as a closure has been approved, subdistrict personnel will implement and/or coordinate the following rehabilitative procedures:

-Remove all signs at the site and on the trail that refer to the site.

-Obliterate all fire rings, remove ashes and spread out over the ground at least 50 feet from the edge of the campsite.

-Either burn or carry out all litter.

-As much as possible, remove and disguise all signs of past use.

-Bare soil areas will be scarified to a depth of approximately one inch to improve the seed bed.

2.8 CAMPSITE CLOSURES - TEMPORARY

Temporary closures can be initiated at any time when judged necessary by the Subdistrict or Backcountry Ranger. Some possible reasons might include bear problems (see "Bear Management Plan"), treacherous stream crossings, wildfires, and ongoing search and rescue missions.

The appropriate Assistant Chief Ranger must be advised of the situation and the Communications Center will be notified immediately so that they can make special announcements informing all park personnel of the closure. The Communications Center will attempt to contact holders of backcountry reservations for the site and inform them of the closure.

Subdistrict Rangers are responsible for signing the campsite in accordance with park standards. The date and reason for the closure should be indicated on the sign, and a memorandum to that effect should be submitted to the Resource Management Office through the Chief, Ranger Activities.

2.9 CAMPSITE CHANGES

Recommendations for campsite changes (e.g., relocation, capacity reduction/ increase, banning of wood fires, etc.) will be submitted as part of the campsite evaluation process.

Upon completion of the review and subsequent approval, the Natural Resource Specialist will notify the following regarding changes:

-All park personnel via memorandum and three successive daily announcements on the park's radio system Morning Report.

-Visitor Services Division (for update of next edition of the trails map).

-Appropriate local interest groups (Smoky Mountain Hiking Club, Appalachian Trail Conference, etc.).

-Issuance of a Press Release through established channels.

2.10 WOOD FIRES (36 CFR 2.1[a][4], 2.13)

Wood fires are permitted at all backcountry campsites (excluding shelters) unless a ban has been approved by the Superintendent.

Recommendations to ban wood fires in specific campsites will be initiated through the campsite evaluation procedure and reviewed by the Science Division and the Backcountry Use Committee. These recommendations will be based on: level of use at the campsite; amount of wood available nearby; severity of vegetation damage; and elevation of the campsite.

Backcountry users should be encouraged to use lightweight backpack stoves instead of wood fires as a means of promoting minimum-impact camping. Where wood fires are used, only dead-and-down wood will be utilized and the visitor will be encouraged to build small fires within designated fire rings.

2.11 ASBURY TRAIL

The historic Asbury Trail is located near the eastern boundary of the park. The trail, which skirts the border of the park for 22 miles or more, passes in and out of the park boundary at various points from Cove Creek, North Carolina, to the area around Cosby, Tennessee.

The historic trail has been included in the listing of famous trailways in Campways, Boy Scouts of America maintained by the Boy Scouts of America (BSA).

In 1982 an agreement between the Boy Scouts of America and the National Park Service was established for the preservation and maintenance of the Asbury Trail by the Scouts since that group gained the most benefit from this resource through their special use. The memorandum of agreement (Appendix B) delineates responsibilities of the parties involved.

2.12 SHELTER MANAGEMENT

Trail shelters will be retained except where environmental deterioration is severe, or where current visitor use levels do not justify retention of a shelter.

Shelters provide a means of confining impacts caused by heavy overnight use when closure of the area or reduction of the carrying capacity are not realistic alternatives. While all shelters along the Appalachian Trail will remain open to public use, the fate of all other shelters will be determined on a case-by-case basis.

District backcountry rangers will evaluate all shelters not on the AT with regard to maintaining them as a part of the backcountry system. Their recommendations will be submitted through the Chief, Ranger Activities, to the Backcountry Use Committee, for review within one year of the effective date of this plan. The final determination regarding the fate of these shelters will be made by the Superintendent.

The overnight capacity of each shelter is determined by the number of bunks it contains. Wood fires should be discouraged at all shelters due to limited availability of firewood and the heavy overnight use they receive. Fireplaces in all shelters will be permanently sealed or removed within one year of the effective date of this plan.

Recurring problems involving trash accumulation under bunks, increased pest rodent populations, and damage to sleeping bags by deteriorating wire bunks underline the need for the backcountry rangers and trail crew foremen to survey and evaluate possible structural alterations and/or adjustments to established maintenance schedules which could resolve these issues. Recommendations for structural changes will be reviewed by the Backcountry Use Committee; the Superintendent will be

the approving authority and will assign the task to the appropriate area or division. Backcountry rangers will be responsible for monitoring the effectiveness of these alterations or adjustments for two years before making a final report to the Backcountry Use Committee and Superintendent for possible future expansion of changes to other sites. A regulatory sign will be developed and posted by district backcountry rangers on an inside wall of all shelters in order to call attention to special site specific as well as backcountry related regulations. (Appendix P)

2.13 CROSSCOUNTRY PERMITS

The purpose of the crosscountry permit is to provide backpackers the "opportunities for solitude or a primitive and unconfined type of recreation" as stated in the Wilderness Act. Rangers and permit writers, however, must recognize that this option in the reservation system is a privilege that is easily abused. While it is impossible to weigh the intent of each permittee in this regard, discretion in the amount of public notice given this option may be the only viable means to avoid totally compromising the controls offered through the designated carrying capacities of campsites and shelters.

Crosscountry permits can be issued by all permanent Park Rangers and those seasonal employees designated by the Subdistrict Ranger. Subdistrict and Backcountry Rangers must be notified when crosscountry permits are issued for their area.

A crosscountry permit will be issued only if all of the following conditions are met:

a. Maximum party size is limited to six people (no stock).

b. Camping locations must be at least:
-100 feet from the nearest surface water (36 CFR 2.10).
-One-half mile from any designated trail (36 CFR 1.5).
-One mile from any designated road (36 CFR 1.5).

c. Camping in spruce-fir, beech gaps, or on grassy or heath balds is prohibited (36 CFR 1.5).

d. Duration of stay at each location cannot exceed one night and the same location cannot be used twice by a party on the same trip.

e. Crosscountry campers are not permitted to use wood fires (36 CFR 2.13).

f. Campers are required to obliterate all traces of human presence upon leaving a crosscountry camp (36 CFR 2.10 [a][2]).

Camping locations for each night should be as closely pinpointed as possible using the UTM system. While it may be possible that the party may not find or reach that specific point, it will, nevertheless, be a point of reference for tracking general progress of a party as well as to identify an area reservation to aid permit writers in managing use levels in the backcountry. District Rangers are responsible for UTM training.

2.14 APPALACHIAN TRAIL THROUGH-HIKERS

The AT through-hikers are persons who are hiking the AT from a starting point at least 50 miles south of the park to an end point at least 50 miles north of the park, or vice versa. Many of them intend to hike the entire length of the 2,000-mile trail from Spring Mountain in Georgia to Mt. Katahdin in Maine.

Because the AT is an entity which exists both within and outside the boundaries of the park, we must recognize that the objectives of an AT through-hiker are somewhat different from those of the conventional backcountry user. The AT through-hiker comes to the Smokies because the AT is here, not necessarily because he or she specifically wants to traverse the Smokies.

Through-hikers are required to comply with all backcountry regulations, including the mandatory backcountry use permit. A deviation from the normal permit procedure allows all through-hikers an open permit for seven days with the stipulation that they will be required to utilize the available bunk space in shelters.

In order to ensure availability of bunk space during the peak through-hiker season, the Backcountry Reservations Office will set aside bunk space on a daily basis during the period April 1 through June 15. Bunk space reservations for northbound through-hikers has been established for individual AT shelters based upon monthly representation of the percentage of through-hiker use in relation to other backcountry users during the 1982 and 1983 seasons. These space assignments are subject to change by the reservations office should current use patterns justify alterations. Backcountry patrol rangers will make every effort possible to intensify spring patrols along the AT in order to monitor the effectiveness of the established quotas and provide recommendations as to changes to suit the needs of the backcountry hiker.

Through-hiker permits can be obtained from three locations in the park:

-Backcountry Reservations Office by mail up to three months prior to the first scheduled night in the park.

-Twentymile Ranger Station.

-Big Creek Ranger Station.

Backcountry users must, however, be made aware that unless a permit writer is specifically scheduled at ranger stations, there is always the chance that due to limited staffing, rangers might not be available to issue permits.

Southbound hikers may obtain permits from the U.S. Forest Service Ranger Station at Hot Springs, North Carolina.

The Twentymile Ranger will establish opportunities for northbound through-hikers to obtain permits in the Fontana Village and/or TVA visitor center areas. This procedure shall be outlined and provided to the Reservations Office in advance of the spring through-hiker season in order to ensure timely distribution to all permit writers, and the Appalachian Trail Council and Project Offices in Harpers Ferry.

2.15 HORSE USE (36 CFR 2.16, 2.14 [a][6])

Although use of backcountry campsites by horse parties is at this time relatively light, the capacities of these sites must include maximum allowable numbers of people and horses separately, based upon subjective determination of what the resource can tolerate. Appendix C lists horse capacities for each backcountry campsite based on recommendations of the Assistant Chief Rangers (TN and NC). Changes in these capacities and the addition of hitchracks, if determined necessary, will be accomplished through the campsite evaluation procedure.

Compared to special use and concession permittees, the amount of horse use which can be attributed to the general public is small. Imposing additional use limits on the general public, other than those which are already part of the backcountry use permit system and campsite capacities, is neither practical nor desirable.

In order to comply with the General Management Plan, which requires that horse use be kept at the 1975 to 1976 level, the following constraints are imposed on Special Use and Concession Permits:

a. The total number of (seven) permits will not be increased (36 CFR 1.5).

b. The total number of horses allowed on all permits will not exceed 190 horses (36 CFR 1.5).

c. No overnight trips which exceed the maximum backcountry party size will be authorized.

Where applicable and appropriate, permittees now operating under special use permits will be converted to concession permits as their current agreement expires.

All concession permittees who rent horses in the park are required to participate in the maintenance of the trails they use:

-The Management Assistant will, when renewing concession permits, include a mandatory trail maintenance program commensurate with the amount of impact generated by horse use (to be added to this plan as Appendix T).

-An annual permittee/concessioner maintenance accomplishment report will be submitted to the Management Assistant, with a copy to the District Backcountry Ranger and the Subdistrict Ranger.

-A written assessment of maintenance needs and permittee compliance will be the responsibility of the Backcountry and Subdistrict Rangers in cooperation with trail crew foremen. The report will be submitted annually to the appropriate Assistant Chief Ranger and the Management Assistant.

The following regulations apply to all horse use:

a. Horses must be kept under physical control at all times; they may not be left to graze or water unattended (36 CFR 2.16 [d][g]).

b. Horses are not permitted within 100 feet of shelters or campsites (36 CFR 2.16 [g]).

c. Off-trail horseback riding is prohibited (36 CFR 2.16 [b]).

d. Grazing is not permitted; all food must be packed in. Hay is not permitted in the backcountry due to the likelihood of introducing seeds of exotic grasses (36 CFR 2.16[g]).

e. Hitchracks, when available, must be used (36 CFR 2.16[g]).

f. In the absence of hitchracks, horses must be tied to a line strung between trees in such manner that stock cannot damage tree trunks, tree roots, or other vegetation. Tying horses directly to trees is prohibited (36 CFR 2.16[g]).

g. Horse manure that has accumulated from overnight tethering must be scattered away from the campsite (36 CFR 2.16[g]).

h. Horses must not be tied closer than 100 feet to any stream or water source (36 CFR 2.16[g]).

2.16 SIGNS

Backcountry signs should provide clear information relating to points ahead and distances, and should provide reassurance to hikers regarding their choice of routes. Several factors should be considered in selecting a sign system, and the guidelines contained in Appendix D are a means to promote uniformity, clarity, simplicity, education, safety, and economy.

Requests for signs will generally originate at the subdistrict level, but regardless of origin, the request must meet basic backcountry sign standards of Appendix D. Review of proposals will include the following:

Subdistrict Ranger
Trail Foreman
District Facility Manager
District Backcountry Ranger
Assistant Chief Ranger (appropriate state)
Chief, Ranger Activities

A Backcountry Sign Subcommittee, within the Backcountry Use Committee, is established to determine the needs for all signs and markers necessary for proper interpretation, direction, information, and control of backcountry visitor use. Replacement of existing signs will not require committee action unless there are changes in text, size, location, etc. Resolution of particular problem areas, changes in policy, and the like, will be referred to the Backcountry Use Committee.

The Backcountry Sign Subcommittee includes the following:

Chairman: Backcountry Reservations Representative (Ron Click)
North Carolina Backcountry Ranger (Doug Raeburn)
Visitor Services Division Representative (Don DeFoe)

2.17 SANITATION (36 CFR 2.14)

The primary concerns in backcountry sanitation efforts are to prevent the presence of human and horse waste, garbage, and trash from reaching obtrusive levels; to avoid fecal contamination of water resources; and to protect the health of backcountry users.

Litter will be removed within the campsite and extending at least 25 feet beyond the impact boundaries associated with all campsites and shelters at least once every two months between April 1 and September 30.

Park staff litter control efforts at all shelters will be supplemented by a volunteer program consisting of a sign posted inside each shelter asking that occupants police the area when they leave and carry out any

trash they find. To enhance this volunteer program, District Backcountry Rangers will seek sources of appropriate design litter bags and coordinate procurement and distribution to permit issue stations so that bags can be provided to all interested backcountry users. The backcountry campsite evaluation procedure should be used as the vehicle in which the effectiveness of this program is analyzed.

All illegal fire rings will be destroyed and ashes in designated fire rings will be cleared out and spread (so as to be inconspicuous).

Although maintenance of backcountry campsites and shelters is the primary responsibility of the District Trail Crew Foremen, area rangers and maintenance supervisors must cooperate in these tasks so that collectively the funds and manpower will be available to ensure good housekeeping of these public use sites. To assist in this endeavor, rangers and all other employees on backcountry patrols will routinely remove litter from campsites and obliterate illegal fire rings.

Since pit toilets are not available at most backcountry camping areas, the "cathole" method will be encouraged as the primary means of human waste disposal. Human waste should be buried four to six inches deep and at least 100 feet from the nearest camping area or source of surface water.

Should visitor use at a particular campsite or shelter become such that the cathole method is insufficient to accomplish acceptable sanitary standards, the following alternatives will be implemented in the order shown:

1. Temporary closure; reopen with reduced capacity.

2. Permanent closure.

3. Install a toilet system that fits in with site specific environmental components.

Pit toilets will be installed only where closing of the shelter or campsite may not be a practical solution and the cathole method of disposal has proven inadequate, but where soil profile is favorable. Site specific systems will only be used at those shelters on the AT where the cathole method is inadequate and the soil profile is not favorable for pit toilets.

The decision to install a privy will be made on a case-by-case basis following the preparation and submittal of an assessment by the Sub-district or Backcountry Ranger to the following people for review:

District Backcountry Ranger
Assistant Chief Ranger (appropriate state)
District Facility Manager
Resource Management Specialist
Chief, Ranger Activities
Park Sanitarian

The final determination will be made by the Superintendent.

Existing pit toilets that are unjustified will be dismantled and removed or burned when they become full.

In order to prevent sanitation problems, horse users should be discouraged from keeping their stock within 100 feet of shelters or cooking and sleeping areas of campsites. They should also be encouraged to tie their stock at least 100 feet from any stream or water source. Manure should be scattered away from the campsite and hitchracks. Should manure at a campsite or shelter reach an unacceptable level, the following measures will be implemented at the subdistrict level in the order shown:

1. Temporary closure; reopen with reduced horse capacity.

2. Permanent closure to horses.

Camping within 100 feet of a flowing stream, river, or body of water is strictly prohibited (36 CFR 2.10 [3]). Polluting or contaminating park area waters or water courses is prohibited (36 CFR 2.14 [6]). Therefore, bathing or washing of utensils in surface water should be discouraged and flagrant acts could be construed as violations. Biodegradable soap should be encouraged for use in the backcountry.

All garbage and trash will either be burned or packed out. Material that cannot be totally consumed by fire will be packed out (36 CFR 2.10[2]).

3. TRAILS MANAGEMENT

3.1 APPALACHIAN TRAIL MANAGEMENT PROGRAM

The National Trails System Act of 1978 (PL 90-543) requires that a comprehensive plan be completed for the management of the entire Appalachian Trail. Subsequent to the development of the comprehensive plan, Great Smoky Mountains National Park and the Smoky Mountain Hiking Club (SMHC), a member of the Appalachian Trail Conference, entered into a cooperative agreement (Appendix E) which in combination with the Backcountry Management Plan provides two essential commitments to the management of the AT from Davenport Gap, North Carolina/Tennessee, to Fontana Dam, North Carolina, and defines the responsibilities of each party to the agreement.

3.2 ANNUAL EVALUATION OF TRAILS

The park's backcountry trail system consists of those trails shown on the Great Smoky Mountains Trail Map (Appendix K) and/or the trails listed in the current approved inventory (Appendix F).

Trails will be evaluated on an annual basis with regard to:

-Present condition.

-Amount of corrective maintenance required to bring the trail(s) to standard.

-Amount of routine maintenance required to maintain the standard.

-The trail's use and relationship to the rest of the system as a whole.

Based on this evaluation, sections of trails should be considered for removal from maintenance schedules over a period of years in an effort to manage the trail inventory in the park at a level commensurate with the annual maintenance funding and manpower resources, and the needs and impacts of the public. This figure may be adjusted over the long term as more data on program costs become available, and money and/or manpower trends change or stabilize. Additionally, the objectives in Section 3.6 (Planning) of this plan should be considered in making any adjustments of the trail inventory.

Facility managers are responsible for this annual evaluation, and input will be sought from the Assistant Chief Rangers (TN and NC), District Backcountry Rangers, and Resource Management. The initial evaluation will be completed within one year of the effective date of this plan, and the current evaluation will become an appendix (Appendix U) of this plan.

3.3 MAINTENANCE PRIORITIES

Routine

Routine maintenance includes windfall removal, waterbar cleaning, minor bridge repair, sign placement, some rock work, and minor drainage correction.

Approximately six to eight weeks prior to the trail crews' arrival each spring, the Subdistrict and Backcountry Rangers will survey the trails in their area, noting the number, size, and location of blowdowns, and condition of bridges. With this information, the Subdistrict and Backcountry Rangers and Trail Foremen will develop a prioritized list of trails to be cleared by trail crews or ranger staff. In composing this listing, the potential damage by horses going around blowdowns and the overall level of use that each trail receives will be major considerations.

A copy of the prioritized trail opening schedule will be submitted to the Facility Manager and Assistant Chief Ranger (TN and NC) prior to the scheduled hiring of seasonal trail crews.

Brushing and Mowing

Although brushing out shrubbery and mowing of trailside ground vegetation have been used as a means to maintain trail visibility, there is a clear argument for establishment of standards and priorities to assist in identification for planning purposes.

In conjunction with the annual spring trails survey discussed above, a prioritized listing of sections of trailside in need of incidental brushing or recurring mowing shall be submitted to a review committee comprised of the following representation:

Visitor Services Division
Science Division
Resource Management Division
Maintenance Division
Backcountry Rangers (both districts)

Upon approval of the Backcountry Management Plan, this committee will initially be charged with the responsibility of establishing a guideline that clearly defines basic standards and environmental (as well as aesthetic) concerns regarding this activity. Concurrently, and following publication of this guideline, this committee will be charged with review of all recommendations made regarding backcountry brushing and mowing projects.

The consensus opinion of the committee will be submitted to the subdistrict personnel who originated the request so that approved items can be prioritized and scheduled into the coming season's backcountry workload.

Major Rehabilitation

Major trail rehabilitation is defined as all corrective work (exclusive of "routine maintenance") that is required to bring a trail up to established park standards. This includes rerouting of overgraded trails, installing waterbars, tread hardening, cribbing, step construction, and new bridge construction.

An essential element of a responsible trails management program is major trail rehabilitation. Routine trail maintenance by itself is insufficient to prevent deterioration of the resources. Each year, by January 31, the District Facility Manager will be responsible for compiling a priority listing of trails in need of major rehabilitation. Input will be solicited from Trail Crew Foremen, District and Backcountry Rangers, and District Interpreters. The finalized list is subject to approval by the Superintendent.

3.4 USE OF MOTORIZED EQUIPMENT

Motorized equipment will be used on a strictly regulated basis in order to handle emergency situations and non-routine management responsibilities. The use of motorized equipment such as chainsaws and trail dozers will be planned so as to interfere as little as possible with backcountry users, and must first be approved by the Superintendent on an individual basis (Appendix Q).

The dozer will be used for new trail construction and major trail rerouting and/or rehabilitation only. It will not be used for any routine maintenance on existing trails. The primary justification will be to accomplish major trail rerouting on poorly located trails which, if not relocated, will result in continued erosion damage.

3.5 SUPPLEMENTARY SOURCES OF MANPOWER

Outside labor sources such as volunteers, organized youth groups (Student Conservation Association, Youth Conservation Corps, etc.), Appalachian Trail Conference Konnarock Trail Crews, and other organizations (hiking clubs, horse user groups, conservation organizations, etc.) can be a valuable asset to the trails maintenance program. The work selected for these groups should be closely coordinated with the Facility Manager to ensure compatibility with the overall trails maintenance program for the park.

Whenever practical, these groups should be worked in remote locations where they are particularly cost-effective. Organized crews that have experienced supervision and are available for more than two weeks should be used for labor-intensive projects, whereas crews available for less than one week, or that lack experienced leaders, should be assigned routine maintenance (e.g., brushing, mowing, waterbar cleaning, etc.).

The Chief of Maintenance is responsible for instituting trail maintenance clinics for leaders of groups and area ranger personnel as needs are identified.

3.6 TRAIL INVENTORY MANAGEMENT

Planning

One goal of the trails management program is to provide a three- to five-mile dayhike (either loop or destination-oriented) and a 10- to 15-mile overnight hike at each of the major trail access areas in the park. Where practical, trailheads will be consolidated to establish loop trails. These areas will be evaluated in regard to meeting this goal and a recommendation made to the Superintendent within one year of the

effective date of this plan. Assistant Chief Rangers (TN and NC), District Backcountry Rangers, and trail crew foremen will be responsible for this evaluation.

The following are critical factors which must be considered in the planning and/or construction of new trails:

1. Where possible, trails will not be routed through:

   a. spruce-fir forest

   b. heads of drainages

   c. balds

2. Trails will not traverse designated critical habitats.

3. Deadend trails (except those which have significant points of interest) will be avoided.

4. Low elevation routes are preferred.

5. Where possible, trails will be routed through dry, well drained areas.

6. Construction material will generally consist of native material from the vicinity of the trail:

   a. All trees will be selected well out of sight of the trail, flush-cut, and randomly located.

   b. Rock will be obtained well out of sight of the trail and signs of its removal disguised.

   c. Soil will be obtained from dispersed areas so as to minimize observed impacts.

The decision for use of non-native material will be based upon the unavailability of suitable native material and must comply with the following criteria as closely as possible:

-The material blends in aesthetically and environmentally with the environment.

-Safeguard against introduction of exotic plant species.

-Material is not chemically treated (except pressure-treated wood decking).

Bridges

The need for trail bridges over stream crossings will be determined on a case-by-case basis. The primary consideration will be visitor safety rather than convenience; therefore, only those streams which regularly present a significant hazard to the public will be considered appropriate.

The fording of backcountry streams is viewed as part of the overall wilderness experience. If a bridge is deemed necessary for a particular crossing, the design should be as unobtrusive as possible, generally constructed of a single footlog with a single handrail.

Requests for bridges will generally be initiated at the subdistrict level via the Job Request form (Appendix R) and will be reviewed by the following:

Assistant Chief Ranger (appropriate state)
District Backcountry Ranger
Facility Manager
Safety Manager
Backcountry Use Committee
Chief, Ranger Activities

Final approval for backcountry bridge placement will be by the Superintendent.

Proposals (New Trails and Rerouting)

Although any park employee can propose the establishment of a new trail, or the rerouting of an existing trail, proposals will generally originate at the subdistrict level. In the case of a new trail or major rerouting, the originator of the proposal and/or the Subdistrict Ranger will prepare the following:

a. An environmental assessment.
b. A biological assessment.
c. A map depicting the project.

For trail rerouting of less than one-half mile, only a memorandum describing the work to be done and a map are required.

In either of the above cases, the proposals will be reviewed by:

Subdistrict Ranger
District Backcountry Ranger
Assistant Chief Ranger (appropriate state)
Facility Manager
Chief, Science Division
Chief, Ranger Activities
Chief, Resource Management
Backcountry Use Committee

Final determination will be made by the Superintendent.

Proposals (Temporary Closures)

Trails may be temporarily closed to hikers and/or horses due to seasonal drainage problems, hazardous trail conditions, large windfalls, or any other complicating factors which make travel unsafe or cause excessive resource damage.

Recommendations for non-emergency temporary closures will be initiated by memorandum with a map attachment. The proposals will generally originate at the subdistrict level and be reviewed by the following:

District Backcountry Ranger
Assistant Chief Ranger (appropriate state)
Facility Manager
Safety Manager
Chief, Ranger Activities
Backcountry Use Committee

Final determination for temporary closures will be made by the Superintendent. If approved, the area signing for the temporary trail closure will be the responsibility of the Subdistrict Ranger.

In the event that a temporary closure is of an emergency nature for safety or law enforcement purposes, permission may be granted orally by either the Safety Manager and/or Chief, Ranger Activities (whichever circumstance is most appropriate), and the resultant action followed up by written informational memorandum to be circulated through the above identifying review/approving authorities.

Proposals (Permanent Closures)

Recommendations for permanent closures will be by memorandum with a map attachment. They will generally originate at the subdistrict level and will be reviewed by:

District Backcountry Ranger
Assistant Chief Ranger (appropriate state)
Facility Manager
Chief, Visitor Services
Chief, Ranger Activities
Backcountry Use Committee

Final determination will be made by the Superintendent, and all closures will be carried out in accordance with applicable Federal regulations (36 CFR 1.5, 1.7).

The procedure for permanent closure of trails will include:

1. Standard signs will be used to indicate a permanent trail closure and will remain in place for one calendar year.

2. Both ends of the trail will be brushed in a minimum of 30 yards to discourage further use.

The Subdistrict Ranger is responsible for these actions.

Trail Reclassification

Recommendations for change with regard to hiker/horse status will be handled on a case-by-case basis and will require a memorandum explaining why the change is necessary, plus a map identifying the subject trail or trail section.

These recommendations may be initiated at any level and must be reviewed by:

Subdistrict Ranger (appropriate area)
District Backcountry Ranger
Assistant Chief Ranger (appropriate state)
Facility Manager
Chief, Visitor Services
Chief, Ranger Activities
Backcountry Use Committee

Final determination will be made by the Superintendent.

Trail Management Evaluation

The respective Facility Managers are responsible for reviewing the prioritized trail maintenance program once a year for the first two years that it is in effect. Input will be obtained from the Assistant Chief Rangers (TN and NC), District Backcountry Rangers, and Trail Crew Foremen. The purpose of the review will be to assess the effectiveness of the prioritized system and to make recommendations for its improvement. A written evaluation by the appropriate Facility Manager will be submitted to the Superintendent by December 15 of the second year of the evaluation period.

After the initial two years, Facility Managers will review and where necessary refine the prioritization program. Any proposed changes must be approved by the Superintendent.

An annual written report of all trail work accomplishment for the calendar year will be incorporated by the Chief of Maintenance into the annual Superintendent's Report submittal by the division. Major trail rehabilitation and routine maintenance will be itemized separately. A brief

summary will be incorporated to illustrate the park's achievements to date in bringing trails up to park standards.

4. BACKCOUNTRY STRUCTURES

The NPS management policy states that patrol cabins are acceptable in wilderness when needed to administer the resource. In Great Smoky Mountains National Park, cabins have played an important role in effective trail maintenance, law enforcement and poaching patrol/surveillance, boar reduction activities, backcountry research, and search and rescue operations.

Cabins currently being maintained for administrative purposes include:

-Mt. LeConte NPS cabin
-Mt. Cammerer firetower/cabin
-Lower Hazel Creek bunkhouse
-Upper Hazel Creek maintenance cabin
-Hyatt Ridge cabin
-Pecks Corner/Hughes Ridge area cabin
-Shuckstack cabin

The Mt. Cammerer facility has not been used for any administrative purpose for at least four years. This site and any other backcountry structure should be reviewed on an annual basis by the Backcountry Use Committee to ascertain the justification for continued intrusion on the wilderness of the park. The decision to either keep or remove a structure will ultimately be made by the Superintendent.

Reservations for use of the cabins must be coordinated through the appropriate Subdistrict Ranger and Facility Manager to avoid capacity problems resulting from more than one party arriving on a given night.

During the mid-1930's, numerous firetowers with cabins were constructed throughout the park by CCC crews to aid in wildland fire detection. Over the years, more cost-effective means of detection were established; thus, staffing, plus maintenance of the structures, fell by the wayside. In recent years these structures, due to lack of routine maintenance, were recognized as hazards to the public as well as unnecessary intrusions on the visitors' wilderness experience. Special appropriations during fiscal year 1982 allowed for the removal of all but three towers (Cove Mountain, Mt. Sterling, and Shuckstack), which will be maintained to facilitate radio system repeaters.

Properly located shelters can be beneficial in backcountry areas where visitor dispersal is not practical because it reduces overall environmental damage by confining impact to a smaller area. The shelters along the AT will remain open to public use. Those shelters not on the AT will be evaluated on a case-by-case basis by the District Rangers with input

from all divisions, and a final determination will be made within one year of the effective date of this plan. No new shelters will be built. In areas where environmental impact has attained unacceptable levels, dispersal of backcountry use will be achieved by reducing campsite capacities and/or campsite closures.

5. BACKCOUNTRY PATROL AND REPORTING

The NPS law enforcement policy is set forth in NPS-9 and local refinements are identified in staff directives and the Smoky Mountain Operating Procedures (SMOP).

Backcountry law enforcement patrols have two basic purposes:

1. To minimize environmental impacts caused by human use.

2. To minimize public safety hazards to people.

The park can accomplish a great deal through public education to minimize violations and abuse brought on by ignorance, but any management policy which results in a restriction of a person's activities will require enforcement to some degree. Experience has shown that visitor contacts in the field are an important deterrent in minimizing human impacts and violations.

Assistant Chief Rangers (TN and NC) should ensure that most trails and designated camping areas are patrolled at least once every two weeks from May 1 to October 30. Visitor activities with the greatest adverse environmental impacts will receive the greatest attention. Details for backcountry patrols are contained in Appendix G, "Backcountry Patrol and Reporting Guidelines." More specific standards may need to be established for problem areas, in which case amendments or additions to Appendix G may be made through the Chief, Ranger Activities.

6. DAY USE

Statistics on day use of hiking trails in the park are presently of limited value. The statistics are generally estimates by Subdistrict Rangers, and there is currently no feedback to assess their accuracy and no mechanism to detect short-term fluctuations or long-term trends.

The incorporation of existing day use statistics for planning purposes must recognize the nature of these data. A day use monitoring system is needed, and although a variety of mechanical devices for this purpose are currently on the market, a survey of the market and test of devices in the vicinity of trailheads should be initiated by the Backcountry Rangers in each district. Once the most suitable device is identified, Assistant Chief Rangers (appropriate state) will assume the responsibility

of establishing monitoring devices at the most appropriate representative backcountry trailheads, as funds permit, in order to provide for sampling of total user population.

As with overnight backpacker use, efforts should be made to disperse day-use hikers. Publications should emphasize areas which receive relatively light use since those areas could provide opportunities for quiet appreciation of the natural scene that many visitors may prefer. Subsequent revisions of "Walks and Hikes" should, in some manner, indicate those trails which receive relatively light use. Lesser used trails should be emphasized in 1610 radio messages, visitor center exhibits, and interpretive programs. If suitable trailhead parking is available, employees should consider using a lesser used trails when planning an interpretive walk.

7. EDUCATION

Minimum impact methods of camping and hiking will be stressed to all backcountry users. This includes proper sanitation measures and wise use of water sources, preferred limitations on use of wood fires, campsite etiquette, and respect for other users. Additional topics should emphasize such safety topics as:

-Hypothermia and fatigue.
-Storm hazards (lightning and hazardous stream crossings).
-Proper food storage.
-Behavior when encountering bears and other wildlife.
-Behavior around packstock and horseback riders.
-What to do when lost.

The possibilities for conveying messages are almost limitless, but primary media should include:

-1610 radio messages (limited to brief recurring messages and emergency announcements regarding hazards.
-Park newspaper.
-Park trails map.
-Visitor center and bulletin board displays.
-Interpretive programs.
-Press releases.
-Informal visitor contacts.

Recent surveys and research conducted or coordinated by the Science Division have shown that education has been very weak regarding backcountry related topics. As current research and surveys are completed, the Chief of Science will assume the responsibility for conducting, or coordinating in-house seminars for park staff and other interested parties. Objectives of these meetings would not only include dissemination of findings, but also efforts on the part of the attendees to address solutions to perceived problems.

8. RESEARCH

Research is recognized as an important part of backcountry management. Researchers contribute in consultation services, design and initiation of monitoring programs, and recommending procedures to mitigate adverse impacts, as well as carrying on full research programs. Identified research needs should be submitted to the Assistant Superintendent of Resource Management and Science. This office will consolidate backcountry related needs with other park research needs into a park package that is updated and submitted annually to the Regional Chief Scientist. The Region assigns priorities and funding for the upcoming research year based on these park lists in the context of total regional needs, and it will be the responsibility of the Chief of the Science Division's responsibility to manage the park's research programs.

9. UPDATING THE PLAN

The Backcountry Management Plan will be reviewed in December following the first season it is implemented. The review committee will consist of the following representation:

-Backcountry Use Committee members
-Visitor Services Division
-Assistant Chief Rangers
-Facility Managers

The Natural Resource Specialist will serve as the chairperson of this review.

Prior to review, input will be solicited from park staff and interested groups by the chairperson for the committee's consideration. Recommended changes will be forwarded by the chairperson to the Superintendent for final approval. Approved changes will be incorporated into the plan by the Natural Resource Specialist.

Thereafter, an annual review of the Backcountry Management Plan will be scheduled by the Backcountry Use Committee.

The Natural Resource Specialist will periodically review the plan for minor operational changes that can be made without committee interaction.

APPENDIXES

A. Agreement of July 30, 1943 (Summary)

B. Cooperative Agreement - Asbury Trail

C. Backcountry Campsites and Shelters

D. Backcountry Sign Guidelines

E. Cooperative Agreement - Maintenance of Appalachian Trail

F. Workload Inventory of Roads and Trails

G. Backcountry Patrol and Reporting Guidelines

H. GRSM Trail Maintenance Manual

I. NPS Trails Management Handbook

J. Backcountry Use Permit

K. Backcountry Trail Map

L. Campsite Signs

M. Backcountry Campsite Evaluation Form

N. Backcountry Campsite Criteria Form

O. Recommendation for Campsite Closure Form

P. Regulatory Sign for Inside Shelters (to be developed)

Q. Request for Use of Motorized Equipment Form

R. Job Request Form

S. Title 36 CODE OF FEDERAL REGULATIONS references relative to backcountry management

T. Trail Maintenance Agreements - Horse Concessioners

U. Annual Trail Evaluation

APPENDIX A

Agreement of July 30, 1943. The Department of the Interior, the Tennessee Valley Authority (TVA), the state of North Carolina, and Swain County entered into an agreement concerning land north of the then proposed Fontana Reservoir. The terms of the agreement and their present status are as follows:

The TVA agreed to buy about 44,000 acres of private land in Swain County lying north of the proposed reservoir and to transfer the land to the Department of the Interior for inclusion in Great Smoky Mountains National Park. This has been done.

The Department of the Interior agreed to enter into a separate agreement with the TVA accepting the land, and it further agreed to extend the boundary of the park to embrace the land. This was done. The separate agreement was entered into on March 31, 1948. It is discussed below.

The Department of the Interior agreed, provided funds were made available by Congress, to construct a "park standard" road from Fontana Dam to the eastern boundary of the 44,000-acre addition to the park. Only part of this road has been constructed.

The state of North Carolina agreed to construct a road from Bryson City to join with the park road. The road has been constructed.

The TVA agreed to quitclaim to the state the Fontana access road. That has been done, and the access road now is part of North Carolina 28.

The state agreed to pay $100,000 to the TVA to assist in carrying out the agreement. The amount has been paid.

The TVA agreed to pay $400,000 to the state in trust for Swain County to be applied to payment of road bonds for the county. TVA paid the money to the state.

The state and Swain County agreed to transfer to the TVA all rights and interests in portions of North Carolina 288 and other roads lying north of the proposed reservoir. The transfer has been completed.

The state and Swain County agreed to release the TVA and the United States from obligations, liabilities, claims, and demands arising out of the construction and operation of Fontana Dam or Fontana Reservoir, or from the closing of North Carolina 288 and other roads.

The provisions of the agreement have been carried out, with the exception of completion of the North Shore road.

APPENDIX B

DATA SHEET
COOPERATIVE AGREEMENTS

1. Title of Agreement Asbury Trail

2. Agreement Number GRSM CA5460-82-04

3. Parties to Agreement Great Smoky Mountains National Park and Boy Scouts of America (through SEJ Committee on Archives and History, United Methodist Church)

4. Term of Agreement (Beginning and Ending Dates, Month and Year)
Beginning September 4, 1982, and continuing for a period of five years unless terminated by mutual agreement.

5. Date of Supplementals or Reaffirmations (if any)

6. Category (Always a primary and a secondary if necessary)
08. Maintenance/preservation

7. Purpose of Agreement
To preserve and maintain the historic "Asbury Trail" within the Park, and to maintain the same for public enjoyment and particularly for special use by Boy Scout Troops.

8. Legislative or Other Authority
Aug 25, 1916 (39 STAT. 535)

9. Name, title, and office of NPS official signing agreement
Merrill D. Beal, Superintendent, Great Smoky Mountains National Park

Typed name, title, and office of official submitting report	Signature	Date
Merrill D. Beal Superintendent Great Smoky Mountains National Park	Merrill D. Beal	9/8/82

AUTHORITY

That authority to enter into this Cooperative Agreement is contained in the Act to establish the National Park Service and for other purposes approved August 25, 1916 (39 Stat. 535) as delegated to the Park Superintendent from the Secretary of the Interior through the National Park Service Director and Regional Director.

NATIONAL PARK SERVICE

By Merrill D. Beal
Superintendent
Great Smoky Mountains
National Park

Date: September 8, 1982

BOY SCOUTS OF AMERICA

Scout Executive

Attest: Brooks B. Little
Brooks B. Little, Director
SEJ Comm. on Archives & History
United Methodist Church
(Boy Scout Agent)

Date: September 4, 1982

United States Department of the Interior

OFFICE OF THE SOLICITOR
ATLANTA REGIONAL OFFICE
Richard B. Russell Federal Building
75 Spring Street, S. W.
Atlanta, Georgia 30303

IN REPLY REFER TO
DMS:kk
LG-18
F-82-10-2368

October 15, 1982

MEMORANDUM

To: Regional Director, Southeast Region, NPS

From: Regional Solicitor, Southeast Region

Subject: Agreement Between Boy Scouts of America and the National Park Service, Bishop Asbury Trail -- Great Smoky Mountains National Park

( ) Subject document has been reviewed and is approved as to form and legal sufficiency.

( ) Subject document is satisfactory to this office and returned herewith with surnamed copy as requested.

( ) Quitclaim deed for the conveyance of subject property is enclosed.

(XX) Subject document is (satisfactory) (~~unsatisfactory~~) to this office.

( ) Claim is (returned) (held) pending additional information.

(XX) Exceptions to the above are listed below (if applicable).

We construe the parenthetical provision on liability in Paragraph 4 of the agreement as limiting the preceding hold harmless clause to claims filed by members of scouting groups. If we are correct in this, then it would be prudent for the Service to itself perform any necessary maintenance of the trail, which is not timely performed by the Boy Scouts.

Roger Sumner Babb

Enclosure

United States Department of the Interior

NATIONAL PARK SERVICE
SOUTHEAST REGIONAL OFFICE
75 Spring Street, S.W.
Atlanta, Georgia 30303

IN REPLY REFER TO:

A44(SER-OPV)

NOV 1 1982

Memorandum

To: Superintendent, Great Smoky Mountains

From: Associate Regional Director, Operations, Southeast Region

Subject: Memorandum of Agreement between Boy Scouts of America and the National Park Service, Bishop Asbury Trail, Great Smoky Mountains

The subject agreement has been reviewed by this office and the Regional Solicitor. The following comments are provided:

1. The agreement should be titled, "Memorandum of Agreement between . . . ."

2. All future agreements should be routed in draft to this office for content review and, if appropriate, we will forward to the Regional Solicitor for legal review.

3. The Regional Solicitor offers comments concerning liability in the enclosed memorandum.

The agreement is approved with noted pen and ink changes and can be transmitted to the appropriate Boy Scout organization. No further actions on your part are necessary.

If you have any questions, please contact Bill Sturgeon on FTS 242-4916 or (404) 221-4916.

C. W. Ogle

Enclosures

Memorandum of

AGREEMENT between the BOY SCOUTS OF AMERICA and the NATIONAL PARK SERVICE concerning the maintenance and use of the Bishop Francis Asbury Trail.

Memorandum of

THIS AGREEMENT, made and entered into on this 4 day of September, 1982, by and between the Boy Scouts of America, Asheville, North Carolina, hereinafter referred to as the Boy Scouts and the National Park Service, U. S. Department of the Interior, acting by and through the Superintendent of the Great Smoky Mountains National Park, hereinafter referred to as the "Service."

WITNESSETH

WHEREAS in the year 1810, Francis Asbury, the prophet of the Long Road, took "the new route" and followed the old Cataloochee Trail, which skirts the border of the Great Smoky Mountains National Park for 22 miles or more, and is inside and outside of the park, at various points, from Cove Creek, North Carolina, to the area around Cosby, Tennessee; and

WHEREAS, in the year 1955 the Superintendent gave permission to the Boy Scouts of America to hike, clear, and mark the old Cataloochee Trail traveled by Bishop Asbury; and

WHEREAS, the historic trail has been included in the listing of famous trailways in "Campways, Boy Scouts of America" maintained by the Boy Scouts of America; and

WHEREAS, it is the desire of the parties hereto, and to their mutual benefit, to preserve and maintain the Asbury Trail, and to maintain the same for public enjoyment and particularly for special use by Boy Scout groups through the Great Smoky Mountains National Park;

NOW, THEREFORE, the parties hereto mutually agree as follows:

A. The Boy Scouts agree:

1. To continue clearing and marking the Asbury Trail and to perform maintenance work on the Asbury Trail through the Great Smoky Mountains National Park as may be mutually agreed upon from time to time by the Boy Scouts and the Service.

2. To maintain the trail, including the marking thereof with a special color, yellow, as previously agreed upon, and to use the Great Smoky Mountains National Park Trail Maintenance Manual and counsel from Rangers in the Cataloochee Subdistrict for guidance.

3. All maintenance operations performed will be contributed and will be subject to the approval of the Superintendent.

4. To carry such insurance against losses, public liability, employee liability, or other hazards, as is customary among prudent operators of similar enterprises under comparable circumstances. In any event, the Boy Scouts shall save the National Park Service, and the United States of America, harmless from any claims filed or actions at law instituted under the Tort Claims Act by any and all persons whose claim for damages is based upon, or arises out of, any act or omission incident to the uses herein contemplated.

(NOTE: INSURANCE - The tour permit requires basic liability insurance by the Councils and Boy Scouts of America groups - then the Boy Scouts of America, as a national policy, maintains a blanket-umbrella excess liability policy in the amounts of $6 million beyond the basic coverage in each Council.

LIABILITY - The Boy Scouts of American can have no responsibility - either for actions or liability of non-scout groups who hike the Asbury Trail.)

5. To make no alterations or additions to the trail except upon prior approval in writing by the Service; and to comply with all rules and regulations of the Service now in effect or which may become effective during the life of this agreement.

6. To provide the National Park Service with a listing of participants and manhours or mandays contributed to trail maintenance in the park annually, within 30-days following the end of the calendar year.

7. That the trail be inspected at least once annually by a professional member of the Boy Scouts of America.

B. The Service agrees:

1. That the Boy Scouts shall continue to enjoy full use of the trail by members who are regularly registered and in good standing.

2. That the Service will cooperate with Boy Scout groups, advising them in matters of maintenance, providing information regarding the maintenance and upkeep of the trail, marking, disposal of brush, etc.

C. It is mutually agreed:

1. That, insofar as possible, each Boy Scout group will give the other advance notice of the times its members expect to work on the trail.

2. That all trail maintenance scheduling and assignments will be performed by the Boy Scouts.

3. That Boy Scout groups may camp overnight at a designated site near the Cataloochee Creek-Asbury Trail crossing with advance notice. However, if they will not be camping such groups should contact the ranger at Cataloochee to advise him when they are in the area to do maintenance work.

4. That award certifications and attendant reports will be the responsibility of the Boy Scouts.

5. That the trail shall be available for use as a hiking trail for hikers on a first-come, first-served basis.

6. That either party to this agreement may terminate the same upon giving to the other party written notice 60 days in advance of said termination.

7. That the Boy Scouts will not discrimate against any members while maintaining or using the trail because of race, creed, color, or national origin.

8. That operations under this agreement shall be subject to the laws of Congress governing the park and the rules and regulations promulgated thereunder, whether now in force or hereafter enacted or promulgated.

9. That unless terminated as provided for in Section C(6) above, this agreement shall continue in force and effect for a period of five (5) years from the date hereof, unless modified or terminated by mutual agreement; and any renewal or extension hereof shall be in writing.

10. That no member of, or delegate to, Congress or Resident Commissioner shall be admitted to any share or part of this agreement or to any benefit that may arise herefrom but this restriction shall not be construed to extend to this agreement, if made with a corporation or company for its general benefit.

APPENDIX C

BACKCOUNTRY CAMPSITES
GREAT SMOKY MOUNTAINS NATIONAL PARK

NUMBER	NAME	PEOPLE	HORSES
1	Cooper Road	10	10
2	Cane Creek	10	
3	Hesse Creek	10	10
4	Kelly Gap	10	10
6	Turkey Pen Ridge	6	
7	Ace Gap	10	10
9	Anthony Creek	6	6
10	Ledbetter Ridge	8	8
11	Beard Cane	10	6
12	Forge Creek	8	
13	Sheep Pen Gap	12	12
14	Flint Gap	8	6
15	Rabbit Creek	8	8
17	Little Bottoms	10	
18	West Prong	8	
19	Upper Henderson	8	8
20	King Branch	10	10
21	Medicine Branch Bluff	8	8
23	Camp Rock	8	
24	Rough Creek	14	14
25	Lower Buckeye Gap	8	
26	Dripping Spring Mountain	8	8

NUMBER	NAME	PEOPLE	HORSES
27	Lower Jakes Gap	8	8
28	Marks Cove	20	20
29	Otter Creek	10	
30	Three Forks	12	
31	Porters Flat	15	
32	Injun Creek	8	
33	Rhododendron Creek	12	
34	Sugar Cove	15	
35	Gilliland Creek	15	
36	Upper Walnut Bottoms	20	20
37	Lower Walnut Bottoms	20	
38	Mount Sterling	20	20
39	Pretty Hollow	20	20
40	Big Hemlock	10	10
41	Caldwell Fork	10	10
42	Spruce Mountain	10	10
44	McGhee Spring	12	12
47	Enloe Creek	8	8
48	Upper Chasteen	8	
49	Cabin Flats	20	20
50	Lower Chasteen Creek	15	15
52	Newton Bald	8	8
53	Poke Patch	12	
54	Nettle Creek	8	

NUMBER	NAME	PEOPLE	HORSES
55	Pole Road	15	15
56	Burnt Spruce	10	10
57	Bryson Place	20	12
58	Nicks Nest Branch	6	6
59	McCracken Branch	6	6
60	Bumgardner Branch	10	10
61	Bald Creek	12	6
62	Upper Ripskin	12	6
63	Jerry Flats	10	6
64	Mill Creek	20	12
65	Bear Pen Branch	8	8
66	Lower Noland Creek	10	
67	Goldmine Branch	10	10
68	Steel Trap	8	
69	Huggins	12	
70	Jonas Creek	12	6
71	CCC	12	12
73	Bear Creek	15	6
74	Lower Forney	12	
75	Hicks Branch	6	
76	Kirkland Creek	12	
82	Calhoun	15	10
83	Bone Valley	20	10
84	Sugar Fork	8	8

NUMBER	NAME	PEOPLE	HORSES
85	Sawdust Pile	20	10
86	Proctor	20	12
88	Pinnacle Creek	8	8
89	Lower Ekaneetlee	8	
90	Lost Cove	12	12
91	Upper Lost Cove	10	10
92	Upper Flats	14	
93	Twentymile Creek	14	14
94	Long Hungry Ridge	8	
95	Wolf Ridge	8	8
96	Eagle Creek Island	10	
97	Big Walnut	10	
98	Chambers Creek	10	

BACKCOUNTRY SHELTERS

NAME	PEOPLE
Davenport Gap	12
Cosby Knob	12
Tricorner Knob	12
Pecks Corner	12
Icewater Spring	12
Mount Collins	12
Double Spring Gap	12
Silers Bald	12
Derrick Knob	12
Spence Field	12
Russell Field	14
Mollies Ridge	12
Birch Spring Gap	12
Mount LeConte	12
Kephart	14
Laurel Gap	14
Rich Mountain	8
Scott Gap	8

APPENDIX D

APPENDIX D

BACKCOUNTRY SIGN GUIDELINES

The objective of a backcountry sign is to provide a means of letting the hiker know his or her location and alternatives for travel. Signs also add enjoyment to one's outdoor experience by identifying features observed as well as pointing out hazardous conditions.

From the standpoint of signing, hiking trails are much like miniature highways, although trails are more often traveled as an end in themselves rather than as a means to an end. Still, people travel them to get from one point to another; wrong turns can waste valuable energy, and inadequate information can turn an otherwise enjoyable trip into a frustrating attempt to find one's destination and may result in a lost hiker. Ideally, of course, each hiker would carry a map and need no help from signs. But many maps are of poor quality and many people, especially day hikers, are only out for a leisurely stroll and have no interest in orienteering.

Backcountry signs should provide clear information relating to points ahead and distances, and should provide reassurance to hikers regarding their choice of routes. Several factors need to be considered in selecting a sign system, and the following guidelines are a means to promote uniformity, clarity, simplicity, education, safety, and economy.

MANUFACTURE

Most backcountry signs should be unfinished, routed, 2-inch thick wood mounted on a wood post. Letter size should generally be between 1-1/2 to 2 inches high. Signs will not be attached to trees. Recreation symbols will be manufactured according to standard NPS sign specifications.

PRIMARY LOCATIONS

1. Trailheads: Signs located at each trailhead will consist of the following:

   - a trail users sign
   - the name of the trail
   - appropriate destinations on that, or intersecting trails (see navigation signs)
   - a statement or symbol prohibiting horse use (if applicable and deemed necessary)

2. Trail Junctions: Junctions will normally display one or two navigational signs and may identify horse use status.

3. Campsites and Shelters: Designated primitive camping areas will normally bear the tent symbol with site number. Shelters will not bear any identification signs.

4. Hazardous Areas

Certain areas, such as waterfalls, may be judged to be of sufficient hazard to the public as to warrant the placement of special warning signs.

5. Geographical Features

Geographical features of special significance may bear an identifying sign (e.g., Spence Field, Charlies Bunion). Elevations will generally not be necessary. These features should be well known landmarks which are identified on the 7.5 minute USGS quads.

TYPE OF SIGNS

1. Navigation Signs:

a. Include the name of the trail.
   - Should be the same as the name used in administrative references (i.e., maintenance inventory).
   - Old roads no longer open to vehicles and now a part of the trail system should not be identified by the word "road."
   - Names not on USGS quads should conform to traditional local names.
   - Names generally coincide with prominent local geographical features shown on USGS quads.

b. Include references to significant geographical features shown on USGS quads which are within 10 miles. These features should be popular, commonly sought destinations rather than just local landmarks.

c. Destination mileages will be given to the nearest one-tenth mile.

d. Directional arrows may be right, left, and up, but not down.

e. Directions to campsites or shelters will be given only when experience shows that campers frequently are confused, or as evidenced by recurring illegal camping in unauthorized sites. Mileages will generally not be necessary.

f. No more than three destinations will generally appear on one sign.

g. Destination references should not include areas we do not want hikers to use or go to (e.g., sensitive man-made or natural features that need protection).

h. Choice of destination references should reflect normal hiking patterns and should not be restricted to subdistrict boundaries.

2. Regulatory Signs:

Generally there should be no reason for repeating portions of the "Trail Users" sign. Messages such as "Leave a clean camp," "Do not litter," etc., will not be placed, and those currently in place should be removed. If, at some time in the future, a standard sign relating to backcountry regulations, manners, etc., is formulated, it may be uniformly applied.

a. "NO CAMPING" signs, or the symbol with slash mark, should be used only where there has been consistent use of an illegal site, or where designated campsites have been either permanently or temporarily closed. Such signs should include directions to the nearest legal site.

b. Horse Use: Trailhead signs will generally show horse use status only if horses are prohibited. The Appalachian Trail will also show horse use sections. Interior trail junctions will also identify trails that are closed to horses.

A need for certain other regulatory signs, such as bear restrictions and fishing closures, will be used as needed. Such signs should make use of existing standard signs whenever possible. Except for signs of very temporary nature, regulatory signs of a unique nature should be routed, ordered from Federal Prison Industries, or commercially prepared so that the final product is well done and commands respect.

3. Safety Signs:

Numerous hazards to life, limb, and property exist in the backcountry, but for the most part, these hazards are considered an inherent risk associated with a wilderness experience. Certain hazards, however, may be singled out for positive action based upon previous experience, potential for loss of life, liability, or other factors. The decision as to whether a hazard warrants a sign should be made by the Park Safety Committee.

Standardized messages should be used when hazards are of a similar nature. Sign wording should not exceed 10 words. Signs should be painted brown with white letters. The word "WARNING" should appear at the top center of the sign in orange letters. Safety signs should be mounted separately from other signs.

SYMBOLS

Some messages can more easily and economically be conveyed via recreation symbols (see 36 CFR 1.10). In such cases, symbols will be used. The following symbols have particular application in the backcountry:

- campsite
- shelter
- horse trail
- hiking trail
- fishing

APPALACHIAN TRAIL SIGNS

Though clearly a responsibility of the National Park Service, that portion of the Appalachian Trail (AT) within the park is also part of a much greater trail system. As a result, management of the AT may be somewhat different than for the remainder of park trails. The following considerations apply specifically to the AT:

- 36 CFR 2.30(a)(2) requires that trails open to horse use be posted as such. The reverse side of the sign will reflect horse closures.

- Since the AT is a landmark in itself, it will be acceptable to refer to the AT as a destination on navigational signs.

- It has been the policy of trail maintaining clubs to designate the AT by way of painted tree blazes. Existing blazes will be maintained. Additional blazes will be added only when necessary for personal safety.

RECORDS

Manufacturing and installation cost records will be maintained at the District Maintenance Office. In addition, each District Backcountry Ranger should maintain records which adequately describe each sign in his area. Records should include previous signing for the location, current signing, date of inspection, detailed location of the sign and other signs in the vicinity. In lieu of a single-purpose yearly inspection, routine inspection of sign conditions will be accomplished through normal trail patrols by Service personnel and cooperating volunteers. Deficiencies observed while on trail patrol should be noted on the Backcountry Patrol Report Form.

REVIEW PROCEDURES

In order to facilitate review, information which supports the request should be clearly detailed and complete, and should address the following topics:

- location
- wording and/or placement of symbols
- reason for changes or additions
- other signs that are in the area

Requests for signs will generally originate at the subdistrict level, but regardless of origin, will be reviewed by the following:

- Subdistrict Ranger
- Trail Foreman
- Assistant Chief Ranger (appropriate area)
- District Backcountry Ranger
- Chief, Ranger Activities

The Park Sign Committee will provide the final review and approval authority for all sign requests.

A Backcountry Sign Subcommittee, within the Backcountry Use Committee, is established to determine the needs for all signs and markers necessary for proper interpretation, direction, information, and control of backcountry visitor use. Replacement of existing signs will not require committee action unless there are changes in text, size, location, etc. Resolution of particular problem areas, changes in policy, and the like, will be referred to the Backcountry Use Committee.

The Backcountry Sign Subcommittee includes the following:

Chairman: Backcountry Reservations Representative (Ron Click)
North Carolina Backcountry Ranger (Doug Raeburn)
Visitor Services Division Representative (Don DeFoe)

APPENDIX E

APPENDIX E

DATA SHEET
COOPERATIVE AGREEMENTS

1. Title of Agreement Maintenance of the Appalachian Trail from Davenport Gap to Fontana Dam

2. Agreement Number CA 5460 - 81 -01

3. Parties to Agreement National Park Service, Great Smoky Mountains National Park and Smoky Mountains Hiking Club

4. Term of Agreement (Beginning and Ending Dates, Month and Year)
Signed 5/20/81 - To be reviewed and revised, if necessary, at an annual conference of the SMHC, the NPS, and the ATC

5. Date of Supplementals or Reaffirmations (if any)

6. Category (Always a primary and a secondary if necessary)
08 - Construction and Maintenance
Secondary: 12 - Shared Planning, Development, Administration & Operations

7. Purpose of Agreement
To ensure that the AT is properly maintained at all times. Maintenance to be performed in accordance with NPS-GRSM standards, as well as the National Trails System Act of 1978 (PL90-543) and the GRSM Backcountry Management Plan.

8. Legislative or Other Authority

9. Name, title, and office of NPS official signing agreement
Merrill D. Beal, Superintendent, Great Smoky Mountains National Park

Typed name, title, and office of official submitting report	Signature	Date
Merrill D. Beal Superintendent	Merrill D. Beal	7/30/81

United States Department of the Interior

NATIONAL PARK SERVICE
Great Smoky Mountains National Park
Gatlinburg, Tennessee 37738

IN REPLY REFER TO:

May 21, 1981

Memorandum

To: Regional Director, SER

From: Superintendent, Great Smokies

Subject: Cooperative Agreement between Great Smoky Mountains National Park & Smoky Mountains Hiking Club

Enclosed is a copy of the Cooperative Agreement between Great Smoky Mountains National Park and the Smoky Mountains Hiking Club for maintenance of the Appalachian Trail from Davenport Gap to Fontana Dam.

(Sgd) Merrill D. Beal

Merrill D. Beal

Enclosure

cc:
Dave Ritchie, Harpers Ferry, w/enc

bcc:
LeRoy Fox, w/enc (3)
File
Yellow
Blue
/lkr

COOPERATIVE AGREEMENT

BETWEEN THE GREAT SMOKY MOUNTAINS NATIONAL PARK AND SMOKY MOUNTAINS HIKING CLUB FOR MAINTENANCE OF THE APPALACHIAN TRAIL FROM DAVENPORT GAP TO FONTANA DAM

INTRODUCTION

The National Trails System Act of 1978 (PL90-543) requires that a comprehensive plan be completed for the management of the entire Appalachian Trail (AT). This Cooperative Agreement is a component of that overall plan. The other essential component is the Backcountry Management Plan (BCMP) of the Great Smoky Mountains National Park (GRSM). These two commitments provide the basis for the management of the AT from Davenport Gap NC/TN to Fontana Dam, NC, the section assigned to the Smoky Mountains Hiking Club (SMHC), and define the responsibilities for the SMHC and the GRSM.

I. ROUTE DESCRIPTION

The section of the AT considered in this Agreement includes the 68.36 miles within the GRSM in North Carolina and Tennessee from Davenport Gap to Fontana Dam.

II. FACILITIES

Major structures in this section are thirteen Adirondack-type shelters spaced from two to eight miles apart along the AT. An observation tower exists on Clingmans Dome; flush toilets and water are available most of the year one-half mile from the tower and also at Newfound Gap where a major road crosses the AT.

III. SIGNIFICANT RESOURCES

A. The highlight of this section is the longest and largest expanse (almost half a million acres) of Appalachian wilderness penetrated by the AT. The AT lies almost

entirely on or near ridge tops with many scenic viewpoints, including several of the lush, grassy "balds" of unexplained origin and uncertain future.

B. The wilderness environment of this section is a sanctuary that preserves the finest examples of temperate deciduous forest in the world. The natural features are largely undisturbed and preserved for future generations. The AT passes through the dark and deep woods of Red Spruce and Fraser Fir, an island of Canadian-type forest occurring only in the highest parts of the Southern Appalachians. The Park is an International Biosphere Reserve because of the wealth and diversity of its vegetation and wildlife, some of which are unique and endangered species. The name "Great Smokies" is derived from the smoke-like haze that usually envelops these mountains. Trees are found at all elevations on this section. White-tailed deer and black bears are frequently encountered in some areas.

C. Rainfall is plentiful and drinking water sources from springs are adequate in all but the driest seasons. The AT does not cross any significant streams in this section.

IV. LAND OWNERSHIP

A. This section is entirely on Federal land under the stewardship of the National Park Service (NPS).

V. USE LEVELS

The AT is closed to public horse use except for about 30.9 miles on which horse parties are allowed for transmountain travel. These portions are (1) 3.3 miles between Silers Bald and Buckeye Gap and (2) 0.4 miles between Jenkins Trail Ridge and Bote Mt. Trail at Spence Field, (3) 20.5 miles from Pecks Corner to Davenport Gap, and (4) 6.7 miles from Fontana Dam to Doe Knob. Because of the heavy visitation in the Park and the many side trails most traffic on this section consists of either day hikers or "weekend" backpackers to one of the shelters. The heavy use has required since 1972 that reservations and permits for overnight shelter use be issued by the NPS. These requirements may be revised by the NPS as needed to protect the Park resources from overuse.

VI. MAINTAINING CLUB

The Smoky Mountains Hiking Club (SMHC), organized in 1924, is Class A member club of the Appalachian Trail Conference. As a member of ATC, the SMHC has as one of its

primary objectives maintaining this section of the AT and participating in its management. Direct responsibility for trail maintenance by the SMHC is delegated to the AT Manager and a group of trail foremen. These trail foremen depend on volunteers from within the SMHC or its affiliates to accomplish needed management and maintenance of each segment of this section.

VII. RELATIONSHIP WITH OTHER GROUPS

A. Federal and State Government: A close working relationship will be maintained with the Great Smoky Mountains National Park Superintendent and his staff who are responsible for the stewardship and management of the entire Park and the Park is the only land owner within this section of the AT. The relationship with State governments is expected to be minimal but will be pursued if necessary.

B. Other: If necessary to assist in large-scale maintenance efforts or other unusual circumstances, it is expected that other AT clubs or affiliates will cooperate when requested by the SMHC and the NPS.

MANAGEMENT SYSTEM

I. PHYSICAL TRAIL

A. Marking: This section of the AT will be marked by white paint blazes as prescribed in the ATC publication "Appalachian Trail Standards Manual." However, the frequency of blazes will be modified by agreement with the NPS so that the wilderness character of the Park is not compromised by proliferating blazes. Blazing at trail junctions and at abrupt changes in the route of the AT will be as prescribed in the AT Standards Manual. There are 30 side trails from this section but none require blue blazing at present. No portions of this section use rock cairns at present. Any required permanent sign indicating junctions, shelters, etc., will be carved on wood. Weather resistant temporary signs may be used at critical locations if needed.

B. Clearing: The AT corridor will be cleared to the prevailing standards of the GRSM.

C. Treadway: The treadway will be maintained to prevailing GRSM standards. Most of this section has steep grades and is subject to both heavy use and much precipitation making it necessary to control erosion in all segments by every appropriate means.

D. Overnight Use Facilities: All overnight use of the entire Park by hikers is by reservation and permit only. Park regulations include accommodation to the special needs of legitimately "through" hikers of the AT.

1. Shelters: Adirondack-type shelters exist at 13 locations within this section:

a. Davenport Gap
b. Cosby Knob
c. Tricorner Knob
d. Pecks Corner
e. Ice Water Springs
f. Mt. Collins
g. Double Springs Gap
h. Silers Bald
i. Derrick Knob
j. Spence Field
k. Russell Field
l. Mollies Ridge
m. Birch Spring Gap

The bunk capacity of the shelters ranges from 12 to 14 persons. All shelters contains a fireplace, but dead or down wood is scarce near the shelters; therefore, portable stoves should be relied upon for cooking. Shelter use is limited to the number of bunk spaces in each shelter, with a one consecutive night stay per shelter.

2. Designated Campsites: There are no designated campsites in this section. Many such campsites exist on side trails two miles or more from the AT.

3. Non-Designated Campsites: Overnight camping is not permitted anywhere along the AT or any other trail within the Park.

E. Water Sources: Reliable water sources exist except in unusually dry periods at all shelters and at or near several gaps within this section. Safe drinking water is available at Fontana Dam and at Newfound Gap. All other water sources may be contaminated, and their water should be purified by adequate boiling or chemical treatment.

F. Relocations: Minor treadway relocations around obstacles and for erosion control or other ecological considerations may be made by the NPS. Major relocations involving the AT corridor will be done only with prior agreement of all parties to this agreement.

G. Registers: Trail registers are not used in this section. However, the NPS system of permits provides data on overnight use of the shelters by both "casual" and "through" hikers. These data will be made available annually to the SMHC and the Appalachian Trail Conference.

II. RELATIONSHIPS

A. Other Maintaining Organizations: The SMHC does not anticipate entering into any formal working agreement with other trail maintenance organizations. The SMHC may, through its membership in the ATC, request assistance from other AT clubs, affiliates, or from the NPS if required to complete large maintenance projects. In view of the nascent stage of apportioning trail maintenance between the NPS and the SMHC, the SMHC does not expect to participate in any such large maintenance projects in the next two years.

B. Appalachian Trail Conference: The SMHC will remain a Class A maintaining club within the ATC.

C. Agency Partnership: The SMHC will maintain a close working relationship with the Great Smoky Mountains National Park with this Cooperative Agreement forming the basis for policy guidance. An annual conference will be held jointly with the Park staff to review the Agreement and to make any necessary revisions.

III. RESOURCE PROTECTION

A. Fire Prevention and Suppression: Fire suppression and active fire fighting will be accomplished only by trained and authorized personnel under the supervision and direction of the NPS. The SMHC does not expect to actively engage in fire fighting efforts. The SMHC will provide casual on-trail monitoring and advice to hikers about fire, and it will destroy fire rings at illegal campsites along the AT.

B. Law Enforcement: Law enforcement along this section of the AT is the responsibility of the NPS. The SMHC will observe the laws and regulations and will report any violations by anyone to proper authorities.

C. Search and Rescue: Search and rescue operations are normally conducted by NPS personnel or by competent teams under NPS direction. The SMHC has a search team which can cooperate with the NPS if detailed knowledge of the AT corridor and adjacent areas would be helpful.

D. Information and Education: Formal information and education programs will be developed jointly by the SMHC and the NPS with the guidance of the ATC. The objectives of such programs are (1) to enable the SMHC personnel to carry out their responsibilities safely and effectively in maintaining this AT section, and (2) to develop, with approval of the NPS, a system of on-trail hiker contacts and in situ informational or educational outlets.

E. Corridor Monitoring: The SMHC and the NPS will share responsibility for monitoring the AT and its corridor. Any environmental impacts or changes in land usage which would threaten the users' perception of a wilderness footway will be considered in revisions of this Cooperative Agreement.

F. Corridor Use: Any potential use of the land adjacent to the AT corridor within the Park which will affect the character of the corridor should be jointly agreed upon by the SMHC and the NPS and incorporated in this Agreement.

G. Trail Use: Except for 30.9 miles of AT which may be used by transmountain horse parties, this AT section is suitable for and designated for foot travel only; no accommodation to other uses is anticipated.

IV. REVIEW AND REVISION

A. Frequency: Following initial adoption of this AT Cooperative Agreement it will be reviewed and revised, if necessary, at an annual conference of the SMHC, the NPS and the ATC.

B. Special Conferences: If any party to this Cooperative Agreement gains knowledge which would require discussion and revision prior to the next annual conference, a special meeting will be scheduled to develop any required revision.

V. RESPONSIBILITIES

A. The following paragraphs list the responsibilities for work to be performed in maintenance and management of the section of the AT included in this Cooperative Agreement.

B. Smoky Mountain Hiking Club: The SMHC will perform all of its listed primary responsibilities to the limits of its resources and capability. When those limits are reached the SMHC will ask for the assistance of other AT

clubs or the NPS to ensure that the AT is properly maintained at all times. THe SMHC will have primary responsibility for the following:

1. Inventory: By October 31 of each year an inventory report of the condition of all segments of the AT in this section will be prepared. Recommendations for action and priorities for each organization will be included. The SMHC Trail Manager or his delegate will confer with the NPS before work assignments arising out of the inventory are agreed upon for that year.

2. Windfall Removal: Windfalls up to 6 inches in diameter will be cleared from the AT if the size of the work party is such that heavy limbs can be handled safely. Larger windfalls will be reported to the NPS for action.

3. Paint Blazes: Renew AT blazes to ATC size standards as needed. The distance between blazes will be kept as it now exists until the next revision of this Cooperative Agreement.

4. Clear Waterbars: After proper instructions by the NPS or ATC personnel, the SMHC will clear waterbars and other drainage structures of debris so as to minimize erosion and bypassing of inadequately drained trail.

5. Litter Removal: Litter will be removed from the AT segments as and when encountered provided that its transport does not interfere with other trail work. Burnable litter may be burned at shelters.

6. Hiker Contacts: SMHC work parties may discuss with hikers on the AT the makeup and importance of the cooperative agreements which are so important to maintaining the AT as a national resource.

7. Work Frequency: Initially the SMHC will make only one pass per year to perform the above work, although several separate trips by work parties may be required to complete the work.

8. Workshops: The SMHC will cooperate with the NPS and ATC in joint workshops or trail maintenance clinics to see that SMHC members and other citizen groups perform trail maintenance in the safest and most effective manner. Current plans are to conduct

such educational sessions early in the spring of each year.

C. National Park Service: The NPS, whose resources even with budget constraints overshadow the SMHC resources, will have to exercise the ultimate responsibility to see that the AT remains open for use in the Park. Accordingly, this Cooperative Agreement does not attempt to list specifically what the NPS will do on the AT. The ~~BCMP~~ and its implementation by the GRSM personnel provide for maintaining the AT to prevailing standards by supplementing as required the maintenance efforts of the SMHC.

D. Miscellaneous:

1. This Agreement may be terminated by either party with 60 days prior notice.

2. No member of, or delegate to, Congress or Resident Commissioner shall be admitted to any share or part of this Agreement or to any benefit that may arise therefrom but this restriction shall not be construed to extend to this Agreement if made with a corporation or company for its general benefit.

3. The Smoky Mountain Hiking CLub agrees that all its activities shall be conducted in accordance with all applicable laws and regulations both State and Federal. Specifically, the Smoky Mountain Hiking Club shall comply with the requirements of (a) Executive Order No. 11246 of September 24, 1967, (b) Title V, Section 503 of the Rehabilitation Act of September 26, 1973 (P.L. 93-112), which requires Government contractors and subcontractors to take affirmative action to employ and to advance in employment qualified handicapped individuals, and (c) with regulations heretofore or hereafter promulgated, relating to non-discrimination in employment and in providing facilities and service to the public, as set forth in exhibit attached hereto and made a part thereof.

APPROVED:

Charles K Klabunde — Date: 5/5/81

C. E. Klabunde
President, SMHC

Merrill D. Beal — 5-20-81

Merrill D. Beal
Superintendent, GSMNP

Great Smoky Mountains National Park

EXHIBIT

CONTINUATION OF CONDITIONS OF THIS AGREEMENT

United States Department of the Interior
National Park Service

The following provisions constitute Condition 4 in accordance with Executive Order No. 11246 of September 24, 1965, as amended by Executive Order No. 11375 of October 13, 1967.

Nondiscrimination. The Smoky Mountains Hiking Club agrees as follows:

(1) The SMHC will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The SMHC will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, or national origin. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; selection for training, including apprenticeship. The SMHC agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the Secretary setting forth the provisions of this nondiscrimination clause.

(2) The SMHC will, in all solicitations or advertisements for employees placed by or on behalf of the SMHC state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin.

(3) The SMHC will send to each labor union or representative of workers with which the SMHC has a collective bargaining agreement or other contract or understanding, a notice, to be provided by the Secretary, advising the labor union or workers' representative of the SMHC's commitments under Section 202 of Executive Order No. 11246 of September 24, 1965, as amended by Executive Order No. 11375 of October 13, 1967, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(4) The SMHC will comply with all provisions of Executive Order No. 11246 of September 24, 1965, as amended by Executive Order No. 11375 of October 13, 1967, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(5) The SMHC will furnish all information and reports required by Executive Order No. 11246 of September 24, 1965, as amended by Executive Order No. 11375 of October 13, 1967, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to the SMHC's books, records, and accounts by the Secretary of the Interior and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(6) In the event of the SMHC's noncompliance with the nondiscrimination clauses of this permit or with any of such rules, regulations, or orders, this permit may be cancelled, terminated, or suspended in whole or in part and the SMHC may be declared ineligible for further government permits or contracts in accordance with procedures authorized in Executive Order No. 11246 of September 24, 1965, as amended by Executive Order No. 11375 of October 13, 1967, and such other sanctions may be imposed and remedies invoked as provided in Executive Order No. 11246 of September 24, 1965, as amended by Executive Order No. 11375 of October 13, 1967, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(7) The SMHC will include the provisions of Paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order No. 11246 of September 24, 1965, as amended by Executive Order No. 11375 of October 13, 1967, so that such provisions will be binding upon each subcontractor or vendor. The SMHC will take such action with respect to any subcontract or purchase order as the Secretary may direct as a means of enforcing such provisions, including sanctions for noncompliance: Provided, however, that in the event the SMHC becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the Secretary, the SMHC may request the United States to enter into such litigation to protect the interests of the United States.

APPENDIX F

APPENDIX F

WORKLOAD INVENTORY OF

ROADS AND TRAILS

Great Smoky Mountains National Park
and
Foothills Parkway

Revisions:
Roads - June 1981
Trails - March 1985

Classification of Roads

Primary. All roads in a park built primarily for visitor use and shown as such on the approved master plan.

Secondary. All roads in a park built primarily for use by Service personnel for operation and protection of the park. (Permitting the use of secondary roads by visitors for occasional side trips does not change the classification).

Type

Graded

Graded. The stage of construction when the subgrade has been completed and all adjacent drains and structures have been completed and backfilled, or, any unbased road with a definite road section which is maintained even though no further construction is contemplated.

Based. Any road on which the base course has been completed. Also, any graded road to which a gravel, stone, chert, shell, shale or sand clay wearing surface has been applied even though no further construction is contemplated.

Surfaced

Base Sealed. Any based road to which a light bituminous seal coat or surface treatment has been applied and which treatment is less than one inch compacted thickness.

Surfaced. Any based or base sealed road which has been provided with a high type surface such as concrete slab or bituminous wearing surface one inch or more in compacted thickness.

Great Smoky Mountains National Park--Foothills Parkway

REVISED JUNE 1981

ROADS AND TRAILS MAINTENANCE WORKLOAD INVENTORY

SUMMARY OF MILEAGE

Classification	Mainline Miles	Parking Areas, etc., Converted To Miles	Total Miles
Primary: Public			
Graded	77.28	0.43	77.71
Surfaced	167.65	26.18	193.83
Total Primary Roads	244.93	26.61	271.54
Secondary: Admin			
Graded	65.99	0.21	66.20
Surfaced	5.08	3.64	8.72
Total Secondary Roads	71.07	3.85	74.92
(Total Graded Roads)	(143.27	0.64	143.91)
(Total Surfaced Roads)	(172.73	29.82	202.55)
GRAND TOTAL ROADS	316.00	30.46	346.46
Trails:			
Graded	907.90		907.90
Surfaced	10.33		10.33
GRAND TOTAL TRAILS.	918.23		918.23

INDEX
ROAD/TRAIL NUMBERS

Park Route No.		Computer Route No.	Page No.
10	Straight Fork Road	105	1,7
11	Toms Branch Road	109	2
11CG	Deep Creek Campground Roads	138	5
11PA	Deep Creek Picnic Area Roads	208	5
12	Rich Mountain Road	127	3
13	Wear Cove Road	23	3
14	Palmer Creek (Cataloochee) Road	108, 22	1,5
14A	Cataloochee Entrance Road	22	5
14CG	Cataloochee Campground Roads		I
15	Gatlinburg Spur Road, FHP	11	9
15A	Gatlinburg Bypass Road	12	9
16	Towstring Road	101	2,7
17	Tremont Road	128	3,10
17	Tremont (Road) Trail	223	40
18	Cherokee Orchard Road	501	7
18A	Roaring Fork Motor Nature Road	502	10
22	Little Greenbrier Road	129	2
25	Smokemont-Towstring Road		1,7
26	Kingfisher Road	130	2
27	Big Creek Entrance Road	103	1
27CG	Big Creek Campground Road	103	1
33	Old Cataloochee Turnpike	104	1
AT	Appalachian Trail		19
AS	Asbury Trail		20

Park Route No.		Computer Route No.	Page No.
BIG-53	Low Gap Trail	0S152	32
-56	Gunther Fork Trail	0S104	28
-57	Swallow Fork Trail	0S215	39
-58	Baxter Creek Trail	0S019	20
-136	Big Creek (Road) Trail	0S026	21
-137	Big Creek Ranger Station Parking		11
-197	Big Creek Water Intake Road		11
-230	Camel Gap Trail	0S045	23
-247	Chestnut Branch Trail	0S050	23
CAD-2	Hatcher Mountain Trail	0N107	28
-2A	Hannah Mountain Trail	0N105,0N106	28
-3	Gregory Bald Trail	0N101	28
-4	Gregory Ridge Trail	0N102	28
-6	Abrams Falls Trail	0N001	19
-7	Beard Cane Trail	0N021	20
-8	Three Mountains Trail	0N219,0N220,0N221,0N222	40
-10	Russell Field Trail	0N204	38
-11	Anthony Creek Trail	0N004	19
-100	Parson Branch Road	504	3
-101	Rabbit Creek (Road) Trail	0N193	37
-102	Cooper Road	411	13
-102	Cooper (Road) Trail	0N058	24
-103	Bunker Hill (Road) Trail	0N039	22
-104	Cane Creek (Road) Trail	0N046	23
-105	Indian Grave Gap Road		14
-108	Cades Cove Residence/Maintenance Area Roads	419	17
-112	Abrams Creek Ranger Station Parking		13
-168	Anthony Creek Road	410	13
-175	Goldmine Road		14
-181	Gregory Cave Road	131	2
-201	Pine-Oak Nature Trail	0N184	36
-202	Leige Oliver Trail	0N144	32
-203	North Side (Anthony Creek) Loop Trail	0N176	35
-204	Cades Cove Vista Nature Trail	0N042	22
-205	Rich Mountain Loop Trail	0N197	38
-235	Little Bottoms Trail	0N145	32
-242	Crooked Arm Ridge Trail	0N066	25
-243	Crib Gap Trail	0N065	24
-258	Ekaneetlee Trail	0N086	26
-261	John Oliver Cabin Trail	0N123	30

Park Route No.		Computer Route No.	Page No.
CAT-60	Mt. Sterling Ridge Trail	0S171	34
-61	Pretty Hollow Gap Trail	0S191	37
-61A	Pretty Hollow Gap (Jeep) Trail	0S190	37
-62	Cataloochee Divide Trail	0S047	23
-63	Palmer Creek Trail	0S178	35
-64	Rough Fork Trail	0S202	38
-65	Caldwell Fork Trail	0S043	22
-65A	Caldwell Fork (Jeep) Trail	0S044	23
-66	Hemphill Bald Trail	0S111	29
-124	Big Fork Ridge Trail	0S028	21
-133	Little Cataloochee Road		12
-140	Rough Creek Road		1
-171	Mt. Sterling Road		12
-171A	Forest Access Road		11
-231	McKee Branch Trail	0S156	33
-232	Long Bunk Trail	0S149	32
-232A	Hannah Cemetery Road		11
-256	Booger Mountain Trail	0S032	21
COS-47	Gabes Mountain Trail	0N095	27
-48	Maddron Bald Trail	0N157	33
-49	Snake Den Ridge Trail	0N208	39
-123	Lower Mt. Cammerer Trail	0N153	33
-131	Indian Camp Creek Road	114	14
-131	Indian Camp Creek (Road) Trail	0N118	30
-132	Cosby Creek (Road) Trail	0N062	24
-134	Cosby Residence Area Road		17
-193	Cosby Incinerator Road		13
-194	Mack Cemetery Road		14
-195	Tritt Cemetery Road		15
-196	Mt. Cammerer (Jeep) Trail	0N170	34
-227	Hen Wallow Falls Trail	0N112	29
-229	Cosby Horse Trail	0N061	24
-239	Albright Grove Nature Trail	0N002	19
-240	Cosby Nature Trail	0N262	45

Park Route No.		Computer Route No.	Page No.
DEP-84	Thomas Divide Trail	0S217,0S218	40
-85	Deep Creek Trail	0S075	25
-86	Fork Ridge Trail	0S092	27
-87	Pole Road Creek Trail	0S187	36
-88	Sunkata Ridge Trail	0S214	39
-89	Deeplow Gap Trail	0S078,0S079	26
-89A	Cooper Creek Road	115	1
-149	Deep Creek Road	116	1
-149	Deep Creek (Road) Trail	0S073	25
-149A	Deep Creek (Road) Trail	0S074	25
-150	Indian Creek (Road) Trail	0S121	30
-150A	Indian Creek (Motor Nature) Trail	0S120	30
-151	Deep Creek Campground Residence Road		16
-173	Deep Creek Shelter and Comfort Station Walks	0S263	45
-250	Deep Creek Juneywhank Nature Trail	0S076	25
-251	Indian Creek Falls Trail	0S119	30
-252	Spruce-Fir Nature Trail	0S212	39
-254	Martin Gap A Trail	0S158	33
-254A	Martin Gap B Trail	0S159	33
-257	Deep Creek Bypass Trail	0S071	25
-260	South Sunkata Trail	0S209	39
ELK-22	Little Greenbrier Trail	0N147	32
-22A	Little Greenbrier Gap Road	414	3
-23	Sugarland Mountain Trail	0N213	39
-23A	Laurel Falls Trail	0N268	45
-23B	Cove Mountain Trail	0N064	24
-24	Huskey Gap Trail	0N115	29
-26	Goshen Prong Trail	0N096	27
-27	Blanket Mountain Trail	0N030	21
-28	Meigs Mountain Trail	0N161	33
-117	Little River Road		2
-117	Little River (Road) Trail	0N148	32
-118	Jakes Creek Road	134	2
-118A	Jakes Creek (Jeep) Road	413	14
-120	Elkmont Residence (#210) Road		14
-208	Mids Branch Nature Trail	0N163	34
-233	Rough Creek Trail	0N200	38
-236	Curry Mountain (Old Wagon) Trail	0N068	25
-237	Cucumber Gap Trail	0N067	25

Park Route No.		Computer Route No.	Page No.
FOR-90	Forney Ridge Trail	0S094	27
-91	Clingmans Dome Trail	0S261	45
-91A	Clingmans Dome Bypass Horse Trail	0S055	24
-92	Noland Divide Trail	0S175	35
-93	Springhouse Branch Trail	0S211	39
-94	Forney Creek Trail	0S093	27
-95	Jonas Creek Trail	0S124	30
-139	Noland Creek Trail	0S174	35
-154	Bear Creek (Jeep Road) Trail	0S020	20
-155	Noland Creek Road		12
-155	Noland Creek Access from Route 9A		16
-174	Forney Pumphouse Road	423	11
-187	Lower Noland Cemetery Road		12
-188	Mill Creek Road		12
GRE-42	Brushy Mountain Trail	0N037	22
-43	Porters Creek Trail	0N189	36
-44	Pinnacle Trail	0N185	36
-45	Ramsey Cascades Trail	0N195	37
-120	Copeland Divide Trail	0N060	24
-128	Porters Creek Road	102	3
-129	Ramsey Prong Road	113	3
-129	Ramsey Prong (Road) Trail	0N196	37
-130	Greenbrier Ranger Station Road		17
-157	Greenbrier Ranger Station Walks	0N264	45
-189	Price Cemetery Road	420	14
-190	Copeland Cemetery Road	421	13
-191	Tunis Cemetery Road	422	15
-246	Porters Creek Manway --> ABANDONED		NA
HAZ-97	Upper Hazel Creek Trail	0S109	29
-101	Jenkins Ridge Trail	0S122	30
-102	Eagle Creek Trail	0S085	26
-104	Lost Cove Trail	0S151	32
-148	Welch Ridge Trail	0S234	41
-148A	Welch Ridge (Jeep) Trail	0S233	41
-148B	Cold Spring Gap (Jeep Road) Trail	0S056	24
-148C	Cold Spring Gap Trail	0S057	24
-158	Hazel Creek Road		11
-158	Hazel Creek (Road) Trail	0S108	28

Park Route No.		Computer Route No.	Page No.
HAZ-159	Bone Valley (Road) Trail	0S031	21
-183	Pickens Gap (Road) Trail	0S182	36
-184	Bradshaw Cemetery Road		11
-185	Fairview Cemetery (Road) Trail	0S088	27
-186	Deep Gap (Jeep Road) Trail	0S077	26
-260	Pinnacle Creek Trail	0S186	36
-263	Cable Cemetery Trail	0S041	22
-264	Fairview Cemetery Trail	0S089	27
-265	Mitchell Cemetery Trail	0S167	34
-266	Pilky-Posey Cemeteries Trail	0S183	36
LEC-32	Twomile Branch Road (horse concession)		10
-32A	Twomile Branch Trail	0N230	41
-33	Rainbow Falls Trail	0N194	37
-33A	Boulevard Trail	0N034	21
-34	Bullhead Trail	0N038	22
-35	Huskey Gap Trail	0N116	29
-36	Road Prong Trail	0N199	38
-37	Chimneys-Sugarland Mtn. Connection Trail -- ABANDONED		NA
-38	Alum Cave Trail	0N003	19
-39	Trillium Gap Trail	0N224	40
-40	Trillium Gap Trail	0N225	40
-108	Headquarters Area Walks	0N265	45
-118	Baskins Creek Trail -- ABANDONED		NA
-122	Hdqtrs. Court & Parking/Maintenance Area Road		17
-123	Headquarters Residence Area Road		17
-124	Ash Hopper Branch Road	407	13
-125	Sugarlands Branch Road	400	14
-126	Sugarlands Cemetery Road	406	15
-162	Headquarters Residence Area Walks	0N266	45
-172	Cliff Top Trail	0N054	24
-176	Cove Mountain (Jeep) Trail	0N063	24
-201	Dudley Creek Road (horse concession)	112	8
-209	Twomile Lead Trail	0N231	41
-210	Panther Branch Trail	0N179	35
-211	River Trail	0N198	38
-212	Jump-Off Trail	0N125	30
-213	Big Locust Nature Trail	0N029	21
-214	Buckeye Nature Trail -- ABANDONED		NA
-215	Chimney Tops Trail	0N053	23
-216	Junglebrook Nature Trail	0N126	30

Park Route No.		Computer Route No.	Page No.
LEC-217	Dudley C Trail	0N081	26
-218	Dudley D Trail	0N082	26
-219	Dudley B Trail	0N146	32
-220	Dudley E Trail	0N083	26
-221	Bell Branch Trail	0N025	21
-222	Dudley F Trail	0N084	26
-223	Big Dudley A Trail	0N027	21
-224	Daddys Branch Trail	0N069	25
-225	Cherokee Orchard to Roaring Fork Trail	0N052	23
-228	Grapeyard Ridge Trail	0N098	28
-234	Rainbow Falls Foot Trail -- ABANDONED		NA
-238	Sugarlands Nature Trail	0N280	46
-245	Twomile One-Hour Loop Trail	0N232	41
-267	Twin Creeks Trail	0N229	41
-268	Grassy Branch Trail	0N099	28
OCO-75	Hughes Ridge Trail	0S114	29
-78	Dry Sluice Gap Trail	0S080	26
-80	Sweat Heifer Creek Trail	0S216	40
-82	Newton Bald Trail	0S173	35
-82A	Newton Bald Road	402	12
-83	Mingus Creek Trail	0S164	34
-131	Chasteen Creek Trail	0S049	23
-131A	Chasteen Creek (Road) Trail	0S048	23
-133	Grassy Branch Trail	0S100	28
-135	Kanati Fork Trail	0S127	31
-144	Mingus Creek Cemetery Road	403	12
-145	Bradley Fork Road	118	11
-145	Bradley Fork (Road) Trail	0S035	22
-145A	Hughes Ridge (Jeep Road) Trail	0S113	29
-145B	Cabin Flats (Jeep Road) Trail	0S040	22
-146	Kephart Prong (Road) Trail	0S128	31
-147	Oconaluftee Residence Area Road		16
-148	Oconaluftee Maintenance Area Road		16
-165	Newfound Gap Comfort Station Walks	0S275	46
-169	Oconaluftee V.C., R.S., Farmstead walks	0S276,0S277	46
-170	Mingus Creek Mill Trail	0S165	34
-199	Old US 441 Road		12
-243	Smokemont Horse Loop Trail	0S205	38
-244	Smokemont Campground Loop Trail	0S207	39
-245	Bradley Fork Trail	0S036	22

Park Route No.		Computer Route No.	Page No.
OCO-246	Becks Branch Loop Trail	0S022	20
-247	Queen Mountain Trail	0S192	37
-248	Collins Creek Picnic Area Trail	0S059	24
-249	Smokemont Nature Trail	0S206	38
-250	Oconaluftee River Trail	0S177	35
-253	Smokemont Campground Area Walks	0S278,0S279	46
RAV-21	Ravensford Road		16
-67	Balsam Mountain Trail	0S018	20
-68	Hyatt Ridge Trail	0S117	29
-68A	Hyatt Ridge Road		12
-70	Three Forks Trail -- CLOSED		NA
-71	Enloe Creek Trail	0S087	27
-71A	Enloe Creek Road		11
-73	Polls Gap Trail	0S188	36
-142	Balsam Mountain Road	107	1
-152	Flat Creek Trail	0S091	27
-164	Heintooga Picnic Area Trail	0S110	29
-173	Spruce Mountain Road		13
-174	Balsam Mountain Campground Area Trails	0S257	45
-175	Laurel Gap (Balsam Mountain) Road		11
-241	Beech Gap Trail	0S024	20
-241	Beech Gap (Jeep) Trail	0S023	20
TRE-13	Turkey Pen Ridge Trail	0N226	41
-15	Chestnut Top Trail	0N051	23
-16	Roundtop Trail	0N203	38
-17	Meigs Creek Trail	0N160	33
-18	Panther Creek Trail	0N180	35
-19	Greenbrier Ridge Trail	0N103	28
-20	Lynn Camp Prong Trail	0N155	33
-21	Miry Ridge Trail	0N166	34
-111	Lumber Ridge Trail	0N154	33
-111	West Prong Trail	0N235	41
-113	Bote Mountain (Road) Trail	0N033	21
-113A	Spence Field (Jeep) Trail	0N210	39
-113B	Schoolhouse Gap Road		14
-115	Middle Prong (Road) Trail	0N162	33
-116	Tremont Ranger Station Road		18

Park Route No.		Computer Route No.	Page No.
TRE-155	Tremont Ranger Station Walks	0N281	46
-206	Lead Cove Trail	0N143	32
-207	Finley Cane Trail	0N090	27
-262	Honey Cove Trail (built/maintained by Tremont EEC)		NA
TWE-106	Long Hungry Ridge Trail	0S150	32
-107	Wolf Ridge Trail	0S236 thru 0S240	42
-149	Dalton Gap Trail	0S070	25
-165	Twentymile Creek (Truck) Trail	0S227	41
-165A	Twentymile (Jeep Road) Trail	0S228	41
-166	Moore Springs Branch Trail	0S168	34
-166A	Moore Springs Branch (Jeep) Trail	0S169	34
-167	Twentymile Ranger Station Road		16
-182	Payne-Orr Cemetery (Road) Trail	0S181	36
-198	Payne Cemetery Road		12
-200	Orr Cemetery Road		12

Great Smoky Mountains National Park
and Foothills Parkway

Roads
PRIMARY (Visitor Use)
Classification

Graded
Type

Route Number	Name	CO	CD	Width	Mainline Miles	Parking Areas, etc., Converted to Miles	Total
	NORTH CAROLINA						
RAV-142 #107	Balsam Mountain Heintooga Ridge Rd-Straight Fork Rd	SW		12'	13.50		13.50
27 #103	Big Creek County Rd 1395 at Park Bdry -Gate	HA		12'	0.80		0.80
27CG #103	Big Creek Campground	HA		12'	1.00	0.16	1.16
14 #108	Cataloochee (Palmer Creek)--Por.*	HA		12'	2.00		2.00
14CG	Cataloochee Campground	HA		12'	0.75	0.16	0.91
33 #104	(Old) Cataloochee Turnpike Cove Creek Gap-Double Gap (approx. 1/3 mi. south of Ivy Gap)	HA		16'	12.50		12.50
DEP-89A #115	Cooper Creek Park Bdry-turnaround at jct with Deeplow Gap Trail	SW		6'	0.50		0.50
DEP-149 #116	Deep Creek Park Bdry-(Barricade) - See Trails	SW		12'	0.40		0.40
CAT-140	Rough Creek End Cataloochee Ent Rd-gate at Messer Branch	HA		12'	0.90		0.90
25	Smokemont-Towstring--Por.* Smokemont CG-Towstring Rd	SW		16'	0.95		0.95
10 #105	Straight Fork Road--Por.* Oconaluftee-park bdry-(Indian Res)-park bdry-Balsam Mtn. Rd	SW		16'	3.80		3.80

*See PRIMARY Roads, Surfaced
#Computer Route Number

Roads
PRIMARY (Visitor Use)
Classification

Graded
Type

Route Number	Name	Co	CD Width	Mainline Miles	Parking Areas, etc., Converted to Miles	Total
11 #109	Toms Branch (Deep Creek) Park bdry at Galbreath Gap-Deep Creek Rd	SW	16' 11	1.38		1.38
16 #101	Towstring--Por.* Bridge to bdry	SW	12' 11	0.67		0.67
	TOTALS for North Carolina			39.15	0.32	39.47
	TENNESSEE:					
3BCC6 #125	Abrams Falls 3BCC-Parking Area	BL	10' 02	0.66		0.66
3BCC4 #123	Cable Mill 3BCC-Parking area	BL	10' 02	0.25		0.25
3BCC7 #126	Forge Creek Cades Cove Loop (Cable Mill) -Parson Branch Rd	BL	16' 02	2.16		2.16
CAD	Forge Creek Horse Camp Road	BL	02	0.06	0.08	0.14
3BCC5 #124	George Caughron Road Loop off 3BCC	BL	10' 02	0.15		0.15
7 #102	Greenbrier--Por.* Ranger Station-gate	SE	(10' 01 (14'	0.80 2.70		3.50
7CG	Greenbrier Picnic Area	SE	16' 01	0.80		0.80
CAD-181 #131	Gregory Cave 3BCC-Cave entrance	BL	10' 02	0.20		0.20
3BCC2 #121	Hyatt Lane 3BCC-3BCC	BL	9' 02	1.95		1.95
ELK-118 #134	Jakes Creek Road Elkmont Rd (4)-Gate	SE	12' 01	0.85		0.85
26 #130	Kingfisher Park bdry-Abrams Creek CG	BL	12' 02	1.00		1.00
22 #129	Little Greenbrier Wear Cove Road-gate	SE	12' 01	0.70		0.70

*See PRIMARY Roads, Surfaced
#Computer Route Number

Roads
PRIMARY (Visitor Use)
Classification

Graded
Type

Route Number	Name	CD	Width	CD	Mainline Miles	Parking Areas, etc., Converted to Miles	Total
ELK-22A #414	Little Greenbrier Gap	SE	12'	01	1.00		1.00
ELK-117 #133	Little River End Elkmont Rd-(Barricade) -- See Trails	SE	12'	01	0.80		0.80
ELK	Mids Branch Nature Trail (Parking)	SE	17'	01		0.03	0.03
CAD-100 #504	Parson Branch Forge Creek Rd-south park bdry	BL	12'	02	7.90		7.90
GRE-128 #102	Porters Creek Gate at end Greenbrier Rd-trailhead at Porters Flat	SE	14'	01	1.00		1.00
3BCC3 #122	Primitive Baptist Church 3BCC-Church	BL	9'	02	0.35		0.35
GRE-129 #113	Ramsey Prong Greenbrier Rd-(Barricade) -- See Trails	SE	14'	01	1.60		1.60
12 #127	Rich Mountain 3BCC-Park bdry	BL	16'	02	6.70		6.70
3BCC1 #120	Sparks Lane 3BCC-3BCC	BL	9'	02	1.30		1.30
17 #128	Tremont Road--Portion* Tremont EEC -(Barricade) -- See Trails	BL	16'	02	2.75		2.75
17PA	Tremont Campground	BL	12'	02	0.20		0.20
13 #23	Wear Cove Little River Rd at Metcalf Bottoms-North park bdry at Wear Cove Gap	SE	18'	01	1.25		1.25

*See PRIMARY ROADS, Surfaced
#Computer Route Number

Roads
PRIMARY (Visitor Use)
Classification

Graded
Type

Route Number	Name	CO	Width	Mainline Miles	Parking Areas, etc., Converted to Miles	Total
4WC	Wonderland Club	SE	14' 01	1.00		1.00
	TOTALS for Tennessee			38.13	0.11	38.24
	GRAND TOTAL			77.28	0.43	77.71

Roads
PRIMARY (Visitor Use)
Classification

Surface Type

Route Number	Name	Co	CD Width	Mainline Miles	Parking Areas, etc., Converted to Miles	Total
	NORTH CAROLINA:					
6CG #100	Balsam Mountain Campground	SW	16' 11	(0.45)**	(0.12)**	(0.57)**
OCO	Big Cove Road	SW	20' 11	(1.75)***		(1.75)**
14 #22	Cataloochee (Palmer Creek)--Por.*	HA	12' 11	1.60		1.60
14A #22	Cataloochee Entrance East Park bdry-Cataloochee Cr.	HA	20' 11	5.19		5.19
2 #17	Clingmans Dome	SW	20' 11	6.96		
	Newfound Gap-Dome					
	Oconaluftee Overlook Parking				0.03	
	Indian Gap Parking Area				0.08	
	Forney Ridge Parking Areas				0.74	
	Spruce Fir Nature Trail Parking				0.09	
	Total					7.90
OCO #205/206	Collins Creek Picnic Area (Por.)	SW	14' 11 20'	0.47	0.42	0.89
1BCC	Couches Creek Area	SW	12' 11		0.13	0.13
11CG #138	Deep Creek Campground:	SW	11			
	West Side Roads		18'	0.40	0.16	0.56
	Trailer Loop		12'	0.04		0.04
	Amphitheater		22'	0.05	0.02	0.07
	East Side Roads		18'	0.32	0.03	0.35
	Walk-In Campground		18'	0.25	0.27	0.52
	Extension Campground		12'	0.61	0.53	1.14
				(1.67)	(1.01)	(2.68)
11CG	Deep Creek Campground Bypass	SW	18' 11	0.24		0.24
11PA #208	Deep Creek Picnic Area	SW	18' 11	0.19	0.11	0.30

*See PRIMARY Roads, Graded
**Not included in totals--maintained by Blue Ridge Parkway
***Not included in totals--maintained by Bureau of Indian Affairs
#Computer Route Number

Roads
PRIMARY (Visitor Use)
Classification

Surfaced
Type

Route Number	Name	Co	Width	Mainline Miles	Parking Areas etc., Converted to Miles	Total
6 #107	Heintooga Ridge	SW	20'	(5.22)**		
	Blue Ridge Parkway-Parking Area					
	Parking Area Sta. 16				(0.05)**	
	Parking Area Sta. 141				(0.06)**	
	Heintooga Ridge Parking Area				(0.29)**	
	Total			(5.22)**	(0.40)**	(5.62)**
9A #19	Lake View (east)	SW	20'	6.89	0.17	7.06
	Park bdry near Bryson City -Tunnel Ridge					
9D #20	Lake View (west)	SW	18'	1.09		1.09
	Fontana Dam-deadend					
022	Mingus Mill Roadway	SW	20'	0.22		0.22
			12'	0.22		0.22
020	Mingus Mill Parking	SW			0.10	0.10
1B #10	Newfound Gap Road	SW	24'	5.20	0.36	5.56
	Newfound Gap (jct with Rt. 2)		20'	11.12	0.13	11.25
	-Park bdry		40'	1.08		1.08
	Oconaluftee Valley Overlook				0.30	0.30
	Smokemont Bridge (2)				0.01	0.01
	Smokemont				0.05	0.05
	0.4 Mi. N of Smokemont CG				0.03	0.03
	Near Towstring Road				0.02	0.02
	Cliff Branch				0.06	0.06
	0.2 Mi. N of Towstring Road				0.03	0.03
	Near Mingus Mill				0.02	0.02
	Near Cliff Branch				0.05	0.05
	Kephart Bridge				0.04	0.04
	Just North of Kephart				0.13	0.13
	Kephart				0.05	0.05
	Near Kephart				0.11	0.11
	Totals			(17.40)	(1.39)	(18.79)
1BOC	Oconaluftee Visitor Center and Ranger Station Road	SW			0.33	0.33
	Trailer Parking Area				0.05	0.05
					(0.38)	(0.38)
020	Oconaluftee JCCCC Access Road	SW	18'	(0.75)***	(0.48)***	(1.23)***
1BSM #110	Smokemont Campground	SW	10'-12'	2.53	1.57	4.10
			16'	0.03		0.03
	(Trailer Section)		12'	0.29	0.47	0.76
	Totals			(2.85)	(2.04)	(4.89)

**Not included in totals--maintained by Blue Ridge Parkway
***Not included in totals--maintained by Job Corps Center
#Computer Route Number

Roads
PRIMARY (Visitor Use)
Classification

Surfaced
Type

Route Number	Name	Co	CD	Width	Mainline Miles	Parking Areas, etc., Converted to Miles	Total
000	Smokemont Horse Concession	SW	11	14'	0.02	0.09	0.11
000	Smokemont Travel Trailer Disposal Station Road	SW	11	12'	0.07		0.07
25	Smokemont-Towstring -- Portion*	SW	11	16'	0.28		0.28
10 #105	Straight Fork--Portion*	SW	11	18'	0.20		0.20
16 #101	Towstring--Portion* Newfound Gap Rd-bridge	SW	11	12'	0.12		0.12
	TOTALS for North Carolina				45.68	6.78	52.46
	TENNESSEE:						
3BCG #137	Cades Cove Campground	BL	02	18'	3.39	1.21	4.60
---CAD #203	Cades Cove Horse Concession	BL	02	10'	0.05	0.05	0.10
3BCC #500	Cades Cove Loop Road	BL	02	9'	11.00	1.20	12.20
	(Cable Mill)			10'		0.36	0.36
	End of Laurel Creek Rd-Loop						
3BPA #202	Cades Cove Picnic Area	BL	02	18'	1.09		1.09
CAD	Cades Cove Trailer Disposal Sta.	BL	02	10'	0.02		0.02
18 #501	Cherokee Orchard	SE	01	18'	2.00		
	Park bdry-Roaring Fork Road			14'	1.20		
				12'	0.53		
	Total						3.73
18	Cherokee Orchard Parking Areas	SE	01	18'		0.20	
				14'		0.32	
				12'		0.02	
	Total						0.54
1A-CH #204	Chimney Tops Picnic Area	SE	01	12'	0.93		0.93
	(Two-way Road)			20'	0.08		0.08
	(Parking)			12'		0.49	0.49

*See PRIMARY Roads, Graded
#Computer Route Number

Roads

PRIMARY (Visitor Use) Classification — Surfaced Type

Route Number	Name	Co	CD	Width	Mainline Miles	Parking Areas, etc., Converted to Miles	Total
5 #21	Cosby Entrance TN 32 at Park bdry-Campground	Co	01	18'	2.05		2.05
5CG #207	Cosby Campground	Co	01	10'	3.00	1.02	4.02
C05	Cosby Trailer Disposal Station	Co	01	10'	0.02		0.02
LEC-201 #112	Dudley Creek Horse Concession	SE	01	18'	0.08	0.06	0.14
4 #18	Elkmont Elkmont jct-Campground	SE	01	17'	1.90		1.90
---	Elkmont Campground, Sec. A	SE	01	12'	1.72	1.45	
	Sec. B			12'	1.01	1.00	
	Sec. C			12'	0.75	0.60	
	Two-way Access			18'	0.44		
	Total						6.97
4AC	Elkmont-Appalachian Club	SE	01	16'	1.05		1.05
3A #13	Fighting Creek Gap Jct NFG Rd-Fighting Cr. Gap	SE	01	20'	4.10	0.18	
	Parking Overlook No. 3					0.06	
	Parking Overlook No. 2					0.07	
	Fighting Creek Gap Parking					0.18	
	Total						4.59
3A #13	Fighting Creek Gap Fighting Creek Gap-Elkmont Jct	SE	01	20'	1.11		1.11
8A #25	Foothills Parkway I-40 to TN 32	Co	01	20'	5.60	0.72	6.32
8F	Foothills Parkway Little River (TN 73)-Carr Creek	BL	02	20'	6.36	1.25	7.61
8G #24	Foothills Parkway Little River (TN 73)-Murray Gap	BL	02	20'	9.98	0.97	10.95
8H #24	Foothills Parkway Murray Gap-US 129 at Chilhowee	BL	02	20'	6.86	1.50	8.36

#Computer Route Number

Roads
PRIMARY (Visitor Use)
Classification

Surfaced
Type

Route Number	Name	Co	Width	Mainline Miles	Parking Areas, etc., Converted to Miles	Total
15A #12	Foothills Parkway, Gatlinburg Bypass	SE	20' 01	4.59	0.08	4.67
15 #11	Foothills Parkway, Gatlinburg Spur Gatlinburg-Pigeon Forge	SE	48' 01	4.02		4.02
15 #11	Foothills Parkway, Gatlinburg Spur	SE	18' 01		1.24	1.24
15 #11	Foothills Parkway, Gatlinburg Spur Crossover Bridges (3)	SE	18' 01		0.12	0.12
7 #102	Greenbrier--Portion* Park bdry at TN 73-Ranger Station	SE	16' 01	1.10		1.10
1A-Hdq.	Headquarters Parking	SE	01		0.04	0.04
66C	Headquarters Travel Trailer Disposal Station Road	SE	14' 01	0.13		0.13
3BN (west) #15	Laurel Creek	BL	20' 02	7.80		
	Townsend Wye-Cades Cove					
	Cades Cove Parking Overlook				0.27	
	Total					8.07
3BN (east) #14	Little River Gorge	SE BL	01 18' 02	6.10 ~~12.20~~ 6.10		~~12.20~~
600	Look Rock Developed Area, FHP Entrance Road to Campground and Picnic Area, Maintenance Area, and connect to Happy Valley Road	BL	20' 02	0.60	0.03	0.63
600	Look Rock Developed Area	BL	02			
	Campground, Section I		12'	1.05	0.99	2.04
	Picnic Area, Section I & II		20'	0.64	0.23	0.87
3BN	Metcalf Bottoms Parking Area	SE	01		0.03	0.03
--- #200/201	Metcalf Bottoms Picnic Area	SE	18' 01	0.17		0.17
			12'	0.63	0.81	1.44
3BN	Millsap	SE	10' 01	0.03	0.09	0.12

*See PRIMARY Roads, Graded
#Computer Route Number

Roads
PRIMARY (Visitor Use)
Classification

Surfaced
Type

Route Number	Name	CC	CD Width	Mainline Miles	Parking Areas, etc., Converted to Miles	Total
1A #10	Newfound Gap Road	SW	20'-22' 11	14.54		
	Gatlinburg-Newfound Gap					
	Newfound Gap Parking Area — NC				0.67	
	~~Parking Areas (27)~~ List				1.20	16.41
18A #502	Roaring Fork	SE	10' 01	5.26		5.26
	Cherokee Orchard Rd-Park bdry					
18A	Roaring Fork Road Parking Areas	SE	10' 01		0.54	0.54
3BN	Sinks Parking Area	BL	02		0.03	0.03
3C #16	Townsend Entrance	BL	20' 02	0.77		0.77
	Townsend Wye-North Park bdry					
17 #128	Tremont--Portion*	BL	16' 02	2.00		2.00
	Laurel Creek Rd-end of surface					
LEC-32 #111	Twomile Branch Horse Concession	SE	18' 01	0.12	0.12	0 2
	TOTALS for Tennessee			121.97	19.40	141.37
	GRAND TOTALS			167.65	26.18	193.83

*See PRIMARY Roads, Graded
#Computer Route Number

PARKING AREAS, ROUTE 1A
December 1971

Surfaced

Mileage from Gatlinburg	Type			Left	Right	Name and/or Comments	Approx Square Feet
	Paved	Graded	No Parking				
0.0						Park Boundary	
0.12	X				X	Entrance Sign Parking	3,000
0.35	X				X	Turnaround - Gatlinburg	2,560
0.89	X			X		Twomile Interchange Intersection	1,800
1.47	X			X		Administration Area Intersection	1,500
2.65	X			X		Bullhead View	3,320
3.67	X			X		Sugarlands No. 1	3,460
3.81	X			X		Sugarlands No. 2	7,920
3.91	X			X		Jim Carr	2,520
4.83	X			X		Balsam Point	9,450
6.80	X			X		Chimneys Overlook No. 1	750
6.84	X				X	Chimneys Overlook No. 2	1,000
6.89	X				X	Chimneys Overlook No. 3	3,600
6.94	X				X	Chimneys Overlook No. 4	2,250
7.03	X				X	Chimneys Overlook No. 5	4,000
7.52	X			X		Buckeye Nature Trail	5,220
7.73	X				X	Fort Harry	14,400
8.37	X				X	Chimney Tops No. 1	9,000
8.49	X				X	Chimney Tops No. 2	3,330
9.13	X			X		Bearpen Hollow	1,200
9.29	X				X	Trout Branch - New	6,930

PARKING AREAS, ROUTE 1A
December 1971

Surfaced

Mileage from Gatlinburg	Type			Left	Right	Name and/or Comments	Appr Squa Fee
	Paved	Graded	No Parking				
9.39	X				X	Hemlock	2,000
9.80	X			X		Birch	1,500
10.05	X			X		Alum Cave No. 1	13,100
10.12	X			X		Alum Cave No. 2	11,070
11.94	X			X		Tree Well	2,000
13.62	X				X	Morton Overlook	4,500
14.11	X				X	Turnaround - Newfound Gap	5,600
14.32						Newfound Gap	

Roads
SECONDARY (Administrative/Management Use)
Classification

Graded
Type

Route Number	Name	Co	CD Width	Mainline Miles	Parking Areas, etc., Converted to Miles	Total
	NORTH CAROLINA					
RAV-175	Balsam Mountain (Laurel Gap) Jeep Road Balsam Mtn Rd (RAV-142) at Pin Oak Gap-Shelter	HA	6' "	5.00		5.00
BIG-137	Big Creek Ranger Station Road	HA	12' "		0.04	0.04
BIG-197	Big Creek Water Intake Road Big Cr Ent Rd (27)-water intake	HA	10' "	0.10		0.10
OCO-145 #118	Bradley Fork Road Smokemont CG-(Barricade) - see TRAILS	SW	12' "	2.50		2.50
HAZ-184	Bradshaw Cemetery Road Hazel Cr Rd (HAZ-158)-cemetery	SW	6' "	1.00		1.00
CCO	Collins Creek Reservoir Road	SW	12' "	0.21		0.21
CCO	Collins Creek Pumphouse Road	SW	10' "	0.05		0.05
DEP	Deep Creek Campground Reservoir Road	SW	6' "	0.50		0.50
RAV-71A	Enloe Creek (Jeep) Road Hyatt Ridge Rd (RAV-68A) -Three Forks Tr (RAV-70)	SW	6' "	1.00		1.00
CAT-171A	Forest Access Old Cataloochee Tpke. (33) at Mt. Sterling Gap-Park bdry	HA	6' "	0.30		0.30
FOR-174 #423	Forney Pumphouse Road Clingmans Dome Rd (2)-Pumphouse	SW	10' "	1.50		1.50
CAT-232A	Hannah Cemetery Road Little Cataloochee Rd (CAT-133) -Cemetery	HA	10' "	0.30		0.30
HAZ-158	Hazel Creek Road Fontana Lake shoreline -(Barricade) -- See TRAILS	SW	12' "	0.50		0.50

#Computer Route Number

Roads

SECONDARY (Administrative/Management Use)

Classification

Graded Type

Route Number	Name	Co	Width	Mainline Miles	Parking Areas, etc., Converted to Miles	Total
RAV-68A	Hyatt Ridge (Jeep) Road Straight Fork Rd (10)- at mouth of Hyatt Creek	SW	6' II	5.00		5.00
CAT-133	Little Cataloochee Road Old Cataloochee Tpke (33)-Pretty Hollow Gap Rd (CAT-61A)	HA	10' II	4.70		4.70
FOR-188	Mill Creek Road Noland Cr Rd (For-155)-trailhead	SW	6' II	1.00		1.00
OCO-144 #403	Mingus Creek Cemetery Road Newfound Gap Rd (1B) -Cemetery	SW	12' II 6'	0.76 1.00		1.76
CAT-171	Mt. Sterling Fire Tower Road Old Cataloochee Tpke (33) -Lookout tower	HA	6' II	3.00		3.00
OCO-199	(Old US 441) Newfound Gap to Oconaluftee Valley Overlook	SW	10' II	0.65		0.65
OCO-82A #402	Newton Bald Road NFG Rd (1B) at Smokemont -Trailhead (OCO-82)	SW	6' II	1.00		1.00
FOR-155	Noland Creek Road Fontana Lake shoreline -bridge washout on Noland Cr	SW	6'-12' II	9.41		9.41
FOR-187	(Lower) Noland Cemetery Noland Cr Rd (FOR-155)-Cemetery	SW	6' II	0.25		0.25
OCO	Oconaluftee JCCC Center to Well Site	SW	10' II	0.20		0.20
TWE-200 #136	Orr Cemetery Road N.C. 28-Locked gate beyond cemetery	SW	16' II	0.50		0.50
TWE-198 #135	Payne Cemetery Road Bryson-Fontana Rd (9D)-Locked gate beyond cemetery	SW	16' II	0.50		0.50

#Computer Route Number

Roads
SECONDARY (Administrative/Management Use)
Classification

Graded
Type

Route Number	Name		Width	Mainline Miles	Parking Areas, etc., Converted to Miles	Total
RAV-173	Spruce Mtn. Fire Tower Road Balsam Mtn Rd (RAV-142) -Lookout tower	#A	6' 11	2.00		2.00
0CO	Towstring Residence & Horse Barn Road	SW	12' 11	0.06	0.03	0.09
	TOTALS for North Carolina			42.99	0.07	43.06
	TENNESSEE					
CAD-112	Abrams Creek Ranger Station Road	BL	12' 02		0.03	0.03
CAD-168 #410	Anthony Creek Road Cades Cove Picnic Area -Jct. trails CAD-10 & CAD-11	BL	12' 02	1.00		1.00
LEC-124 #407	Ash Hopper Branch Road Fighting Cr Gap Rd (3A) -Water intake	SE	10' 01	0.92		0.92
CAD	Cades Cove Incinerator & Sewage Lagoon Road	BL	12' 02	0.30		0.30
CHI	Chilhowee Residence #590	BL	12' 02	0.15		0.15
CAD-102 #411	Cooper Road Cades Cove Loop Rd (3BCC) -(Barricade) -- See TRAILS	BL	12' 02	1.60		1.60
GRE-190 #421	Copeland Cemetery Road Park bdry-Cemetery	SE	6' 01	1.00		1.00
COS	Cosby CG Reservoir Road	CO	12' 01	0.20		0.20
COS	Cosby Developed Area, Intake & Reservoir Road	CO	10' 01	0.90		0.90
COS-193	Cosby Incinerator Road Cosby Entrance Rd (5)-Incinerator	CO	12' 01	1.00		1.00

#Computer Route Number

Roads

SECONDARY (Administrative/Management Use)

Route Number	Name	Classification	Graded Type Width	Mainline Miles	Parking Areas, etc., Converted to Miles	Total
ELK ---	Elkmont CG Incinerator Road	SE	12' 01	0.50		0.50
ELK ---	Elkmont CG Reservoir Road	SE	12' 01	0.10		0.10
ELK-120	Elkmont Residence Road, to Qtrs. #210	SE	10' 01	0.09		0.09
CAD-175	Goldmine Road Cooper Rd(CAD-102)-Park bdry	BL	12' 02	0.95		0.95
COS-131 #114	Indian Camp Creek Road Park bdry-(Barricade)--See TRAILS	CO	14' 01	1.00		1.00
CAD-105	Indian Grave Gap Road Rich Mtn Rd (CAD-12)-Powerline	BL	6'-12' 02	4.00		4
ELK-118A #413	Jakes Creek (Jeep) Road Gate at end of Jakes Cr Rd (ELK-118) - Blanket Mountain Trail (ELK-27)	SE	6' 01	1.00		1.00
COS-194	Mack Cemetery Road Park bdry-Cemetery	CO	6' 01	0.20		0.20
ELK ---	Metcalf Bottoms, Intake & Reservoir	SE	10' 01	0.55		0.55
GRE-189 #420	Price Cemetery Road Park bdry-Cemetery	SE	6' 01	0.30		0.30
TRE-113B	Schoolhouse Gap Road Laurel Cr Rd (3BN)-Gap	BL	12' 02	2.30		2.30
LEC-125 #400	Sugarlands Branch Road Newfound Gap Rd (1A)-Cache	SE	10' 01	0.50		0.50

#Computer Route Number

Roads
SECONDARY (Administrative/Management Use)
Classification

Graded
Type

Route Number	Name		Width	Mainline Miles	Parking Areas, etc., Converted to Miles	Total
LEC-126 #406	Sugarlands Cemetery Road Cherokee Orchard Rd (18)-Cemetery	SE	12' 01	2.80		2.80
COS-195	Tritt Cemetery Road Park bdry-Cemetery	CO	6' 01	0.60		0.60
GRE-191 #422	Tunis Cemetery Road Park bdry up Lindsey Cr to Lindseytown Cemetery	SE	6' 01	0.90		0.90
LEC	Twin Creeks Shelter	SE	16' 01	0.14	0.11	0.25
	TOTALS for Tennessee			23.00	0.14	23.14
	GRAND TOTALS			65.99	0.21	66.20

#Computer Route Number

Roads

SECONDARY (Administrative/Management Use) — Classification

Surfaced — Type

Route Number	Name	Width	Mainline Miles	Parking Areas, etc., Converted to Miles	Total
	NORTH CAROLINA				
---	Balsam Mtn. Camptender Road	16'	(0.10)*		(0.10)*
DEP-151	Deep Creek CG Residences	18'	0.05	0.02	0.07
FOR-155	Noland Creek Access from Route 9A	10'	0.10		0.10
OCO-148	Oconaluftee Maintenance Area	18'	0.13	0.30	0.43
OCO-147	Oconaluftee Residence Area	18'	0.88	0.08	
	Oconaluftee Seasonal Quarters	16'	0.20	0.02	
	Total				1.18
RAV-21	Ravensford Road	16'	0.50		0.50
TWE-167	Twentymile Ranger Station	14'	0.10		0.10

*Not included in totals--Maintained by Blue Ridge Parkway

TOTALS for North Carolina	1.96	0.42	2.38

TRAILS USE INVENTORY

PARK #	COMP #	NAME	TERMINI	TYPE	USE	STATE	DIST	WIDTH FEET	LENGTH MILES
* HorseNC									
TWE-166A	08169	Moore Springs Branch Jeep Trail	Twentymile (TWE-165)-1st ford Moore Spring	Graded	Horse	NC	S	6	0.50
CAT-60	08171	Mt Sterling Ridge Trail	Mt Sterl Rd (CAT-171)-Laurel Gap (RAV-175)	Graded	Horse	NC	S	4	5.70
OCO-82	08173	Newton Bald Trail	Newton Bald (OCO-82A)-Thomas Div (DEP-84)	Graded	Horse	NC	S	4	5.00
FOR-139	08174	Noland Creek Trail	Noland Cr (FOR-155)-Noland Divide (FOR-92)	Graded	Horse	NC	S	4	5.50
FOR-92	08175	Noland Divide Trail	Forney Pumphouse Rd (FOR-174)-Deep Cr CG	Graded	Horse	NC	S	4	14.00
OCO-250	08177	Oconaluftee River Trail	Bdry on Big Cove Rd-Towstring Barn (16)	Graded	Horse	NC	S	4	3.50
CAT-63	08178	Palmer Creek Trail	Pretty Hollow (CAT-61A)-Balsam Mt (RAV-142)	Graded	Horse	NC	S	4	4.00
TWE-182	08181	Payne-Orr Cemetery Road	Payne Cemetery (TWE-198)-Orr Cem (TWE-200)	Graded	Horse	NC	S	12	1.25
HAZ-183	08182	Pickens Gap Road	Hazel Cr (HAZ-158)-Jenkins Ridge (HAZ-101)	Graded	Horse	NC	S	12	3.55
HAZ-260	08186	Pinnacle Creek Trail	Jenkins Ridge (HAZ-101)-Eagle Cr (HAZ-102)	Graded	Horse	NC	S	4	2.75
DEP-87	08187	Pole Road Creek Trail	Upper Sassafras Gap-Deep Cr Tr (DEP-85)	Graded	Horse	NC	S	4	3.50
RAV-73	08188	Polls Gap Trail	Polls Gap on Rt 6-Spruce Mt Rd (RAV-173)	Graded	Horse	NC	S	4	4.00
CAT-61A	08190	Pretty Hollow Gap (Jeep) Trail	Cataloochee Rd (14A)-Pretty Hollow (CAT-61)	Graded	Horse	NC	S	6	2.00
CAT-61	08191	Pretty Hollow Gap Trail	Pretty Hollow (CAT-61A)-Mt Sterl (CAT-60)	Graded	Horse	NC	S	4	4.00
OCO-247	08192	Queen Mountain Trail	Hughes Ridge (OCO-75)-Bradley Fork(OCO-145)	Graded	Horse	NC	S	4	1.30
CAT-64	08202	Rough Fork Trail	Rough Cr Rd (CAT-140)-Polls Gap on Rt 6	Graded	Horse	NC	S	4	5.00
OCO-243	08205	Smokemont Horse Loop Trail	Loop Tr west of NFG Rd (1B) opposite stable	Graded	Horse	NC	S	4	1.50
DEP-260	08209	South Sunkata Trail	Noland Divide (FOR-92)-Deep Cr Rd (DEP-149)	Graded	Horse	NC	S	4	1.75
FOR-93	08211	Springhouse Branch Trail	Mill Cr Rd (FOR-188)-Jonas Cr Tr (FOR-95)	Graded	Horse	NC	S	4	9.20
DEP-88	08214	Sunkata Ridge Trail	Deep Cr (DEP-149)-Thomas Divide Tr (DEP-84)	Graded	Horse	NC	S	4	10.00
BIG-57	08215	Swallow Fork Trail	Big Cr (BIG-136)-Mt Sterling Ridge (CAT-60)	Graded	Horse	NC	N	4	3.95
DEP-84	08218	Thomas Divide Trail	Newton Bald-Deep Low Gap	Graded	Horse	NC	S	4	5.00
TWE-165	08227	Twentymile Truck Trail	NC 28-Proctor Gap	Graded	Horse	NC	S	12	5.00
TWE-165A	08228	Twentymile Jeep Road	Proctor Gap-Sassafras Gap on AT	Graded	Horse	NC	S	8	2.65

TRAILS USE INVENTORY

PARK #	COMP #	NAME	TERMINI	TYPE	USE	STATE DIST	WIDTH FEET	LENGTH MILES
* HorseNC								
HAZ-148A	OS233	Welch Ridge (Jeep) Trail	Cold Spring Gap-Mt Glory	Graded	Horse	NC S	6	2.00
HAZ-148	OS234	Welch Ridge Trail	AT @ Silers Bald-Cold Spring Br (HAZ-148A)	Graded	Horse	NC S	4	6.00
TWE-107	OS236	Wolf Ridge Trail	Twentymile (TWE-165)-Dalton Gap (TWE-149)	Graded	Horse	NC S	4	2.00
TWE-107	OS237	Wolf Ridge Trail	Dalton Gap (TWE-149)-Parson Bald on CAD-3	Graded	Horse	NC S	4	5.40
2		Quiet Walkway, Clingmans Dome Road	Noland Divide Trail (no additional mileage)	Graded	Horse	NC S	4	0.00
FOR		Forney Creek Horse Trail	To Forney Cr-Laurel Br (9A) near Tunnel	Graded	Horse	NC S	4	7.80
** SUBTOTAL **								428.10

TRAILS USE INVENTORY

PARK #	COMP #	NAME	TERMINI	TYPE	USE	STATE	DIST	WIDTH FEET	LENGTH MILES
* HorseTN									
CAD-11	ON004	Anthony Creek Trail	Anthony Cr Rd (CAD-168)-Bote Mt Rd(TRE-113)	Graded	Horse	TN	N	4	1.90
AT-East	ON005	Appalachian Trail	Davenport Gap-Tricorner Knob	Graded	Horse	TN	N	4	16.00
AT-West	ON012	Appalachian Trail	Silers Bald-Miry Ridge	Graded	Horse	TN	N	4	3.00
AT-West	ON014	Appalachian Trail	Spence Field-Doe Knob	Graded	Horse	TN	N	4	7.00
CAD-7	ON021	Beard Cane Trail	Cooper Rd (CAD-102)-Blair Gap Tr (CAD-8)	Graded	Horse	TN	N	4	4.20
LEC-221	ON025	Bell Branch Trail	Dudley Horse Trail A-Dudley Horse Trail B	Graded	Horse	TN	N	4	1.15
LEC-223	ON027	Big Dudley Horse Trail, A	TN 73 to Roaring Fork at LEC-39)	Graded	Horse	TN	N	4	6.15
ELK-27	ON030	Blanket Mountain Trail	Elkmont (ELK-118A)-Blanket Mt via Jakes Cr	Graded	Horse	TN	N	4	4.10
TRE-113	ON033	Bote Mountain Road	Laurel Creek Rd (3BN West)-turnaround	Graded	Horse	TN	N	12	5.48
GRE-42	ON037	Brushy Mountain Trail	Porters Cr (GRE-128)-Brushy Mt via Trillium	Graded	Horse	TN	N	4	4.70
CAD-104	ON046	Cane Creek Road	Cooper Rd (CAD-102)-Miller Cove Tr (CAD-8)	Graded	Horse	TN	N	12	3.20
LEC-225	ON052	Cherokee Orchard to Roar.Fork Trail	Roaring Fork (18A)-Dudley Tr A (LEC-223)	Graded	Horse	TN	N	4	3.00
CAD-102	ON058	Cooper Road	Barricade-Abrams Creek Campground	Graded	Horse	TN	N	12	11.00
COS-229	ON061	Cosby Horse Trail	TN 32 @ Bdry-Lower Mt Cammerer (COS-123)	Graded	Horse	TN	N	4	2.85
COS-132	ON062	Cosby Creek Road	Cosby CG Reservoir Rd-AT at Low Gap	Graded	Horse	TN	N	6	2.60
CAD-243	ON065	Crib Gap Trail	Turkey Pen Ridge(TRE-13)-Anthony Cr(CAD-168	Graded	Horse	TN	N	4	1.60
CAD-242	ON066	Crooked Arm Ridge Trail	Rich Mt (CAD-205)-Indian Grave Gap(CAD-105)	Graded	Horse	TN	N	4	2.20
ELK-237	ON067	Cucumber Gap Trail	Little River (ELK-117)-Jakes Cr (ELK-118)	Graded	Horse	TN	N	4	2.40
LEC-224	ON069	Daddys Branch Trail	Loop off Dudley Horse Trail A	Graded	Horse	TN	N	8	1.00
LEC-217	ON081	Dudley Creek Horse Trail, C	Little Dudley H Tr B-Big Dudley H Tr A	Graded	Horse	TN	N	4	3.20
LEC-218	ON082	Dudley Creek Horse Trail, D	Dudley Horse Tr C-Roaring Fork Rd (18A)	Graded	Horse	TN	N	4	0.50
LEC-220	ON083	Dudley Creek Horse Trail, E	Big Dudley Horse Tr A-Dudley Horse Trail F	Graded	Horse	TN	N	8	0.30
LEC-222	ON084	Dudley Creek Horse Trail, F	Big Dudley Horse Tr A-Little Dudley H Tr B	Graded	Horse	TN	N	8	0.50
TRE-207	ON090	Finley Cane Trail	Laurel Cr Rd (3BN W)-Bote Mt Rd (TRE-113)	Graded	Horse	TN	N	4	2.70

TRAILS USE INVENTORY

PARK #	COMP #	NAME	TERMINI	TYPE	USE	STATE	DIST	WIDTH FEET	LENGTH MILES
* HorseTN									
CAD-3	ON101	Gregory Bald Trail	Parson Branch Rd (CAD-100)-AT @ Doe Knob	Graded	Horse TN		N	4	7.50
TRE-19	ON103	Greenbrier Ridge Trail	Lynn Camp Prong (TRE-20)-AT at Sams Gap	Graded	Horse TN		N	4	4.10
CAD-2A	ON105	Hannah Mountain Trail	Parson Br (CAD-100)-Rabbit Cr Rd (CAD-101)	Graded	Horse TN		N	4	7.56
CAD-2A	ON106	Hannah Mountain Trail	Rabbit Cr (CAD-101)-Hatcher Mt Tr (CAD-2)	Graded	Horse TN		N	4	1.80
CAD-2	ON107	Hatcher Mountain Trail	Cooper Road (CAD-102)-Abrams Falls	Graded	Horse TN		N	4	4.80
ELK-24	ON115	Huskey Gap Trail	Little River(ELK-117)-Sugarland Mt(ELK-23)	Graded	Horse TN		N	2	2.10
LEC-35	ON116	Huskey Gap Trail	NFG Road (1A)-Sugarland Mt Trail (ELK-23)	Graded	Horse TN		N	2	2.00
COS-131	ON118	Indian Camp Creek Road	(Barricade)-trailhead	Graded	Horse TN		N	14	1.35
TRE-206	ON143	Lead Cove Trail	Laurel Cr Rd (3BN W)-Bote Mt Rd (TRE-113)	Graded	Horse TN		N	4	1.70
LEC-219	ON146	Little Dudley Trail, B	Dudley Riding Stables-Big Dudley Trail A	Graded	Horse TN		N	4	2.70
ELK-117	ON148	Little River Road	(Barricade)-gate at Fish Camp Prong	Graded	Horse TN		N	12	2.80
COS-123	ON153	Lower Mt Cammerer Trail	Cosby CG Sec B Rd-AT on Cammerer Ridge	Graded	Horse TN		N	4	8.60
TRE-20	ON155	Lynn Camp Prong Trail	Middle Prong (TRE-115)-Miry Ridge (TRE-21)	Graded	Horse TN		N	4	2.40
ELK-28	ON161	Meigs Mountain Trail	Jakes Cr (ELK-118)-Old Wagon Tr (ELK-236)	Graded	Horse TN		N	2	4.10
TRE-115	ON162	Middle Prong (Jeep) Trail	Tremont Rd (17)-Marks Cove Primitive Camp	Graded	Horse TN		N	6	5.50
COS-196	ON170	Mt Cammerer Jeep Trail	AT-lookout tower	Graded	Horse TN		N	6	1.00
CAD-203	ON176	North Side Loop Trail	Cades Cove Stable-Anthony Cr Rd (CAD-168)	Graded	Horse TN		N	8	2.50
LEC-210	ON179	Panther Branch Trail	Loop off Twomile Branch Trail (LEC-32A)	Graded	Horse TN		N	4	2.00
TRE-18	ON180	Panther Creek Trail	Tremont Rd (17)-Jakes Cr Rd (ELK-118A)	Graded	Horse TN		N	4	2.20
CAD-101	ON193	Rabbit Creek Road	Abrams Falls Prkg Area-Kingfisher (CAD-26)	Graded	Horse TN		N	12	8.10
LEC-33	ON194	Rainbow Falls Trail	Prkng area on Cher Orch (18)-Mt LeConte	Graded	Horse TN		N	4	6.50
CAD-205	ON197	Rich Mountain Loop Horse Trail	Cades Cove Stables-Indian Grave (CAD-105)	Graded	Horse TN		N	4	3.40
LEC-211	ON198	River Trail	Twomile Stables-Twomile 1-Hour Loop Trail	Graded	Horse TN		N	4	1.80
ELK-233	ON200	Rough Creek Trail	Little River(ELK-117)-Sugarland Mt (ELK-23)	Graded	Horse TN		N	2	3.50

TRAILS USE INVENTORY

PARK #	COMP #	NAME	TERMINI	TYPE	USE	STATE	DIST	WIDTH FEET	LENGTH MILES
* HorseTN									
CAD-10	ON204	Russell Field Trail	Anthony Cr (CAD-11)-AT at Russell Field	Graded	Horse TN		N	4	3.50
COS-49	ON208	Snake Den Ridge Trail	Cosby CG Sec B Rd-AT near Inadu Knob	Graded	Horse TN		N	6	5.50
TRE-113A	ON210	Spence Field (Jeep) Trail	Bote Mt turnaround (TRE-113)-AT @ Spence F	Graded	Horse TN		N	6	1.70
CAD-8	ON220	Three Mtns Trail (Ace Gap Trail)	Blair Gap-Rich Gap	Graded	Horse TN		N	2	5.60
CAD-8	ON221	Three Mtns Trail (Rich Mtn Trail)	Rich Gap-Indian Grave Road	Graded	Horse TN		N	4	2.50
CAD-8	ON222	Three Mtns Trail (Scott Mtn Trail)	Indian Grave Road-Schoolhouse Gap Road	Graded	Horse TN		N	2	3.60
17	ON223	Tremont Road	(Barricade)-gate @ jct Middle Pr (TRE-115)	Graded	Horse TN		N	16	3.00
LEC-39	ON224	Trillium Gap Trail	Cherokee Orchard Parking Area-Trillium Gap	Graded	Horse TN		N	4	5.30
LEC-40	ON225	Trillium Gap Trail	Trillium Gap-Mt LeConte	Graded	Horse TN		N	4	3.50
TRE-13	ON226	Turkey Pen Ridge Trail	Laurel Cr (3BN W)-Schoolhouse Gap(TRE-113B)	Graded	Horse TN		N	4	3.60
LEC-32A	ON230	Twomile Branch Trail (1-hour loop)	Cherokee Orchard-Sugarlands Truck Trail	Graded	Horse TN		N	4	1.80
LEC-209	ON231	Twomile Lead Trail (1-hour loop)	Cherokee Orchard-Sugarlands Truck Trail	Graded	Horse TN		N	4	2.00
LEC-245	ON232	Twomile One-Hour Loop Trail	Loop from Twomile Stables	Graded	Horse TN		N	8	3.00
** SUBTOTAL **									225.34
** TOTAL **									920.52

TRAILS USE INVENTORY

PARK #	COMP #	NAME	TERMINI	TYPE	USE	STATE DIST	WIDTH FEET	LENGTH MILES
* HorseNC								
OCO-135	08127	Kanati Fork Trail	NFG Rd (1B)-Thomas Divide Tr (DEP-84)	Graded	Horse NC	S	2	3.00
OCO-146	08128	Kephart Prong Road	NFG Road (1B)-Kephart Prong Shelter	Graded	Horse NC	S	12	2.00
HAZ	08130	Lakeshore Trail (Total Mi 40.30)	Fontana Dam-Lost Cove Campsite #90	Graded	Horse NC	S	3	5.70
HAZ	08131	Lakeshore Trail	Lost Cove CS #90 up Pinnacle Cr-Pickens Gap	Graded	Horse NC	S	4	3.50
HAZ	08132	Lakeshore Trail	Pickens Gap down Sugar Fork-Hazel Creek Rd	Graded	Horse NC	S	10	2.40
HAZ	08133	Lakeshore Trail	Down Hazel Cr Rd-Bridge at lower bunkhouse	Graded	Horse NC	S	10	4.40
HAZ	08134	Lakeshore Trail	Hazel Cr Lower Bnkhse Bridge-Whiteside Br	Graded	Horse NC	S	2	2.70
HAZ	08135	Lakeshore Trail	Whiteside Branch-Calhoun Branch	Graded	Horse NC	S	4	1.60
HAZ	08136	Lakeshore Trail	Calhoun Branch-Pilkey Creek	Graded	Horse NC	S	4	4.00
HAZ	08137	Lakeshore Trail	Pilkey Creek-Kirkland Branch	Graded	Horse NC	S	4	4.90
HAZ	08138	Lakeshore Trail	Kirkland Branch-Hicks Branch	Graded	Horse NC	S	4	1.90
HAZ	08139	Lakeshore Trail	Hicks Branch-Chambers Creek	Graded	Horse NC	S	4	1.00
HAZ	08140	Lakeshore Trail	Chambers Creek-Jenny Branch	Graded	Horse NC	S	4	1.10
FOR	08141	Lakeshore Trail	Jenny Branch-Forney Creek	Graded	Horse NC	S	4	3.10
FOR	08142	Lakeshore Trail	Forney Cr-Laurel Br (9A) near Tunnel	Graded	Horse NC	S	4	4.00
CAT-232	08149	Long Bunk Trail	Mt Sterling (CAT-171)-Hannah Cem (CAT-232A)	Graded	Horse NC	S	4	4.50
TWE-106	08150	Long Hungry Ridge Trail	Dalton Gap (TWE-149)-Moore Spring on CAD-3	Graded	Horse NC	S	4	5.00
HAZ-104	08151	Lost Cove Trail	Eagle Cr (HAZ-102)-Sassafras Gap on AT	Graded	Horse NC	S	4	3.50
BIG-53	08152	Low Gap Trail	Big Cr Rd (BIG-136)-AT at Low Gap	Graded	Horse NC	N	4	2.60
CAT-231	08156	McKee Branch Trail	Cataloochee Div (CAT-62)-Caldwell F(CAT-65)	Graded	Horse NC	S	4	2.40
DEP-254	08158	Martin Gap Trail A	Sunkata Ridge (DEP-88)-Deep Cr (DEP-149A)	Graded	Horse NC	S	4	1.50
DEP-254A	08159	Martin Gap Trail B	Sunkata Ridge (DEP-88)-DEP-150 turnaround	Graded	Horse NC	S	4	1.50
OCO-83	08164	Mingus Creek Trail	Mingus Cr Cem (OCO-144)-Newton Bald(OCO-82)	Graded	Horse NC	S	2	5.10
TWE-166	08168	Moore Springs Branch Trail	Dalton Gap (TWE-149)-first ford on TWE-166A	Graded	Horse NC	S	4	1.25

TRAILS USE INVENTORY

PARK #	COMP #	NAME	TERMINI	TYPE	USE	STATE DIST	WIDTH FEET	LENGTH MILES
* HorseNC								
TWE-149	OS070	Dalton Gap Trail	Twentymile Truck Tr (TWE-165)-Dalton Gap	Graded	Horse	NC S	4	7.00
DEP-257	OS071	Deep Creek Bypass Trail	Around Deep Creek Campground for horses	Graded	Horse	NC S	4	0.50
DEP-257	OS072	Deep Creek Horse Trail	Park Bdry-Deep Creek turnaround	Graded	Horse	NC S	4	3.00
DEP-149	OS073	Deep Creek Road	Barricade-turnaround	Graded	Horse	NC S	12	3.10
DEP-149A	OS074	Deep Creek Road	Jenkins Pl(DEP-149)-Bryson/Pole Rd Camps	Graded	Horse	NC S	6	5.00
DEP-85	OS075	Deep Creek Trail	Deep Cr (DEP-149A)-NFG Rd (1B)@Thomas Ridge	Graded	Horse	NC S	4	7.00
HAZ-186	OS077	Deep Gap (Jeep) Trail	Hazel Creek (HAZ-158)-Deep Gap trailheads	Graded	Horse	NC S	6	3.50
DEP-89	OS078	Deeplow Gap Trail	Indian Cr (DEP-150A)-Thomas Divide (DEP-84)	Graded	Horse	NC S	4	2.10
DEP-89	OS079	Deeplow Gap Trail	Thomas Divide(DEP-84)-Mingus Divide(OCO-83)	Graded	Horse	NC S	4	4.00
OCO-78	OS080	Dry Sluice Gap Trail	Cabin Flats (OCO-145B)-Dry Sluice Gap @ AT	Graded	Horse	NC S	4	5.00
HAZ-102	OS085	Eagle Creek Trail	Fontana Lake Shoreline-AT at Little Bald	Graded	Horse	NC S	4	9.00
RAV-71	OS087	Enloe Creek Trail	Hughes Ridge (OCO-75)-Three Forks (RAV-70)	Graded	Horse	NC S	4	3.50
HAZ-185	OS088	Fairview Cemetery Road	Hazel Cr Rd (HAZ-158)-Fairview Cemetery	Graded	Horse	NC S	8	2.50
OCO-133	OS100	Grassy Branch Trail	Kephart (OCO-146)-Grassy Gap on OCO-78	Graded	Horse	NC S	4	2.50
HAZ-158	OS108	Hazel Creek Road	Fontana Lake shoreline-Proctor Creek	Graded	Horse	NC S	6	13.50
HAZ-97	OS109	Hazel Creek Trail, Upper	Hazel Cr Rd (HAZ-158)-Welch Ridge (HAZ-148)	Graded	Horse	NC S	2	7.20
CAT-66	OS111	Hemphill Bald Trail	Heintooga Ridge (6)-Caldwell Fork (CAT-65)	Graded	Horse	NC S	4	8.00
OCO-145A	OS113	Hughes Ridge Jeep Road	Bradley Fork (OCO-145)-AT at Pecks Corner	Graded	Horse	NC S	6	6.00
OCO-75	OS114	Hughes Ridge Trail	Smokemont CG-Hughes Ridge Rd (OCO-145A)	Graded	Horse	NC S	4	9.00
RAV-68	OS117	Hyatt Ridge Trail	Hyatt Ridge (RAV-68A)-Balsam Mt (RAV-67)	Graded	Horse	NC S	4	6.00
DEP-150A	OS120	Indian Creek Motor Nature Trail	Toms Branch Rd (11)-Deep Cr Rd (DEP-149)	Graded	Horse	NC S	12	5.00
DEP-150	OS121	Indian Creek Road	Jct Deep Cr Rd (DEP-149)-turnaround	Graded	Horse	NC S	12	4.40
HAZ-101	OS122	Jenkins Ridge Trail	Pickens Gap on HAZ-183-AT near Thunderhead	Graded	Horse	NC S	4	8.70
FOR-95	OS124	Jonas Creek Trail	Bear Cr (FOR-154)-Welch Ridge Tr (HAZ-148)	Graded	Horse	NC S	4	9.50

TRAILS INVENTORY BY DISTRICT

PARK	# COMP #	NAME OF TRAIL	TERMINI	TYPE	USE	ST	DIST	WIDTH FEET	LENGTH MILES
* NGraded Foot									
1A	ON241	Quiet Walkway, Newfound Gap Road	Bullhead View	Graded	Foot	TN	N	2	0.10
1A	ON242	Quiet Walkway, Newfound Gap Road	Huskey Gap Parking Area	Graded	Foot	TN	N	2	0.95
1A	ON243	Quiet Walkway, Newfound Gap Road	Jim Carr Place	Graded	Foot	TN	N	2	0.15
1A	ON244	Quiet Walkway, Newfound Gap Road	Balsam Point	Graded	Foot	TN	N	2	0.10
3A	ON245	Quiet Walkway, Fighting Creek Road	Big White Oak	Graded	Foot	TN	N	2	0.50
3A	ON246	Quiet Walkway, Fighting Creek Road	Hickory Flats Branch	Graded	Foot	TN	N	2	0.15
3A	ON247	Quiet Walkway, Fighting Creek Road	Laurel Falls Branch	Graded	Foot	TN	N	2	0.15
AT-West	ON013	Appalachian Trail	Miry Ridge-Spence Field	Graded	Foot	TN	N	2	8.20
BIG-247	OS050	Chestnut Branch Trail	Big Cr Rd @ Ranger Station-AT	Graded	Foot	NC	N	2	2.00
BIG-56	OS104	Gunther Fork Trail	Camel Gap Tr (BIG-230)-Balsam Mt (RAV-67)	Graded	Foot	NC	N	2	4.00
BIG-58	OS019	Baxter Creek Trail	Big Cr Rd (BIG-136)-Mt Sterling tower	Graded	Foot	NC	N	2	6.20
CAD-103	ON039	Bunker Hill Road	Parson Branch Rd (CAD-100)-lookout tower	Graded	Foot	TN	N	12	2.45
CAD-201	ON184	Pine-Oak Nature Trail	Loop off Cades Cove Loop Road (3BCC)	Graded	Foot	TN	N	2	0.40
CAD-202	ON144	Leige Oliver Trail	Abrams Falls Pkg Area-Leige Oliver Place	Graded	Foot	TN	N	4	0.50
CAD-204	ON042	Cades Cove CG Nature Trail	Loop off outer CG loop road (Section B)	Graded	Foot	TN	N	2	0.90
CAD-235	ON145	Little Bottoms Trail	Cooper Rd (CAD-102)-Hatcher Mt Tr (CAD-2)	Graded	Foot	TN	N	2	2.25
CAD-261	ON123	John Oliver Cabin Trail	Pkg area on Cades Cove Loop (3BCC)-cabin	Graded	Foot	TN	N	4	0.50
CAD-4	ON102	Gregory Ridge Trail	Forge Cr Rd (3BCC7)-Rich Gap at CAD-3	Graded	Foot	TN	N	4	4.90
CAD-6	ON001	Abrams Falls Trail	Abrams Falls Parking Area-Abrams Falls	Graded	Foot	TN	N	2	2.50
COS-227	ON112	Henwallow Falls Trail	Cosby Developed Area-waterfall	Graded	Foot	TN	N	2	1.40
COS-239	ON002	Albright Grove Nature Trail	Loop off Maddron Bald Trail (COS-48)	Graded	Foot	TN	N	2	0.65
COS-47	ON095	Gabes Mountain Trail	Indian Camp Cr(COS-131)-Henwallow (COS-227)	Graded	Foot	TN	N	2	5.20
COS-48	ON157	Maddron Bald Trail	Indian Camp Cr(COS-131)-Snake Den (COS-49)	Graded	Foot	TN	N	2	6.50
ELK	ON097	Goshen Prong-Backcountry Site # 25	(see Name)	Graded	Foot	TN	N	4	0.90

TRAILS INVENTORY BY DISTRICT

PARK	# COMP #	NAME OF TRAIL	TERMINI	TYPE	USE	ST	DIST	WIDTH FEET	LENGTH MILES
* NGraded Foot									
ELK	ON201	Rough Creek-Backcountry Site No 30	(see Name)	Graded	Foot	TN	N	4	1.70
ELK-208	ON163	Mids Branch Nature Trail	Off Elkmont Rd (4) at Elkmont Campground	Graded	Foot	TN	N	2	0.80
ELK-22	ON147	Little Greenbrier Trail	Wear Cove Gap Rd (13)-Cove Mt Tr (ELK-23B)	Graded	Foot	TN	N	2	4.35
ELK-23	ON213	Sugarland Mountain Trail	Fighting Creek Gap (3A)-AT at Mt Collins	Graded	Foot	TN	N	2	11.85
ELK-236	ON068	Curry Mountain Trail	Little River Rd (3BN)-Meigs Mt Tr (ELK-28)	Graded	Foot	TN	N	4	3.25
ELK-236		Old Wagon Trail	(see Curry Mountain Trail)	Graded	Foot	TN	N	4	0.00
ELK-23B	ON064	Cove Mountain Trail	Laurel Falls-Cove Mt Jeep Rd (LEC-176)	Graded	Foot	TN	N	4	2.80
ELK-26	ON096	Goshen Prong Trail	Little River (ELK-117)-AT @ Double Spring	Graded	Foot	TN	N	2	7.55
GRE-120	ON060	Copeland Divide Trail	Ramsey Prong (GRE-129)-Lindsay Cemetery	Graded	Foot	TN	N	4	4.45
GRE-129	ON196	Ramsey Prong Road	(Barricade)-trailhead	Graded	Foot	TN	N	14	1.60
GRE-43	ON189	Porters Creek Trail	Porters Cr (GRE-128) up Porters Cr 3 miles	Graded	Foot	TN	N	4	3.00
GRE-44	ON185	Pinnacle Trail	Ramsey Prong (GRE-129)-Greenbrier Pinnacle	Graded	Foot	TN	N	6	3.50
GRE-45	ON195	Ramsey Cascade Trail	Ramsey Prong Rd (GRE-129)-Ramsey Cascades	Graded	Foot	TN	N	2	2.50
LEC	ON172	Myrtle Point Trail	Off Boulevard Tr (LEC-33A) at Mt LeConte	Graded	Foot	TN	N	2	0.20
LEC-172	ON054	Cliff Top Trail	Loop off Boulevard Trail at Mt LeConte	Graded	Foot	TN	N	2	0.50
LEC-176	ON063	Cove Mountain (Jeep) Trail	HQ Res Area Rd (LEC-123)-lookout tower	Graded	Foot	TN	N	6	8.50
LEC-212	ON125	Jump-Off Trail	Boulevard Tr (LEC-33A)-Mt Kephart Cliffs	Graded	Foot	TN	N	2	0.40
LEC-213	ON029	Big Locust Nature Trail	Loop off Chimney Tops Picnic Area Road	Graded	Foot	TN	N	2	0.70
LEC-215	ON053	Chimney Tops Trail	Newfound Gap Rd (1A)-Chimney Tops	Graded	Foot	TN	N	4	2.00
LEC-216	ON126	Junglebrook Nature Trail	Loop off Cherokee Orchard Road (18)	Graded	Foot	TN	N	2	0.70
LEC-228	ON098	Grapeyard Ridge Trail	Dudley Horse Trail A-Greenbrier Rd (7)	Graded	Foot	TN	N	4	4.90
LEC-267	ON229	Twin Creeks Trail	G'burg City Line-Junglebrook Tr (LEC-216)	Graded	Foot	TN	N	4	1.80
LEC-268	ON099	Grassy Branch Trail	Cher Orch Rd (18)-Panther Cr Tr (LEC-210)	Graded	Foot	TN	N	4	1.20
LEC-33A	ON034	Boulevard Trail	Mt LeConte-AT near Mt Kephart	Graded	Foot	TN	N	4	5.30

TRAILS INVENTORY BY DISTRICT

PARK	COMP #	NAME OF TRAIL	TERMINI	TYPE	USE	ST DIST	WIDTH FEET	LENGTH MILES
* 8Graded Horse								
HAZ	08137	Lakeshore Trail	Pilkey Creek-Kirkland Branch	Graded	Horse	NC 8	4	4.90
HAZ	08138	Lakeshore Trail	Kirkland Branch-Hicks Branch	Graded	Horse	NC 8	4	1.90
HAZ	08139	Lakeshore Trail	Hicks Branch-Chambers Creek	Graded	Horse	NC 8	4	1.00
HAZ	08140	Lakeshore Trail	Chambers Creek-Jenny Branch	Graded	Horse	NC 8	4	1.10
HAZ-101	08122	Jenkins Ridge Trail	Pickens Gap on HAZ-183-AT near Thunderhead	Graded	Horse	NC 8	4	8.70
HAZ-102	08085	Eagle Creek Trail	Fontana Lake Shoreline-AT at Little Bald	Graded	Horse	NC 8	4	9.00
HAZ-104	08151	Lost Cove Trail	Eagle Cr (HAZ-102)-Sassafras Gap on AT	Graded	Horse	NC 8	4	3.50
HAZ-148	08234	Welch Ridge Trail	AT @ Silers Bald-Cold Spring Br (HAZ-148A)	Graded	Horse	NC 8	4	6.00
HAZ-148A	08233	Welch Ridge (Jeep) Trail	Cold Spring Gap-Mt Glory	Graded	Horse	NC 8	6	2.00
HAZ-148B	08056	Cold Spring Gap (Jeep) Road	Hazel Cr Rd (HAZ-158)-trailhead (HAZ-148C)	Graded	Horse	NC 8	10	1.75
HAZ-148C	08057	Cold Spring Gap Trail	Cold Spring Gap-end CSG RD (HAZ-148B)	Graded	Horse	NC 8	4	2.00
HAZ-158	08108	Hazel Creek Road	Fontana Lake shoreline-Proctor Creek	Graded	Horse	NC 8	6	13.50
HAZ-159	08031	Bone Valley Road	Hazel Cr (HAZ-158)-deadend near Hall Cmtry	Graded	Horse	NC 8	10	1.85
HAZ-183	08182	Pickens Gap Road	Hazel Cr (HAZ-158)-Jenkins Ridge (HAZ-101)	Graded	Horse	NC 8	12	3.55
HAZ-185	08088	Fairview Cemetery Road	Hazel Cr Rd (HAZ-158)-Fairview Cemetery	Graded	Horse	NC 8	8	2.50
HAZ-186	08077	Deep Gap (Jeep) Trail	Hazel Creek (HAZ-158)-Deep Gap trailheads	Graded	Horse	NC 8	6	3.50
HAZ-260	08186	Pinnacle Creek Trail	Jenkins Ridge (HAZ-101)-Eagle Cr (HAZ-102)	Graded	Horse	NC 8	4	2.75
HAZ-97	08109	Hazel Creek Trail, Upper	Hazel Cr Rd (HAZ-158)-Welch Ridge (HAZ-148)	Graded	Horse	NC 8	2	7.20
OCO-131	08049	Chasteen Creek Trail	Chasteen Cr (OCO-131A)-Hughes Ridge(OCO-75)	Graded	Horse	NC 8	4	1.50
OCO-131A	08048	Chasteen Creek Road	Jct Bradley Fork Tr (OCO-245)-turnaround	Graded	Horse	NC 8	12	3.30
OCO-133	08100	Grassy Branch Trail	Kephart (OCO-146)-Grassy Gap on OCO-78	Graded	Horse	NC 8	4	2.50
OCO-135	08127	Kanati Fork Trail	NFG Rd (1B)-Thomas Divide Tr (DEP-84)	Graded	Horse	NC 8	2	3.00
OCO-145	08035	Bradley Fork Road	Smokemont CG-turnaround (elev 3,000)	Graded	Horse	NC 8	12	5.00
OCO-145A	08113	Hughes Ridge Jeep Road	Bradley Fork (OCO-145)-AT at Pecks Corner	Graded	Horse	NC 8	6	6.00

TRAILS INVENTORY BY DISTRICT

PARK #	COMP #	NAME OF TRAIL	TERMINI	TYPE	USE	ST	DIST	WIDTH FEET	LENGTH MILES
* SGraded Horse									
DEP-257	08072	Deep Creek Horse Trail	Park Bdry-Deep Creek turnaround	Graded	Horse	NC	8	4	3.00
DEP-260	08209	South Sunkata Trail	Noland Divide (FOR-92)-Deep Cr Rd (DEP-149)	Graded	Horse	NC	8	4	1.75
DEP-84	08218	Thomas Divide Trail	Newton Bald-Deep Low Gap	Graded	Horse	NC	8	4	5.00
DEP-85	08075	Deep Creek Trail	Deep Cr (DEP-149A)-NFG Rd (1B)@Thomas Ridge	Graded	Horse	NC	8	4	7.00
DEP-87	08187	Pole Road Creek Trail	Upper Sassafras Gap-Deep Cr Tr (DEP-85)	Graded	Horse	NC	8	4	3.50
DEP-88	08214	Sunkata Ridge Trail	Deep Cr (DEP-149)-Thomas Divide Tr (DEP-84)	Graded	Horse	NC	8	4	10.00
DEP-89	08078	Deeplow Gap Trail	Indian Cr (DEP-150A)-Thomas Divide (DEP-84)	Graded	Horse	NC	8	4	2.10
DEP-89	08079	Deeplow Gap Trail	Thomas Divide(DEP-84)-Mingus Divide(OCO-83)	Graded	Horse	NC	8	4	4.00
FOR	08141	Lakeshore Trail	Jenny Branch-Forney Creek	Graded	Horse	NC	8	4	3.10
FOR	08142	Lakeshore Trail	Forney Cr-Laurel Br (9A) near Tunnel	Graded	Horse	NC	8	4	4.00
FOR		Forney Creek Horse Trail	To Forney Cr-Laurel Br (9A) near Tunnel	Graded	Horse	NC	8	4	7.80
FOR-139	08174	Noland Creek Trail	Noland Cr (FOR-155)-Noland Divide (FOR-92)	Graded	Horse	NC	8	4	5.50
FOR-154	08020	Bear Creek (Jeep) Road	Fontana Lake shoreline-High Rocks tower	Graded	Horse	NC	8	6	10.00
FOR-91A	08055	Clingmans Dome Bypass Horse Trail	Clingmans Dome Parking Area-AT	Graded	Horse	NC	8	4	0.50
FOR-92	08175	Noland Divide Trail	Forney Pumphouse Rd (FOR-174)-Deep Cr CG	Graded	Horse	NC	8	4	14.00
FOR-93	08211	Springhouse Branch Trail	Mill Cr Rd (FOR-188)-Jonas Cr Tr (FOR-95)	Graded	Horse	NC	8	4	9.20
FOR-95	08124	Jonas Creek Trail	Bear Cr (FOR-154)-Welch Ridge Tr (HAZ-148)	Graded	Horse	NC	8	4	9.50
HAZ	08130	Lakeshore Trail (Total Mi 40.30)	Fontana Dam-Lost Cove Campsite #90	Graded	Horse	NC	8	3	5.70
HAZ	08131	Lakeshore Trail	Lost Cove CS #90 up Pinnacle Cr-Pickens Gap	Graded	Horse	NC	8	4	3.50
HAZ	08132	Lakeshore Trail	Pickens Gap down Sugar Fork-Hazel Creek Rd	Graded	Horse	NC	8	10	2.40
HAZ	08133	Lakeshore Trail	Down Hazel Cr Rd-Bridge at lower bunkhouse	Graded	Horse	NC	8	10	4.40
HAZ	08134	Lakeshore Trail	Hazel Cr Lower Bnkhse Bridge-Whiteside Br	Graded	Horse	NC	8	2	2.70
HAZ	08135	Lakeshore Trail	Whiteside Branch-Calhoun Branch	Graded	Horse	NC	8	4	1.60
HAZ	08136	Lakeshore Trail	Calhoun Branch-Pilkey Creek	Graded	Horse	NC	8	4	4.00

TRAILS INVENTORY BY DISTRICT

PARK #	COMP #	NAME OF TRAIL	TERMINI	TYPE	USE	ST	DIST	WIDTH FEET	LENGTH MILES
* SGraded Horse									
OCO-145B	OS040	Cabin Flats Jeep Road	Bradley Fork (OCO-145)-Cabin Flats Campsite	Graded	Horse	NC	S	6	1.00
OCO-146	OS128	Kephart Prong Road	NFG Road (1B)-Kephart Prong Shelter	Graded	Horse	NC	S	12	2.00
OCO-243	OS205	Smokemont Horse Loop Trail	Loop Tr west of NFG Rd (1B) opposite stable	Graded	Horse	NC	S	4	1.50
OCO-245	OS036	Bradley Fork Trail	Towstring Horse Camp-Chasteen Cr (OCO-131A)	Graded	Horse	NC	S	4	2.50
OCO-246	OS022	Becks Branch Loop Trail	Loop Trail from Smokemont Stable	Graded	Horse	NC	S	4	1.75
OCO-247	OS192	Queen Mountain Trail	Hughes Ridge (OCO-75)-Bradley Fork(OCO-145)	Graded	Horse	NC	S	4	1.30
OCO-250	OS177	Oconaluftee River Trail	Bdry on Big Cove Rd-Towstring Barn (16)	Graded	Horse	NC	S	4	3.50
OCO-75	OS114	Hughes Ridge Trail	Smokemont CG-Hughes Ridge Rd (OCO-145A)	Graded	Horse	NC	S	4	9.00
OCO-78	OS080	Dry Sluice Gap Trail	Cabin Flats (OCO-145B)-Dry Sluice Gap @ AT	Graded	Horse	NC	S	4	5.00
OCO-82	OS173	Newton Bald Trail	Newton Bald (OCO-82A)-Thomas Div (DEP-84)	Graded	Horse	NC	S	4	5.00
OCO-83	OS164	Mingus Creek Trail	Mingus Cr Cem (OCO-144)-Newton Bald(OCO-82)	Graded	Horse	NC	S	2	5.10
RAV-241	OS023	Beech Gap (Jeep) Trail	Balsam Mt Rd (RAV-142)-Beech Gap (RAV-175)	Graded	Horse	NC	S	6	3.00
RAV-241	OS024	Beech Gap Trail	Straight Fork Rd (10)-Hyatt Ridge (RAV-68A)	Graded	Horse	NC	S	4	3.00
RAV-67	OS018	Balsam Mountain Trail	Laurel Gap-AT at Tricorner Knob	Graded	Horse	NC	S	4	6.00
RAV-68	OS117	Hyatt Ridge Trail	Hyatt Ridge (RAV-68A)-Balsam Mt (RAV-67)	Graded	Horse	NC	S	4	6.00
RAV-71	OS087	Enloe Creek Trail	Hughes Ridge (OCO-75)-Three Forks (RAV-70)	Graded	Horse	NC	S	4	3.50
RAV-73	OS188	Polls Gap Trail	Polls Gap on Rt 6-Spruce Mt Rd (RAV-173)	Graded	Horse	NC	S	4	4.00
TWE-106	OS150	Long Hungry Ridge Trail	Dalton Gap (TWE-149)-Moore Spring on CAD-3	Graded	Horse	NC	S	4	5.00
TWE-107	OS236	Wolf Ridge Trail	Twentymile (TWE-165)-Dalton Gap (TWE-149)	Graded	Horse	NC	S	4	2.00
TWE-107	OS237	Wolf Ridge Trail	Dalton Gap (TWE-149)-Parson Bald on CAD-3	Graded	Horse	NC	S	4	5.40
TWE-149	OS070	Dalton Gap Trail	Twentymile Truck Tr (TWE-165)-Dalton Gap	Graded	Horse	NC	S	4	7.00
TWE-165	OS227	Twentymile Truck Trail	NC 28-Proctor Gap	Graded	Horse	NC	S	12	5.00
TWE-165A	OS228	Twentymile Jeep Road	Proctor Gap-Sassafras Gap on AT	Graded	Horse	NC	S	8	2.65
TWE-166	OS168	Moore Springs Branch Trail	Dalton Gap (TWE-149)-first ford on TWE-166A	Graded	Horse	NC	S	4	1.25

TRAILS INVENTORY BY DISTRICT

PARK #	COMP #	NAME OF TRAIL	TERMINI	TYPE	USE	ST	DIST	WIDTH FEET	LENGTH MILES
* SGraded Horse									
TWE-166A	OS169	Moore Springs Branch Jeep Trail	Twentymile (TWE-165)-1st ford Moore Spring	Graded	Horse	NC	8	6	0.50
TWE-182	OS181	Payne-Orr Cemetery Road	Payne Cemetery (TWE-198)-Orr Cem (TWE-200)	Graded	Horse	NC	8	12	1.25
** SUBTOTAL **									411.15

Roads

SECONDARY (Administrative/Management Use) — Classification

Surfaced Type

Route Number	Name	Width	Mainline Miles	Parking Areas, etc., Converted to Miles	Total
	TENNESSEE				
CAD-108	Cades Cove Campground Store and Shelter	9'	0.02		0.02
CAD-108 #419	Cades Cove Maintenance Area	18'	0.04	0.19	0.23
CAD-108	Cades Cove Ranger Station Road	16'	0.20	0.02	0.22
CAD-108	Cades Cove Residence Area	18'	0.14	0.06	0.20
---	Cades Cove Employee Trailer Court, Roads and Parking	18'	0.15	0.18	0.33
---	Cades Cove Trailer Court	18'		0.14	0.14
---	Cades Cove Trailer Court Parking			0.11	0.11
---	Chimneys Camptender's Residence	18'	0.10		0.10
COS-134	Cosby Residence Area	12'	0.07	0.02	0.09
		18'	0.08	0.12	0.20
	Cosby Maintenance Area	18'	0.02	0.20	0.22
			(0.17)	(0.34)	(0.51)
---	Elkmont Ranger Station-Residence Road, Qtrs. #434	12'	0.03	0.01	0.04
---	Elkmont Seasonal Quarters	12'	0.02	0.04	0.06
GRE-130	Greenbrier Ranger Station Road	18'	0.10	0.03	0.13
LEC-122	Headquarters Court & Parking Area			1.75	1.75
---	Headquarters Parking	18'		0.15	0.15
---	Headquarters Parking Access Road	18'	0.02		0.02
LEC-123	Headquarters Residence Area Road	18'	0.50	0.15	0.65
LEC-122	Headquarters Utility Area Road	20'	0.80		0.80

#Computer Route Number

Roads
SECONDARY (Administrative/Management Use) Classification — Surfaced Type

Route Number	Name	Width	Mainline Miles	Parking Areas, etc., Converted to Miles	Total
---	Look Rock Maintenance Area Road & Court, FHP	20'	0.13	0.01	0.14
---	Look Rock Pumphouse Road, FHP	12'	0.04		0.04
TRE-116	Tremont Ranger Station Road	12'	0.06	0.04	0.10
---	Twin Creeks Residence Area Road	12'	0.60		0.60
	TOTALS for Tennessee		3.12	3.22	6.34
	GRAND TOTAL		5.08	3.64	8.72

TRAILS USE INVENTORY

PARK #	COMP #	NAME	TERMINI	TYPE	USE	STATE	DIST	WIDTH FEET	LENGTH MILES
* Foot NC									
OCO-244	08207	Smokemont Campground Loop Trail	Smokemont CG, forms loop on Bradley OCO-145	Graded	Foot	NC	S	2	4.00
DEP-252	08212	Spruce-Fir Nature Trail	Loop off Clingmans Dome Road (2)	Graded	Foot	NC	S	2	0.30
OCO-80	08216	Sweat Heifer Creek Trail	Kephart Prong (OCO-146)-AT near Mt Kephart	Graded	Foot	NC	S	2	4.20
DEP-84	08217	Thomas Divide Trail	Newfound Gap-Newton Bald	Graded	Foot	NC	S	2	5.50
DEP	08238	(Cemetery Trail)	Begin 1st bridge on Deep Cr above Indian Cr	Graded	Foot	NC	S	4	0.75
9A	08239	(Cemetery Trail)	Off 9A on Hickory Flat Br (2 cemeteries)	Graded	Foot	NC	S	4	0.50
DEP	08240	(Cemetery Trail)	On ridge above bridge at Jenkins Place	Graded	Foot	NC	S	2	0.25
1B	08248	Quiet Walkway, Newfound Gap Road	Collins Creek Picnic Area	Graded	Foot	NC	S	2	0.25
1B	08249	Quiet Walkway, Newfound Gap Road	Opposite side of road from Kanati Fork Tr	Graded	Foot	NC	S	2	0.11
1B	08250	Quiet Walkway, Newfound Gap Road	Opposite old rock slide above Kanati Fork T	Graded	Foot	NC	S	2	0.10
1B	08251	Quiet Walkway, Newfound Gap Road	Old NFG Road just above Beech Flats	Graded	Foot	NC	S	2	0.27
1B	08252	Quiet Walkway, Newfound Gap Road	Thomas Divide Trail (no additional mileage)	Graded	Foot	NC	S	2	0.00
1B	08253	Quiet Walkway, Newfound Gap Road	Last large pull-out before Deep Cr Trail	Graded	Foot	NC	S	2	0.07
1B	08254	Quiet Walkway, Newfound Gap Road	Small pull-out just before Deep Cr Trail	Graded	Foot	NC	S	2	0.16
1B	08255	Quiet Walkway, Newfound Gap Road	Old Deep Creek Trail	Graded	Foot	NC	S	2	0.15
2		Quiet Walkway, Clingmans Dome Road	Fork Ridge Trail (no additional mileage)	Graded	Foot	NC	S	2	0.00
9A	08256	Quiet Walkway, Bryson-Fontana Road	First pull-out past Canebreak	Graded	Foot	NC	S	2	0.08
RAV-174	08257	Balsam Mt CG Area Trails (0.40 mi)	Not included in total, maintenance by BRP	Surface	Foot	NC	S	2	0.00
FOR	08260	Clingmans Dome Parking Area Trail		Surface	Foot	NC	S	6	0.08
FOR-91	08261	Clingmans Dome Trail	Forney Ridge Parking Area-AT at the Tower	Surface	Foot	NC	S	8	0.50
DEP-173	08263	Deep Creek	Shelter and comfort station walks	Surface	Foot	NC	S	3	0.36
OCO	08274	Mingus Mill Walkway		Surface	Foot	NC	S	8	0.15
OCO-165	08275	Newfound Gap Comfort Station Walks		Surface	Foot	NC	S	8	0.10
OCO-169	08276	Oconaluftee VC, RS, Farmstead Walks		Surface	Foot	NC	S	3	0.06

TRAILS USE INVENTORY

PARK #	COMP #	NAME	TERMINI	TYPE	USE	STATE	DIST	WIDTH FEET	LENGTH MILES
* Foot NC									
AT-East	08007	Appalachian Trail	Pecks Corner-False Gap	Graded	Foot	NC	S	2	4.00
AT-East	08008	Appalachian Trail	False Gap-Ice Water Spring	Graded	Foot	NC	S	2	3.50
AT-East	08009	Appalachian Trail	Ice Water Spring-Newfound Gap	Graded	Foot	NC	S	2	3.00
AT-West	08010	Appalachian Trail	Newfound Gap-Clingmans Dome	Graded	Foot	NC	S	2	7.50
AS	08016	Asbury Trail	Park Bdry @ Cove Cr Gap-Mt Sterling Gap	Graded	Foot	NC	S	2	23.50
BAV	08017	Balsam Mountain Nature Trail	Balsam Mt CG-near Heintooga Picnic Area	Graded	Foot	NC	S	2	0.50
BIG-58	08019	Baxter Creek Trail	Big Cr Rd (BIG-136)-Mt Sterling tower	Graded	Foot	NC	N	2	6.20
BAZ-263	08041	Cable Cemetery Trail	Fairview Cem (BAZ-185)-Cable Cemetery	Graded	Foot	NC	S	4	1.20
BIG-247	08050	Chestnut Branch Trail	Big Cr Rd @ Ranger Station-AT	Graded	Foot	NC	N	2	2.00
OCO-248	08059	Collins Creek Picnic Area Trail		Graded	Foot	NC	S	3	0.78
DEP-250	08076	Deep Creek Juneywhank Nature Trail		Graded	Foot	NC	S	2	0.40
BAZ-264	08089	Fairview Cemetery Trail	Deep Gap Tr (BAZ-186)-Fairview Cemetery	Graded	Foot	NC	S	4	1.40
BAV-152	08091	Flat Creek Trail	Heintooga Ridge (6)-Heintooga P A Overlook	Graded	Foot	NC	S	2	3.00
DEP-86	08092	Fork Ridge Trail	AT near Mt Collins-Deep Creek Gap	Graded	Foot	NC	S	2	6.00
FOR-94	08093	Forney Creek Trail	Jonas Cr Tr (FOR-95)-Andrews Bald on FOR-90	Graded	Foot	NC	S	2	7.00
FOR-90	08094	Forney Ridge Trail	Clingmans Pkg A-Springhouse Branch (FOR-93)	Graded	Foot	NC	S	4	5.50
BIG-56	08104	Gunther Fork Trail	Camel Gap Tr (BIG-230)-Balsam Mt (BAV-67)	Graded	Foot	NC	N	2	4.00
BAV-164	08110	Heintooga Picnic Area Trails		Graded	Foot	NC	S	2	0.50
DEP-251	08119	Indian Creek Falls Trail		Graded	Foot	NC	S	2	0.06
OCO-170	08165	Mingus Creek Mill Trail	From Mingus Mill Parking Area-the Mill	Graded	Foot	NC	S	2	0.10
OCO-170	08165	Mingus Creek Mill Trail	From Mingus Mill Parking Area-the Mill	Graded	Foot	NC	S	3	0.17
BAZ-265	08167	Mitchell Cemetery Trail	Deep Gap (BAZ-186)-Mitchell Cem-lakeshore	Graded	Foot	NC	S	4	1.30
BAZ-266	08183	Pilkey-Posey Cemeteries Trail	Deep Gap (BAZ-186)-Pilkey/Posey Cem-lake	Graded	Foot	NC	S	8	2.00
OCO-249	08206	Smokemont Campground Nature Trail	Loop west of campground road	Graded	Foot	NC	S	2	1.00

TRAILS USE INVENTORY

PARK #	COMP #	NAME	TERMINI	TYPE	USE	STATE	DIST	WIDTH FEET	LENGTH MILES
* Foot TN									
CAD-6	ON001	Abrams Falls Trail	Abrams Falls Parking Area-Abrams Falls	Graded	Foot	TN	N	2	2.50
COS-239	ON002	Albright Grove Nature Trail	Loop off Maddron Bald Trail (COS-48)	Graded	Foot	TN	N	2	0.65
LEC-38	ON003	Alum Cave Trail	NFG Rd @ Alum Cave Pkg-LEC-33 @ Mt LeConte	Graded	Foot	TN	N	2	5.00
AT-West	ON013	Appalachian Trail	Miry Ridge-Spence Field	Graded	Foot	TN	N	2	8.20
LEC-213	ON029	Big Locust Nature Trail	Loop off Chimney Tops Picnic Area Road	Graded	Foot	TN	N	2	0.70
LEC-33A	ON034	Boulevard Trail	Mt LeConte-AT near Mt Kephart	Graded	Foot	TN	N	4	5.30
LEC-34	ON038	Bullhead Trail	Sugarlands Cem (LEC-126)-LEC-33 @Mt Leconte	Graded	Foot	TN	N	4	5.90
CAD-103	ON039	Bunker Hill Road	Parson Branch Rd (CAD-100)-lookout tower	Graded	Foot	TN	N	12	2.45
CAD-204	ON042	Cades Cove CG Nature Trail	Loop off outer CG loop road (Section B)	Graded	Foot	TN	N	2	0.90
TRE-15	ON051	Chestnut Top Trail	Schoolhouse Gap Rd (TRE-113B)-Townsend Wye	Graded	Foot	TN	N	2	4.50
LEC-215	ON053	Chimney Tops Trail	Newfound Gap Rd (1A)-Chimney Tops	Graded	Foot	TN	N	4	2.00
LEC-172	ON054	Cliff Top Trail	Loop off Boulevard Trail at Mt LeConte	Graded	Foot	TN	N	2	0.50
GRE-120	ON060	Copeland Divide Trail	Ramsey Prong (GRE-129)-Lindsay Cemetery	Graded	Foot	TN	N	4	4.45
LEC-176	ON063	Cove Mountain (Jeep) Trail	HQ Res Area Rd (LEC-123)-lookout tower	Graded	Foot	TN	N	6	8.50
ELK-23B	ON064	Cove Mountain Trail	Laurel Falls-Cove Mt Jeep Rd (LEC-176)	Graded	Foot	TN	N	4	2.80
ELK-236	ON068	Curry Mountain Trail	Little River Rd (3BN)-Meigs Mt Tr (ELK-28)	Graded	Foot	TN	N	4	3.25
COS-47	ON095	Gabes Mountain Trail	Indian Camp Cr(COS-131)-Henwallow (COS-227)	Graded	Foot	TN	N	2	5.20
ELK-26	ON096	Goshen Prong Trail	Little River (ELK-117)-AT @ Double Spring	Graded	Foot	TN	N	2	7.55
ELK	ON097	Goshen Prong-Backcountry Site # 25	(see Name)	Graded	Foot	TN	N	4	0.90
LEC-228	ON098	Grapeyard Ridge Trail	Dudley Horse Trail A-Greenbrier Rd (7)	Graded	Foot	TN	N	4	4.90
LEC-268	ON099	Grassy Branch Trail	Cher Orch Rd (18)-Panther Cr Tr (LEC-210)	Graded	Foot	TN	N	4	1.20
CAD-4	ON102	Gregory Ridge Trail	Forge Cr Rd (3BCC7)-Rich Gap at CAD-3	Graded	Foot	TN	N	4	4.90
COS-227	ON112	Henwallow Falls Trail	Cosby Developed Area-waterfall	Graded	Foot	TN	N	2	1.40
CAD-261	ON123	John Oliver Cabin Trail	Pkg area on Cades Cove Loop (3BCC)-cabin	Graded	Foot	TN	N	4	0.50

TRAILS USE INVENTORY

PARK #	COMP #	NAME	TERMINI	TYPE	USE	STATE DIST	WIDTH FEET	LENGTH MILES
* Foot NC								
OCO-169	OS277	Oconaluftee VC, RS, Farmstead		Surface	Foot	NC 8	2	0.65
OCO-253	OS278	Smokemont Campground Area Walks	To comfort stations and to amphitheater	Surface	Foot	NC 8	3	0.42
OCO-253	OS279	Smokemont Campground Area Walks	To comfort stations and to amphitheater	Surface	Foot	NC 8	6	0.10
9A	OS282	Bryson-Fontana Road	Sidewalk at Noland Creek Parking Area	Surface	Foot	NC 8	7	0.05
1B	OS287	Newfound Gap Parking Area	Sidewalk	Surface	Foot	NC 8	6	0.30
** SUBTOTAL **								104.07

TRAILS USE INVENTORY

PARK #	COMP #	NAME	TERMINI	TYPE	USE	STATE	DIST	WIDTH FEET	LENGTH MILES
* Foot TN									
1A	ON242	Quiet Walkway, Newfound Gap Road	Huskey Gap Parking Area	Graded	Foot	TN	N	2	0.95
1A	ON243	Quiet Walkway, Newfound Gap Road	Jim Carr Place	Graded	Foot	TN	N	2	0.15
1A	ON244	Quiet Walkway, Newfound Gap Road	Balsam Point	Graded	Foot	TN	N	2	0.10
3A	ON245	Quiet Walkway, Fighting Creek Road	Big White Oak	Graded	Foot	TN	N	2	0.50
3A	ON246	Quiet Walkway, Fighting Creek Road	Hickory Flats Branch	Graded	Foot	TN	N	2	0.15
3A	ON247	Quiet Walkway, Fighting Creek Road	Laurel Falls Branch	Graded	Foot	TN	N	2	0.15
CAD	ON258	Cable Mill	Prkng Area-Barn, Mill, and Visitor Center	Surface	Foot	TN	N	10	0.12
LEC	ON259	Chimney Tops Picnic Area	Walks to comfort stations	Surface	Foot	TN	N	3	0.11
COS-240	ON262	Cosby Nature Trail	Off Cosby Entrance Road (5) at Campground	Surface	Foot	TN	N	2	0.81
COS-240	ON262	Cosby Nature Trail	Off Cosby Entrance Road (5) at Campground	Surface	Foot	TN	N	4	0.10
GRE-157	ON264	Greenbrier Ranger Station	Walks	Surface	Foot	TN	N	2	0.02
LEC-108	ON265	Headquarters Area	Walks	Surface	Foot	TN	N	3	0.13
LEC-108	ON265	Headquarters Area	Walks	Surface	Foot	TN	N	5	0.06
LEC-162	ON266	Headquarters Residence Area	Walks	Surface	Foot	TN	N	2	0.14
LEC	ON267	Headquarters to Visitor Center	Walk	Surface	Foot	TN	N	6	0.11
ELK-23A	ON268	Laurel Falls Trail	Fighting Creek Gap (3A)-Laurel Falls	Surface	Foot	TN	N	5	1.25
CAD	ON269	Look Rock Dev Area Trails & Walks		Surface	Foot	TN	N	8	0.30
CAD	ON270	Look Rock Dev Area Trails & Walks		Surface	Foot	TN	N	7	0.07
CAD	ON271	Look Rock Dev Area Trails & Walks		Surface	Foot	TN	N	5	0.67
CAD	ON272	Look Rock Dev Area Trails & Walks		Surface	Foot	TN	N	4	0.07
CAD	ON273	Look Rock Dev Area Trails & Walks		Surface	Foot	TN	N	3	1.29
LEC-238	ON280	Sugarlands Nature Trail	Off walk between HQ Admin Bldg & Vis Ctr	Surface	Foot	TN	N	2	1.10
TRE-155	ON281	Tremont Ranger Station	Walks	Surface	Foot	TN	N	2	0.06
3A	ON283	Fighting Creek Gap Road	Sidewalk	Surface	Foot	TN	N	6	0.13

TRAILS USE INVENTORY

PARK #	COMP #	NAME	TERMINI	TYPE	USE	STATE	DIST	WIDTH FEET	LENGTH MILES
* Foot TN									
LEC-212	ON125	Jump-Off Trail	Boulevard Tr (LEC-33A)-Mt Kephart Cliffs	Graded	Foot	TN	N	2	0.40
LEC-216	ON126	Junglebrook Nature Trail	Loop off Cherokee Orchard Road (18)	Graded	Foot	TN	N	2	0.70
CAD-202	ON144	Leige Oliver Trail	Abrams Falls Pkg Area-Leige Oliver Place	Graded	Foot	TN	N	4	0.50
CAD-235	ON145	Little Bottoms Trail	Cooper Rd (CAD-102)-Hatcher Mt Tr (CAD-2)	Graded	Foot	TN	N	2	2.25
ELK-22	ON147	Little Greenbrier Trail	Wear Cove Gap Rd (13)-Cove Mt Tr (ELK-23B)	Graded	Foot	TN	N	2	4.35
TRE-111	ON154	Lumber Ridge Trail	Tremont Road (17)-Meigs Creek (TRE-17)	Graded	Foot	TN	N	2	4.10
COS-48	ON157	Maddron Bald Trail	Indian Camp Cr(COS-131)-Snake Den (COS-49)	Graded	Foot	TN	N	2	6.50
TRE-17	ON160	Meigs Creek Trail	Little River (3BN E)-Old Wagon Rd (ELK-236)	Graded	Foot	TN	N	2	5.40
ELK-208	ON163	Mids Branch Nature Trail	Off Elkmont Rd (4) at Elkmont Campground	Graded	Foot	TN	N	2	0.80
TRE-21	ON166	Miry Ridge Trail	Jakes Gap-AT at Buckeye Gap	Graded	Foot	TN	N	4	4.95
LEC	ON172	Myrtle Point Trail	Off Boulevard Tr (LEC-33A) at Mt LeConte	Graded	Foot	TN	N	2	0.20
ELK-236		Old Wagon Trail	(see Curry Mountain Trail)	Graded	Foot	TN	N	4	0.00
CAD-201	ON184	Pine-Oak Nature Trail	Loop off Cades Cove Loop Road (3BCC)	Graded	Foot	TN	N	2	0.40
GRE-44	ON185	Pinnacle Trail	Ramsey Prong (GRE-129)-Greenbrier Pinnacle	Graded	Foot	TN	N	6	3.50
GRE-43	ON189	Porters Creek Trail	Porters Cr (GRE-128) up Porters Cr 3 miles	Graded	Foot	TN	N	4	3.00
GRE-45	ON195	Ramsey Cascade Trail	Ramsey Prong Rd (GRE-129)-Ramsey Cascades	Graded	Foot	TN	N	2	2.50
GRE-129	ON196	Ramsey Prong Road	(Barricade)-trailhead	Graded	Foot	TN	N	14	1.60
LEC-36	ON199	Road Prong Trail	Chimney Tops (LEC-215)-Rt 2 at Indian Gap	Graded	Foot	TN	N	2	2.50
ELK	ON201	Rough Creek-Backcountry Site No 30	(see Name)	Graded	Foot	TN	N	4	1.70
TRE-16	ON203	Roundtop Trail	Wear Cove Gap (13)-Townsend Wye	Graded	Foot	TN	N	2	7.50
ELK-23	ON213	Sugarland Mountain Trail	Fighting Creek Gap (3A)-AT at Mt Collins	Graded	Foot	TN	N	2	11.85
LEC-267	ON229	Twin Creeks Trail	G'burg City Line-Junglebrook Tr (LEC-216)	Graded	Foot	TN	N	4	1.80
TRE-111	ON235	West Prong Trail	Bote Mt Road (TRE-12)-Tremont Road (17)	Graded	Foot	TN	N	2	2.70
1A	ON241	Quiet Walkway, Newfound Gap Road	Bullhead View	Graded	Foot	TN	N	2	0.10

TRAILS USE INVENTORY

PARK #	COMP #	NAME	TERMINI	TYPE	USE	STATE	DIST	WIDTH FEET	LENGTH MILES
* Foot TN									
1A	ON242	Quiet Walkway, Newfound Gap Road	Huskey Gap Parking Area	Graded	Foot	TN	N	2	0.95
1A	ON243	Quiet Walkway, Newfound Gap Road	Jim Carr Place	Graded	Foot	TN	N	2	0.15
1A	ON244	Quiet Walkway, Newfound Gap Road	Balsam Point	Graded	Foot	TN	N	2	0.10
3A	ON245	Quiet Walkway, Fighting Creek Road	Big White Oak	Graded	Foot	TN	N	2	0.50
3A	ON246	Quiet Walkway, Fighting Creek Road	Hickory Flats Branch	Graded	Foot	TN	N	2	0.15
3A	ON247	Quiet Walkway, Fighting Creek Road	Laurel Falls Branch	Graded	Foot	TN	N	2	0.15
CAD	ON258	Cable Mill	Prkng Area-Barn, Mill, and Visitor Center	Surface	Foot	TN	N	10	0.12
LEC	ON259	Chimney Tops Picnic Area	Walks to comfort stations	Surface	Foot	TN	N	3	0.11
COS-240	ON262	Cosby Nature Trail	Off Cosby Entrance Road (5) at Campground	Surface	Foot	TN	N	2	0.81
COS-240	ON262	Cosby Nature Trail	Off Cosby Entrance Road (5) at Campground	Surface	Foot	TN	N	4	0.10
GRE-157	ON264	Greenbrier Ranger Station	Walks	Surface	Foot	TN	N	2	0.02
LEC-108	ON265	Headquarters Area	Walks	Surface	Foot	TN	N	3	0.13
LEC-108	ON265	Headquarters Area	Walks	Surface	Foot	TN	N	5	0.06
LEC-162	ON266	Headquarters Residence Area	Walks	Surface	Foot	TN	N	2	0.14
LEC	ON267	Headquarters to Visitor Center	Walk	Surface	Foot	TN	N	6	0.11
ELK-23A	ON268	Laurel Falls Trail	Fighting Creek Gap (3A)-Laurel Falls	Surface	Foot	TN	N	5	1.25
CAD	ON269	Look Rock Dev Area Trails & Walks		Surface	Foot	TN	N	8	0.30
CAD	ON270	Look Rock Dev Area Trails & Walks		Surface	Foot	TN	N	7	0.07
CAD	ON271	Look Rock Dev Area Trails & Walks		Surface	Foot	TN	N	5	0.67
CAD	ON272	Look Rock Dev Area Trails & Walks		Surface	Foot	TN	N	4	0.07
CAD	ON273	Look Rock Dev Area Trails & Walks		Surface	Foot	TN	N	3	1.29
LEC-238	ON280	Sugarlands Nature Trail	Off walk between HQ Admin Bldg & Vis Ctr	Surface	Foot	TN	N	2	1.10
TRE-155	ON281	Tremont Ranger Station	Walks	Surface	Foot	TN	N	2	0.06
3A	ON283	Fighting Creek Gap Road	Sidewalk	Surface	Foot	TN	N	6	0.13

TRAILS USE INVENTORY

PARK #	COMP #	NAME	TERMINI	TYPE	USE	STATE DIST	WIDTH FEET	LENGTH MILES
* HorseNC								
AT-East	08006	Appalachian Trail	Tricorner Knob-Pecks Corner	Graded	Horse	NC S	4	6.00
AT-West	Q8011	Appalachian Trail	Clingmans Dome-Silers Bald	Graded	Horse	NC S	4	4.00
AT-West	OS015	Appalachian Trail	Doe Knob-Fontana Dam	Graded	Horse	NC S	4	7.00
RAV-67	OS018	Balsam Mountain Trail	Laurel Gap-AT at Tricorner Knob	Graded	Horse	NC S	4	6.00
FOR-154	OS020	Bear Creek (Jeep) Road	Fontana Lake shoreline-High Rocks tower	Graded	Horse	NC S	6	10.00
OCO-246	OS022	Becks Branch Loop Trail	Loop Trail from Smokemont Stable	Graded	Horse	NC S	4	1.75
RAV-241	OS023	Beech Gap (Jeep) Trail	Balsam Mt Rd (RAV-142)-Beech Gap (RAV-175)	Graded	Horse	NC S	6	3.00
RAV-241	OS024	Beech Gap Trail	Straight Fork Rd (10)-Hyatt Ridge (RAV-68A)	Graded	Horse	NC S	4	3.00
BIG-136	OS026	Big Creek Road	Big Cr Rd (27)-trailheads (Walnut Bottoms)	Graded	Horse	NC N	12	5.75
CAT-124	OS028	Big Fork Ridge Trail	Rough Cr (CAT-140)-Caldwell Fork (CAT-65)	Graded	Horse	NC S	4	2.80
HAZ-159	OS031	Bone Valley Road	Hazel Cr (HAZ-158)-deadend near Hall Cmtry	Graded	Horse	NC S	10	1.85
CAT-256	OS032	Booger Mountain Trail	Caldwell Fork (CAT-65A)-Cldwll Frk (CAT-65)	Graded	Horse	NC S	4	4.00
OCO-145	OS035	Bradley Fork Road	Smokemont CG-turnaround (elev 3,000)	Graded	Horse	NC S	12	5.00
OCO-245	OS036	Bradley Fork Trail	Towstring Horse Camp-Chasteen Cr (OCO-131A)	Graded	Horse	NC S	4	2.50
OCO-145B	OS040	Cabin Flats Jeep Road	Bradley Fork (OCO-145)-Cabin Flats Campsite	Graded	Horse	NC S	6	1.00
CAT-65	OS043	Caldwell Fork Trail	Rough Rork (CAT-64)-Caldwell Fork (CAT-65A)	Graded	Horse	NC S	4	6.50
CAT-65A	OS044	Caldwell Fork (Jeep) Trail	Cataloochee (14A)-Caldwell Fork (CAT-65)	Graded	Horse	NC S	6	0.80
BIG-230	OS045	Camel Gap Trail	Big Cr Rd (BIG-136)-AT at Camel Gap	Graded	Horse	NC N	4	4.65
CAT-62	OS047	Cataloochee Divide Trail	Cove Cr Gap on Rt 33-Double Gap on CAT-66	Graded	Horse	NC S	4	8.00
OCO-131A	OS048	Chasteen Creek Road	Jct Bradley Fork Tr (OCO-245)-turnaround	Graded	Horse	NC S	12	3.30
OCO-131	OS049	Chasteen Creek Trail	Chasteen Cr (OCO-131A)-Hughes Ridge(OCO-75)	Graded	Horse	NC S	4	1.50
FOR-91A	OS055	Clingmans Dome Bypass Horse Trail	Clingmans Dome Parking Area-AT	Graded	Horse	NC S	4	0.50
HAZ-148B	OS056	Cold Spring Gap (Jeep) Road	Hazel Cr Rd (HAZ-158)-trailhead (HAZ-148C)	Graded	Horse	NC S	10	1.75
HAZ-148C	OS057	Cold Spring Gap Trail	Cold Spring Gap-end CSG RD (HAZ-148B)	Graded	Horse	NC S	4	2.00

TRAILS USE INVENTORY

PARK #	COMP #	NAME	TERMINI	TYPE	USE	STATE	DIST	WIDTH FEET	LENGTH MILES
* Foot TN									
8G	ON284	Foothills Parkway, Section G	Sidewalk	Surface	Foot	TN	N	6	0.54
8H	ON285	Foothills Parkway, Section H	Sidewalk	Surface	Foot	TN	N	6	0.27
15A	ON286	Gatlinburg Bypass (Foothills Pky)	Sidewalk	Surface	Foot	TN	N	6	0.12
1A	ON288	Newfound Gap Road	Sidewalk	Surface	Foot	TN	N	6	0.09
** SUBTOTAL **									163.01

TRAILS INVENTORY BY DISTRICT

PARK	# COMP #	NAME OF TRAIL	TERMINI	TYPE	USE	ST DIST	WIDTH FEET	LENGTH MILES
* 8Graded Horse								
2		Quiet Walkway, Clingmans Dome Road	Noland Divide Trail (no additional mileage)	Graded	Horse	NC 8	4	0.00
AT-East	08006	Appalachian Trail	Tricorner Knob-Pecks Corner	Graded	Horse	NC 8	4	6.00
AT-West	08011	Appalachian Trail	Clingmans Dome-Silers Bald	Graded	Horse	NC 8	4	4.00
AT-West	08015	Appalachian Trail	Doe Knob-Fontana Dam	Graded	Horse	NC 8	4	7.00
CAT-124	08028	Big Fork Ridge Trail	Rough Cr (CAT-140)-Caldwell Fork (CAT-65)	Graded	Horse	NC 8	4	2.80
CAT-231	08156	McKee Branch Trail	Cataloochee Div (CAT-62)-Caldwell F(CAT-65)	Graded	Horse	NC 8	4	2.40
CAT-232	08149	Long Bunk Trail	Mt Sterling (CAT-171)-Hannah Cem (CAT-232A)	Graded	Horse	NC 8	4	4.50
CAT-256	08032	Booger Mountain Trail	Caldwell Fork (CAT-65A)-Cldwll Frk (CAT-65)	Graded	Horse	NC 8	4	4.00
CAT-60	08171	Mt Sterling Ridge Trail	Mt Sterl Rd (CAT-171)-Laurel Gap (RAV-175)	Graded	Horse	NC 8	4	5.70
CAT-61	08191	Pretty Hollow Gap Trail	Pretty Hollow (CAT-61A)-Mt Sterl (CAT-60)	Graded	Horse	NC 8	4	4.00
CAT-61A	08190	Pretty Hollow Gap (Jeep) Trail	Cataloochee Rd (14A)-Pretty Hollow (CAT-61)	Graded	Horse	NC 8	6	2.00
CAT-62	08047	Cataloochee Divide Trail	Cove Cr Gap on Rt 33-Double Gap on CAT-66	Graded	Horse	NC 8	4	8.00
CAT-63	08178	Palmer Creek Trail	Pretty Hollow (CAT-61A)-Balsam Mt (RAV-142)	Graded	Horse	NC 8	4	4.00
CAT-64	08202	Rough Fork Trail	Rough Cr Rd (CAT-140)-Polls Gap on Rt 6	Graded	Horse	NC 8	4	5.00
CAT-65	08043	Caldwell Fork Trail	Rough Rork (CAT-64)-Caldwell Fork (CAT-65A)	Graded	Horse	NC 8	4	6.50
CAT-65A	08044	Caldwell Fork (Jeep) Trail	Cataloochee (14A)-Caldwell Fork (CAT-65)	Graded	Horse	NC 8	6	0.80
CAT-66	08111	Hemphill Bald Trai	Heintooga Ridge (6)-Caldwell Fork (CAT-65)	Graded	Horse	NC 8	4	8.00
DEP-149	08073	Deep Creek Road	Barricade-turnaround	Graded	Horse	NC 8	12	3.10
DEP-149A	08074	Deep Creek Road	Jenkins Pl(DEP-149)-Bryson/Pole Rd Camps	Graded	Horse	NC 8	6	5.00
DEP-150	08121	Indian Creek Road	Jct Deep Cr Rd (DEP-149)-turnaround	Graded	Horse	NC 8	12	4.40
DEP-150A	08120	Indian Creek Motor Nature Trail	Toms Branch Rd (11)-Deep Cr Rd (DEP-149)	Graded	Horse	NC 8	12	5.00
DEP-254	08158	Martin Gap Trail A	Sunkata Ridge (DEP-88)-Deep Cr (DEP-149A)	Graded	Horse	NC 8	4	1.50
DEP-254A	08159	Martin Gap Trail B	Sunkata Ridge (DEP-88)-DEP-150 turnaround	Graded	Horse	NC 8	4	1.50
DEP-257	08071	Deep Creek Bypass Trail	Around Deep Creek Campground for horses	Graded	Horse	NC 8	4	0.50

TRAILS INVENTORY BY DISTRICT

PARK	# COMP #	NAME OF TRAIL	TERMINI	TYPE	USE	ST	DIST	WIDTH FEET	LENGTH MILES
* 8Graded Foot									
FOR-94	08093	Forney Creek Trail	Jonas Cr Tr (FOR-95)-Andrews Bald on FOR-90	Graded	Foot	NC	8	2	7.00
HAZ-263	08041	Cable Cemetery Trail	Fairview Cem (HAZ-185)-Cable Cemetery	Graded	Foot	NC	8	4	1.20
HAZ-264	08089	Fairview Cemetery Trail	Deep Gap Tr (HAZ-186)-Fairview Cemetery	Graded	Foot	NC	8	4	1.40
HAZ-265	08167	Mitchell Cemetery Trail	Deep Gap (HAZ-186)-Mitchell Cem-lakeshore	Graded	Foot	NC	8	4	1.30
HAZ-266	08183	Pilkey-Posey Cemeteries Trail	Deep Gap (HAZ-186)-Pilkey/Posey Cem-lake	Graded	Foot	NC	8	8	2.00
OCO-170	08165	Mingus Creek Mill Trail	From Mingus Mill Parking Area-the Mill	Graded	Foot	NC	S	2	0.10
OCO-170	08165	Mingus Creek Mill Trail	From Mingus Mill Parking Area-the Mill	Graded	Foot	NC	S	3	0.17
OCO-244	08207	Smokemont Campground Loop Trail	Smokemont CG, forms loop on Bradley OCO-145	Graded	Foot	NC	S	2	4.00
OCO-248	08059	Collins Creek Picnic Area Trail		Graded	Foot	NC	S	3	0.78
OCO-249	08206	Smokemont Campground Nature Trail	Loop west of campground road	Graded	Foot	NC	S	2	1.00
OCO-80	08216	Sweat Heifer Creek Trail	Kephart Prong (OCO-146)-AT near Mt Kephart	Graded	Foot	NC	S	2	4.20
RAV	08017	Balsam Mountain Nature Trail	Balsam Mt CG-near Heintooga Picnic Area	Graded	Foot	NC	S	2	0.50
RAV-152	08091	Flat Creek Trail	Heintooga Ridge (6)-Heintooga P A Overlook	Graded	Foot	NC	S	2	3.00
RAV-164	08110	Heintooga Picnic Area Trails		Graded	Foot	NC	S	2	0.50
** SUBTOTAL **									89.10

TRAILS INVENTORY BY DISTRICT

PARK	# COMP #	NAME OF TRAIL	TERMINI	TYPE	USE	ST DIST	WIDTH FEET	LENGTH MILES
* 8Graded Foot								
1B	OS248	Quiet Walkway, Newfound Gap Road	Collins Creek Picnic Area	Graded	Foot	NC S	2	0.25
1B	OS249	Quiet Walkway, Newfound Gap Road	Opposite side of road from Kanati Fork Tr	Graded	Foot	NC S	2	0.11
1B	OS250	Quiet Walkway, Newfound Gap Road	Opposite old rock slide above Kanati Fork T	Graded	Foot	NC S	2	0.10
1B	OS251	Quiet Walkway, Newfound Gap Road	Old NFG Road just above Beech Flats	Graded	Foot	NC S	2	0.27
1B	OS252	Quiet Walkway, Newfound Gap Road	Thomas Divide Trail (no additional mileage)	Graded	Foot	NC S	2	0.00
1B	OS253	Quiet Walkway, Newfound Gap Road	Last large pull-out before Deep Cr Trail	Graded	Foot	NC S	2	0.07
1B	OS254	Quiet Walkway, Newfound Gap Road	Small pull-out just before Deep Cr Trail	Graded	Foot	NC S	2	0.16
1B	OS255	Quiet Walkway, Newfound Gap Road	Old Deep Creek Trail	Graded	Foot	NC S	2	0.15
2		Quiet Walkway, Clingmans Dome Road	Fork Ridge Trail (no additional mileage)	Graded	Foot	NC S	2	0.00
9A	OS239	(Cemetery Trail)	Off 9A on Hickory Flat Br (2 cemeteries)	Graded	Foot	NC S	4	0.50
9A	OS256	Quiet Walkway, Bryson-Fontana Road	First pull-out past Canebreak	Graded	Foot	NC S	2	0.08
AS	OS016	Asbury Trail	Park Bdry @ Cove Cr Gap-Mt Sterling Gap	Graded	Foot	NC S	2	23.50
AT-East	OS007	Appalachian Trail	Pecks Corner-False Gap	Graded	Foot	NC S	2	4.00
AT-East	OS008	Appalachian Trail	False Gap-Ice Water Spring	Graded	Foot	NC S	2	3.50
AT-East	OS009	Appalachian Trail	Ice Water Spring-Newfound Gap	Graded	Foot	NC S	2	3.00
AT-West	OS010	Appalachian Trail	Newfound Gap-Clingmans Dome	Graded	Foot	NC S	2	7.50
DEP	OS238	(Cemetery Trail)	Begin 1st bridge on Deep Cr above Indian Cr	Graded	Foot	NC S	4	0.75
DEP	OS240	(Cemetery Trail)	On ridge above bridge at Jenkins Place	Graded	Foot	NC S	2	0.25
DEP-250	OS076	Deep Creek Juneywhank Nature Trail		Graded	Foot	NC S	2	0.40
DEP-251	OS119	Indian Creek Falls Trail		Graded	Foot	NC S	2	0.06
DEP-252	OS212	Spruce-Fir Nature Trail	Loop off Clingmans Dome Road (2)	Graded	Foot	NC S	2	0.30
DEP-84	OS217	Thomas Divide Trail	Newfound Gap-Newton Bald	Graded	Foot	NC S	2	5.50
DEP-86	OS092	Fork Ridge Trail	AT near Mt Collins-Deep Creek Gap	Graded	Foot	NC S	2	6.00
FOR-90	OS094	Forney Ridge Trail	Clingmans Pkg A-Springhouse Branch (FOR-93)	Graded	Foot	NC S	4	5.50

TRAILS INVENTORY BY DISTRICT

PARK #	COMP #	NAME OF TRAIL	TERMINI	TYPE	USE	ST	DIST	WIDTH FEET	LENGTH MILES
* NSurfaceFoot									
15A	ON286	Gatlinburg Bypass (Foothills Pky)	Sidewalk	Surface	Foot	TN	N	6	0.12
1A	ON288	Newfound Gap Road	Sidewalk	Surface	Foot	TN	N	6	0.09
3A	ON283	Fighting Creek Gap Road	Sidewalk	Surface	Foot	TN	N	6	0.13
8G	ON284	Foothills Parkway, Section G	Sidewalk	Surface	Foot	TN	N	6	0.54
8H	ON285	Foothills Parkway, Section H	Sidewalk	Surface	Foot	TN	N	6	0.27
CAD	ON258	Cable Mill	Prkng Area-Barn, Mill, and Visitor Center	Surface	Foot	TN	N	10	0.12
CAD	ON269	Look Rock Dev Area Trails & Walks		Surface	Foot	TN	N	8	0.30
CAD	ON270	Look Rock Dev Area Trails & Walks		Surface	Foot	TN	N	7	0.07
CAD	ON271	Look Rock Dev Area Trails & Walks		Surface	Foot	TN	N	5	0.67
CAD	ON272	Look Rock Dev Area Trails & Walks		Surface	Foot	TN	N	4	0.07
CAD	ON273	Look Rock Dev Area Trails & Walks		Surface	Foot	TN	N	3	1.29
COS-240	ON262	Cosby Nature Trail	Off Cosby Entrance Road (5) at Campground	Surface	Foot	TN	N	2	0.81
COS-240	ON262	Cosby Nature Trail	Off Cosby Entrance Road (5) at Campground	Surface	Foot	TN	N	4	0.10
ELK-23A	ON268	Laurel Falls Trail	Fighting Creek Gap (3A)-Laurel Falls	Surface	Foot	TN	N	5	1.25
GRE-157	ON264	Greenbrier Ranger Station	Walks	Surface	Foot	TN	N	2	0.02
LEC	ON259	Chimney Tops Picnic Area	Walks to comfort stations	Surface	Foot	TN	N	3	0.11
LEC	ON267	Headquarters to Visitor Center	Walk	Surface	Foot	TN	N	6	0.11
LEC-108	ON265	Headquarters Area	Walks	Surface	Foot	TN	N	3	0.13
LEC-108	ON265	Headquarters Area	Walks	Surface	Foot	TN	N	5	0.06
LEC-162	ON266	Headquarters Residence Area	Walks	Surface	Foot	TN	N	2	0.14
LEC-238	ON280	Sugarlands Nature Trail	Off walk between HQ Admin' Bldg & Vis Ctr	Surface	Foot	TN	N	2	1.10
TRE-155	ON281	Tremont Ranger Station	Walks	Surface	Foot	TN	N	2	0.06
** SUBTOTAL **									7.56

TRAILS INVENTORY BY DISTRICT

PARK #	COMP #	NAME OF TRAIL	TERMINI	TYPE	USE	ST	DIST	WIDTH FEET	LENGTH MILES
* NGraded Horse									
LEC-224	ON069	Daddys Branch Trail	Loop off Dudley Horse Trail A	Graded	Horse	TN	N	8	1.00
LEC-225	ON052	Cherokee Orchard to Roar.Fork Trail	Roaring Fork (18A)-Dudley Tr A (LEC-223)	Graded	Horse	TN	N	4	3.00
LEC-245	ON232	Twomile One-Hour Loop Trail	Loop from Twomile Stables	Graded	Horse	TN	N	8	3.00
LEC-32A	ON230	Twomile Branch Trail (1-hour loop)	Cherokee Orchard-Sugarlands Truck Trail	Graded	Horse	TN	N	4	1.80
LEC-33	ON194	Rainbow Falls Trail	Prkng area on Cher Orch (18)-Mt LeConte	Graded	Horse	TN	N	4	6.50
LEC-35	ON116	Huskey Gap Trail	NFG Road (1A)-Sugarland Mt Trail (ELK-23)	Graded	Horse	TN	N	2	2.00
LEC-39	ON224	Trillium Gap Trail	Cherokee Orchard Parking Area-Trillium Gap	Graded	Horse	TN	N	4	5.30
LEC-40	ON225	Trillium Gap Trail	Trillium Gap-Mt LeConte	Graded	Horse	TN	N	4	3.50
TRE-113	ON033	Bote Mountain Road	Laurel Creek Rd (3BN West)-turnaround	Graded	Horse	TN	N	12	5.48
TRE-113A	ON210	Spence Field (Jeep) Trail	Bote Mt turnaround (TRE-113)-AT @ Spence F	Graded	Horse	TN	N	6	1.70
TRE-115	ON162	Middle Prong (Jeep) Trail	Tremont Rd (17)-Marks Cove Primitive Camp	Graded	Horse	TN	N	6	5.50
TRE-13	ON226	Turkey Pen Ridge Trail	Laurel Cr (3BN W)-Schoolhouse Gap(TRE-113B)	Graded	Horse	TN	N	4	3.60
TRE-18	ON180	Panther Creek Trail	Tremont Rd (17)-Jakes Cr Rd (ELK-118A)	Graded	Horse	TN	N	4	2.20
TRE-19	ON103	Greenbrier Ridge Trail	Lynn Camp Prong (TRE-20)-AT at Sams Gap	Graded	Horse	TN	N	4	4.10
TRE-20	ON155	Lynn Camp Prong Trail	Middle Prong (TRE-115)-Miry Ridge (TRE-21)	Graded	Horse	TN	N	4	2.40
TRE-206	ON143	Lead Cove Trail	Laurel Cr Rd (3BN W)-Bote Mt Rd (TRE-113)	Graded	Horse	TN	N	4	1.70
TRE-207	ON090	Finley Cane Trail	Laurel Cr Rd (3BN W)-Bote Mt Rd (TRE-113)	Graded	Horse	TN	N	4	2.70
** SUBTOTAL **									242.29

TRAILS INVENTORY BY DISTRICT

PARK #	COMP #	NAME OF TRAIL	TERMINI	TYPE	USE	ST	DIST	WIDTH FEET	LENGTH MILES
* NGraded Horse									
CAD-8	ON222	Three Mtns Trail (Scott Mtn Trail)	Indian Grave Road-Schoolhouse Gap Road	Graded	Horse	TN	N	2	3.60
COS-123	ON153	Lower Mt Cammerer Trail	Cosby CG Sec B Rd-AT on Cammerer Ridge	Graded	Horse	TN	N	4	8.60
COS-131	ON118	Indian Camp Creek Road	(Barricade)-trailhead	Graded	Horse	TN	N	14	1.35
COS-132	ON062	Cosby Creek Road	Cosby CG Reservoir Rd-AT at Low Gap	Graded	Horse	TN	N	6	2.60
COS-196	ON170	Mt Cammerer Jeep Trail	AT-lookout tower	Graded	Horse	TN	N	6	1.00
COS-229	ON061	Cosby Horse Trail	TN 32 @ Bdry-Lower Mt Cammerer (COS-123)	Graded	Horse	TN	N	4	2.85
COS-49	ON208	Snake Den Ridge Trail	Cosby CG Sec B Rd-AT near Inadu Knob	Graded	Horse	TN	N	6	5.50
ELK-117	ON148	Little River Road	(Barricade)-gate at Fish Camp Prong	Graded	Horse	TN	N	12	2.80
ELK-233	ON200	Rough Creek Trail	Little River(ELK-117)-Sugarland Mt (ELK-23)	Graded	Horse	TN	N	2	3.50
ELK-237	ON067	Cucumber Gap Trail	Little River (ELK-117)-Jakes Cr (ELK-118)	Graded	Horse	TN	N	4	2.40
ELK-24	ON115	Huskey Gap Trail	Little River(ELK-117)-Sugarland Mt(ELK-23)	Graded	Horse	TN	N	2	2.10
ELK-27	ON030	Blanket Mountain Trail	Elkmont (ELK-118A)-Blanket Mt via Jakes Cr	Graded	Horse	TN	N	4	4.10
ELK-28	ON161	Meigs Mountain Trail	Jakes Cr (ELK-118)-Old Wagon Tr (ELK-236)	Graded	Horse	TN	N	2	4.10
GRE-42	ON037	Brushy Mountain Trail	Porters Cr (GRE-128)-Brushy Mt via Trillium	Graded	Horse	TN	N	4	4.70
LEC-209	ON231	Twomile Lead Trail (1-hour loop)	Cherokee Orchard-Sugarlands Truck Trail	Graded	Horse	TN	N	4	2.00
LEC-210	ON179	Panther Branch Trail	Loop off Twomile Branch Trail (LEC-32A)	Graded	Horse	TN	N	4	2.00
LEC-211	ON198	River Trail	Twomile Stables-Twomile 1-Hour Loop Trail	Graded	Horse	TN	N	4	1.80
LEC-217	ON081	Dudley Creek Horse Trail, C	Little Dudley H Tr B-Big Dudley H Tr A	Graded	Horse	TN	N	4	3.20
LEC-218	ON082	Dudley Creek Horse Trail, D	Dudley Horse Tr C-Roaring Fork Rd (18A)	Graded	Horse	TN	N	4	0.50
LEC-219	ON146	Little Dudley Trail, B	Dudley Riding Stables-Big Dudley Trail A	Graded	Horse	TN	N	4	2.70
LEC-220	ON083	Dudley Creek Horse Trail, E	Big Dudley Horse Tr A-Dudley Horse Trail F	Graded	Horse	TN	N	8	0.30
LEC-221	ON025	Bell Branch Trail	Dudley Horse Trail A-Dudley Horse Trail B	Graded	Horse	TN	N	4	1.15
LEC-222	ON084	Dudley Creek Horse Trail, F	Big Dudley Horse Tr A-Little Dudley H Tr B	Graded	Horse	TN	N	8	0.50
LEC-223	ON027	Big Dudley Horse Trail, A	TN 73 to Roaring Fork at LEC-39)	Graded	Horse	TN	N	4	6.15

TRAILS INVENTORY BY DISTRICT

PARK #	COMP #	NAME OF TRAIL	TERMINI	TYPE	USE	ST	DIST	WIDTH FEET	LENGTH MILES
* NGraded Horse									
17	ON223	Tremont Road	(Barricade)-gate @ jct Middle Pr (TRE-115)	Graded	Horse	TN	N	16	3.00
AT-East	ON005	Appalachian Trail	Davenport Gap-Tricorner Knob	Graded	Horse	TN	N	4	16.00
AT-West	ON012	Appalachian Trail	Silers Bald-Miry Ridge	Graded	Horse	TN	N	4	3.00
AT-West	ON014	Appalachian Trail	Spence Field-Doe Knob	Graded	Horse	TN	N	4	7.00
BIG-136	OS026	Big Creek Road	Big Cr Rd (27)-trailheads (Walnut Bottoms)	Graded	Horse	NC	N	12	5.75
BIG-230	OS045	Camel Gap Trail	Big Cr Rd (BIG-136)-AT at Camel Gap	Graded	Horse	NC	N	4	4.65
BIG-53	OS152	Low Gap Trail	Big Cr Rd (BIG-136)-AT at Low Gap	Graded	Horse	NC	N	4	2.60
BIG-57	OS215	Swallow Fork Trail	Big Cr (BIG-136)-Mt Sterling Ridge (CAT-60)	Graded	Horse	NC	N	4	3.95
CAD-10	ON204	Russell Field Trail	Anthony Cr (CAD-11)-AT at Russell Field	Graded	Horse	TN	N	4	3.50
CAD-101	ON193	Rabbit Creek Road	Abrams Falls Prkg Area-Kingfisher (CAD-26)	Graded	Horse	TN	N	12	8.10
CAD-102	ON058	Cooper Road	Barricade-Abrams Creek Campground	Graded	Horse	TN	N	12	11.00
CAD-104	ON046	Cane Creek Road	Cooper Rd (CAD-102)-Miller Cove Tr (CAD-8)	Graded	Horse	TN	N	12	3.20
CAD-11	ON004	Anthony Creek Trail	Anthony Cr Rd (CAD-168)-Bote Mt Rd(TRE-113)	Graded	Horse	TN	N	4	1.90
CAD-2	ON107	Hatcher Mountain Trail	Cooper Road (CAD-102)-Abrams Falls	Graded	Horse	TN	N	4	4.80
CAD-203	ON176	North Side Loop Trail	Cades Cove Stable-Anthony Cr Rd (CAD-168)	Graded	Horse	TN	N	8	2.50
CAD-205	ON197	Rich Mountain Loop Horse Trail	Cades Cove Stables-Indian Grave (CAD-105)	Graded	Horse	TN	N	4	3.40
CAD-242	ON066	Crooked Arm Ridge Trail	Rich Mt (CAD-205)-Indian Grave Gap(CAD-105)	Graded	Horse	TN	N	4	2.20
CAD-243	ON065	Crib Gap Trail	Turkey Pen Ridge(TRE-13)-Anthony Cr(CAD-168	Graded	Horse	TN	N	4	1.60
CAD-2A	ON105	Hannah Mountain Trail	Parson Br (CAD-100)-Rabbit Cr Rd (CAD-101)	Graded	Horse	TN	N	4	7.56
CAD-2A	ON106	Hannah Mountain Trail	Rabbit Cr (CAD-101)-Hatcher Mt Tr (CAD-2)	Graded	Horse	TN	N	4	1.80
CAD-3	ON101	Gregory Bald Trail	Parson Branch Rd (CAD-100)-AT @ Doe Knob	Graded	Horse	TN	N	4	7.50
CAD-7	ON021	Beard Cane Trail	Cooper Rd (CAD-102)-Blair Gap Tr (CAD-8)	Graded	Horse	TN	N	4	4.20
CAD-8	ON220	Three Mtns Trail (Ace Gap Trail)	Blair Gap-Rich Gap	Graded	Horse	TN	N	2	5.60
CAD-8	ON221	Three Mtns Trail (Rich Mtn Trail)	Rich Gap-Indian Grave Road	Graded	Horse	TN	N	4	2.50

TRAILS INVENTORY BY DISTRICT

PARK	# COMP	NAME OF TRAIL	TERMINI	TYPE	USE	ST	DIST	WIDTH FEET	LENGTH MILES
* NGraded Foot									
LEC-34	ON038	Bullhead Trail	Sugarlands Cem (LEC-126)-LEC-33 @Mt Leconte	Graded	Foot	TN	N	4	5.90
LEC-36	ON199	Road Prong Trail	Chimney Tops (LEC-215)-Rt 2 at Indian Gap	Graded	Foot	TN	N	2	2.50
LEC-38	ON003	Alum Cave Trail	NFG Rd @ Alum Cave Pkg-LEC-33 @ Mt LeConte	Graded	Foot	TN	N	2	5.00
TRE-11.	ON154	Lumber Ridge Trail	Tremont Road (17)-Meigs Creek (TRE-17)	Graded	Foot	TN	N	2	4.10
TRE-111	ON235	West Prong Trail	Bote Mt Road (TRE-12)-Tremont Road (17)	Graded	Foot	TN	N	2	2.70
TRE-15	ON051	Chestnut Top Trail	Schoolhouse Gap Rd (TRE-113B)-Townsend Wye	Graded	Foot	TN	N	2	4.50
TRE-16	ON203	Roundtop Trail	Wear Cove Gap (13)-Townsend Wye	Graded	Foot	TN	N	2	7.50
TRE-17	ON160	Meigs Creek Trail	Little River (3BN E)-Old Wagon Rd (ELK-236)	Graded	Foot	TN	N	2	5.40
TRE-21	ON166	Miry Ridge Trail	Jakes Gap-AT at Buckeye Gap	Graded	Foot	TN	N	4	4.95
** SUBTOTAL **									167.65

TRAILS INVENTORY BY DISTRICT

PARK	# COMP #	NAME OF TRAIL	TERMINI	TYPE	USE	ST	DIST	WIDTH FEET	LENGTH MILES
* SSurfaceFoot									
1B	0S287	Newfound Gap Parking Area	Sidewalk	Surface	Foot	NC	S	6	0.30
9A	0S282	Bryson-Fontana Road	Sidewalk at Noland Creek Parking Area	Surface	Foot	NC	S	7	0.05
DEP-173	0S263	Deep Creek	Shelter and comfort station walks	Surface	Foot	NC	S	3	0.36
FOR	0S260	Clingmans Dome Parking Area Trail		Surface	Foot	NC	S	6	0.08
FOR-91	0S261	Clingmans Dome Trail	Forney Ridge Parking Area-AT at the Tower	Surface	Foot	NC	S	8	0.50
OCO	0S274	Mingus Mill Walkway		Surface	Foot	NC	S	8	0.15
OCO-165	0S275	Newfound Gap Comfort Station Walks		Surface	Foot	NC	S	8	0.10
OCO-169	0S276	Oconaluftee VC, RS, Farmstead Walks		Surface	Foot	NC	S	3	0.06
OCO-169	0S277	Oconaluftee VC, RS, Farmstead		Surface	Foot	NC	S	2	0.65
OCO-253	0S278	Smokemont Campground Area Walks	To comfort stations and to amphitheater	Surface	Foot	NC	S	3	0.42
OCO-253	0S279	Smokemont Campground Area Walks	To comfort stations and to amphitheater	Surface	Foot	NC	S	6	0.10
RAV-174	0S257	Balsam Mt CG Area Trails (0.40 mi)	Not included in total, maintenance by BRP	Surface	Foot	NC	S	2	0.00
** SUBTOTAL **									2.77
** TOTAL **									920.52

APPENDIX G

BACKCOUNTRY PATROL AND REPORTING GUIDELINES

The National Park Service law enforcement policy is set forth in NPS-9, the Superintendent's Statement for Management, and other appropriate local directives, but it would seem appropriate to relate the role of law enforcement and protection activities to backcountry management.

Backcountry law enforcement has two basic purposes:

1. To minimize environmental impacts caused by human use.
2. To minimize public safety hazards caused by people.

The park can do a great deal through public education to minimize violations and abuse resulting from ignorance. However, any management policy which results in restriction of a person's activities in the backcountry will require law enforcement to some degree. Experience has shown that face-to-face law enforcement contacts in the field are an important part of the overall effort at minimizing human impacts.

Trail Patrols

A great deal of effectiveness can be accomplished through routine trail patrols. This activity provides contacts with a good representative sampling of the majority of park users and minimizes the total impact of "a little bit of damage by a lot of people." District rangers should ensure that most trails and designated campsites are patrolled at least once every two weeks from May through October (peak season). Visitor activities with the greatest adverse environmental impacts will receive the greatest emphasis in law enforcement contacts.

The following points are offered as obvious, but sometimes overlooked, components of backcountry trail patrols:

-Schedule trips for appropriate times (not always midday) and avoid duplication.

-Arrange for transportation in a timely manner to save fuel and patrol time.

-Contact all observed visitors and provide them an opportunity for dialogue.

-Check all backpackers for a valid permit. Issue permits for those without one and revise permits for "off-schedule" hikers, or if they request an acceptable change.

-Check fishermen and complete a creel census report for each contact.

-Act within the scope of your authority on all observed violations.

-Be alert to unusual phenomena or items of special interest and note same on trail patrol report.

-Report immediately to the Communications Center, or 700B or an appropriate contact, urgent items of interest to many stations (e.g., bear incidents, high water crossings, etc.).

-Perform minor maintenance, within time and ability constraints, including:

(a) Cleaning up campsites.

(b) Destroying illegal and/or surplus fire rings.

(c) Remove all litter; excessive amounts should be neatly stockpiled and arrangements coordinated with a horse patrol and/or trail crew for timely removal.

(d) Remove all windfalls up to seven inches in diameter, and accurately report the location, size, and degree of obstruction of all other windfalls to the appropriate maintenance supervisor.

-Submit an accurate and complete Backcountry Patrol Report form within two days.

Reporting System

Certain characteristics of the backcountry, particularly the size of the area and exclusion of motorized traffic, make it difficult for supervisory and research personnel to observe or notice a great deal of change firsthand. The backcountry, therefore, has the potential for sustaining a great deal of abuse or other changes undetected. Management must rely to a large extent upon information provided by field personnel who travel in the backcountry.

The best means of collecting and sharing routine observations in the backcountry seems to be the Backcountry Patrol Report form. It will be completed after each hike, and submitted for review within two days after completion of the trip. Report forms should be filled out as completely and concisely as possible, following the instructions provided. Routing must be accomplished as expeditiously as possible to ensure that pertinent information reaches the appropriate parties in a reasonable period of time.

Backcountry patrol reports will normally be routed through the Subdistrict, District, and Resource Management offices and, when applicable, through Uplands Field Research Laboratory or a maintenance supervisor if appropriate. Since some data may be of statistical interest, or may show changes from year to year, reports should be stored for three years by the appropriate District Backcountry Ranger.

Backcountry-Related Communications

Day-to-day events will generally be adequately recorded on patrol reports and Case Incident Records, but a good many changes of lesser importance may not be recorded, or for that matter, passed along to other public contact employees.

Although a large amount of responsibility for trip planning and safety rests with the hiker, practically all Service literature advises visitors to "ask a Ranger" for information. It is, therefore, extremely important that every public contact person be kept advised of backcountry conditions. This can be accomplished to a degree by reporting significant situations to the Communications Center for inclusion in the daily broadcast "Morning Report," and routing of printed copies of the Morning Report to appropriate public contact stations.

Additional communications should be established with local interest groups, hiking clubs, and sporting goods stores catering to backcountry users in order to disseminate information and changes in conditions or management directions.

SUPERVISOR OR

CREW LEADERS RESPONSIBILITIES

1. Give on-the-job instructions to each employee covering the work he will do. All crew members should know the description of their work and duties expected.

2. Enforcing all safety regulations.

3. Work Camps:

   a. Try to locate camps away from heavy visitor use areas.

   b. Keep campsite clean and orderly. Remove unburnable debris from backcountry - "Pack-it-Out."

4. Records: The supervisor will provide Form 10-51 (small pad) to each employee to record the following information.

   a. Keep daily records of all work accomplished.

   b. Keep daily records of hours worked - regular and overtime (if any).

   c. Keep daily records of tools, equipment and supplies.

5. If food is furnished by the government, call in grocery orders to your supervisor at least one week in advance of need.

6. In case of injury, fill out CA-1 form (Employee's Notice of Injury) and forward to your Foreman, with information needed to complete DI-134.

7. If crew is operating with stock, the packer assigned to that crew is the responsible employee for the handling and welfare of the stock.

8. When crew members terminate, fill out SF 10-153 (Recommendation for Future Placement) at least three days prior to the last day of work. If they resign, a SF-52 also needs to be filled out and forwarded to the Foreman.

- * -

Section II

TRAIL MAINTENANCE

Trail Maintenance: It is intended that regular routine maintenance include the removal of rocks and downed trees, cleaning of water bars, construction of new water bars, filling of washed out trails, brushing and trimming of vegetation, bridge repairs and construction, etc.

The trail work program should be corrective rather than stop gap.

The ideal trail is one that appears to be old, but well maintained, with natural conditions prevailing along the sides of the trail and no signs of construction, such as axe marks, freshly broken stones, freshly cut stumps, or raw cut slopes. All trail maintenance work should be carried out in such a manner as to accomplish the above with a minimum of unnatural disturbance.

SIGNS

1. Mark on map or report to supervisor all signs which have been destroyed or need replacing. Foreman shall report sign deficiencies to District Facility Manager who will initiate replacement sign requests.

CLEARING

When cutting through down trees across the trail, make at least a three foot wide opening on foot trails and a six foot wide opening on horse and foot trails. Where possible, remove cut sections to low side of trail and hide or obliterate sawed ends.

Remove snags and danger trees that might fall on the trail or in campsites. Cut stumps flush with ground and cover.

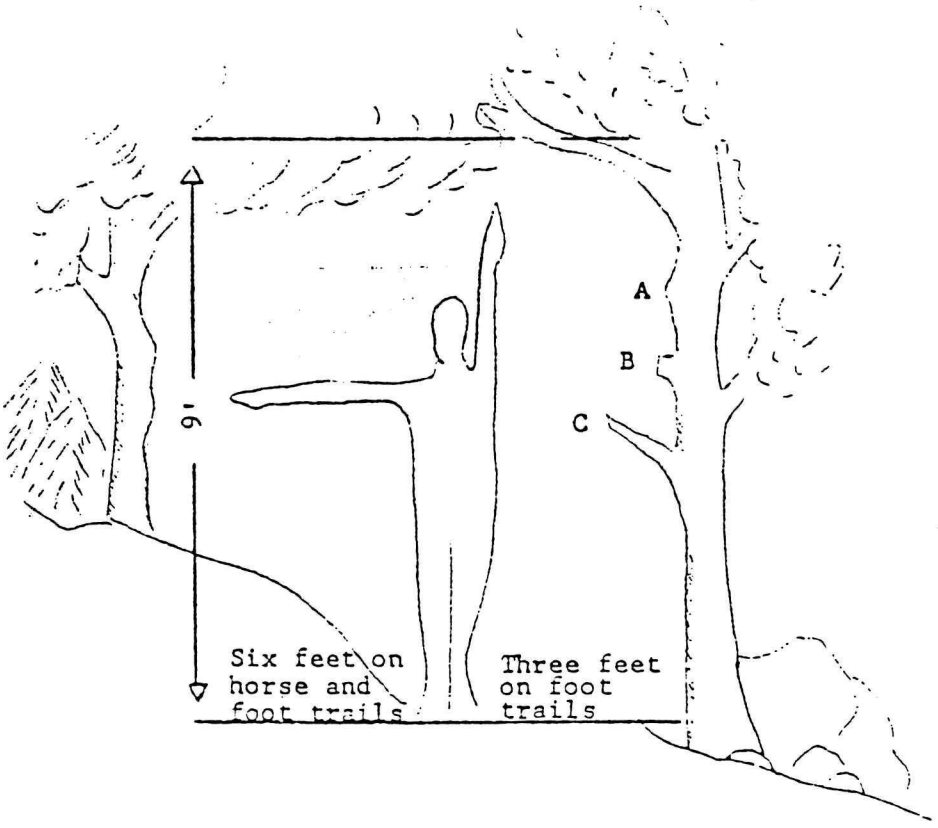
Cut brush flush with ground.

Cut limbs flush with tree and provide at least a three foot clearance in width on foot trails, a six foot width on horse and foot trails, and a nine foot overhead clearance.

All cleared material should be disposed of by scattering out of sight as much as possible.

Remove all plastic colored tape after it has served its purpose.

Never blaze or bark trees.



Cut limbs flush with tree as shown in A and B.

DO NOT leave stubs as in C.

FIGURE I

SECTION THROUGH BOGGY GROUND
TO BE USED ONLY WHERE A CHANGE IN
LOCATION IS IMPRACTICAL

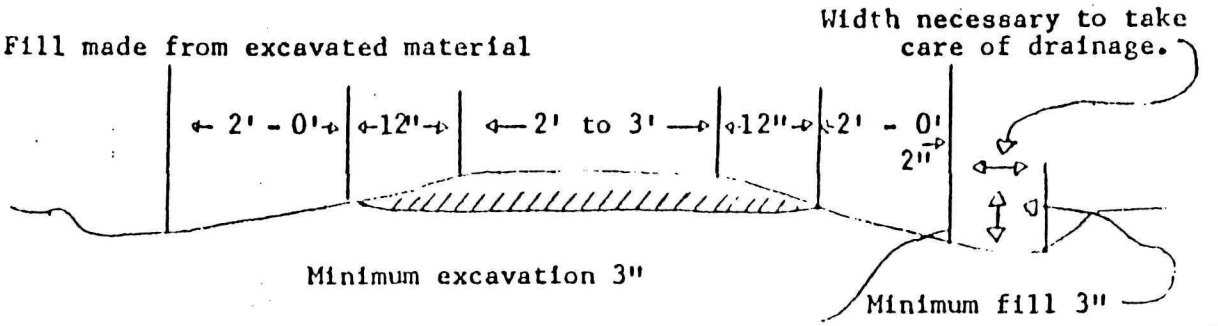


FIGURE II

TRASH REMOVAL

Trash pick up from trails, campsites and stream banks is as much a part of trail maintenance as clearing and rocking. Trail crews shall make a special effort to pick up all trash encountered in their travels. Burn or carry out all debris. No refuse is to be buried in the backcountry. Large volumes should be bagged and left where they can be picked up later by packer. Report locations to Foreman.

All pit toilets encountered should be checked, cleaned and repaired, if needed. If the pit is full, report this condition to your Supervisor.

ROCK REMOVAL

All loose rock 8" and larger shall be removed from the treadway and used for the construction of water bars.

DRAINAGE

No factor in trail maintenance or construction is more important than proper drainage. Many sections of good trail are damaged or destroyed by erosion that good drainage could have prevented.

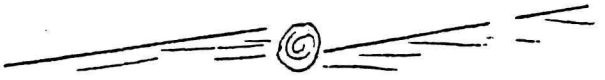
All water bars should be cleaned and repaired as encountered. New water bars should be constructed wherever erosion indicates the need. They may be constructed of rock or log. Large rock is the preferred construction since it is permanent if properly constructed.

Heavy two-man stone well set into the ground with about six inches above ground as shown in Figure IV seems to work best.

Where good stones are not available, carefully constructed peeled log water bars may be used. They should be well set below grade as shown in Figure III.

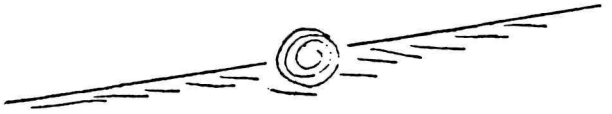
Construct water bars at such an angle across the trail that they will be self-cleaning, not be so flat they will silt up nor so steep they will erode.

Water bars should be constructed at switchbacks so that the water is drained off the end of the switchback and not permitted to drain along the switchback down the trail. In some cases, dips in the trail paved with stone can be used to carry water across the trail.



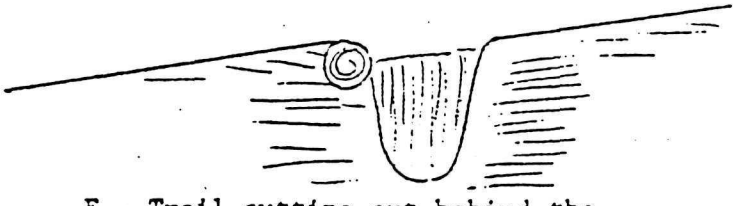
A - Correct

B - Incorrect



C - Incorrect

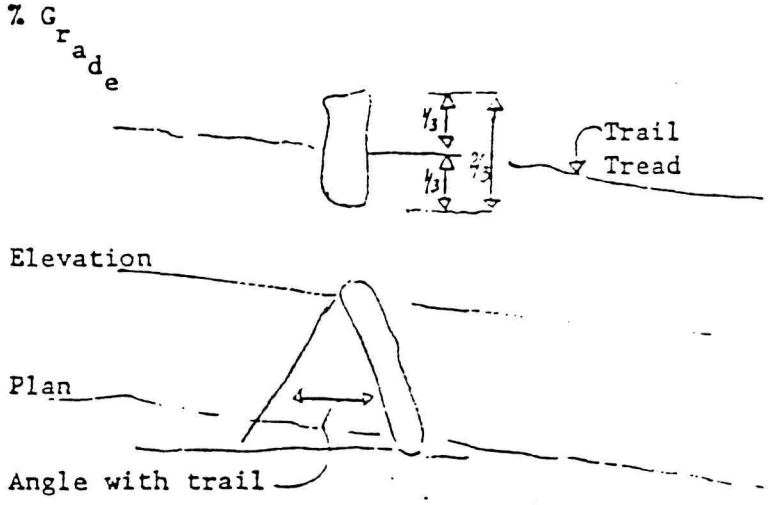
D - Trail silting up above the waterbreak. Pitch too flat.



E - Trail cutting out behind the waterbreak. Pitch too steep.

LOG WATER BAR
FIGURE III

Every suitable depression which is crossed by the grade line should be used to divert water runoff from the trail. When such natural breaks do not occur at satisfactory intervals, artifical water bars must be constructed across the trail.



If possible, water bars should be one piece of stone. Two or more stones should be placed together as tightly as possible.

Percent Grade	Angle with Trail
0% - 10%	30
11% - 15%	35
16% - 20%	40
21% - 25%	45
26% - 30%	50
31% - 35%	55
36% - 40%	60

ROCK WATER BAR
FIGURE IV

ROCK WALLS

Do not build rock walls on earth fill. Trench into sound footing and construct self-supporting wall. Veneer walls will not hold up. Generally speaking, base of wall should be one third of height.

BRIDGES

1. Inspect all bridges as you come to them for rot, broken decking and loose or broken railings.

2. Make minor repairs to decking, railing and abutments as required. Notify your Supervisor of major repairs needed.

3. Foot logs should be checked and, if necessary, replaced. If replacement is needed, take safety precautions and notify your Supervisor.

4. Serious damage to large structures or damage that can not be repaired should be reported/or repaired promptly.

5. Material used in repairing and building bridges should be obtained from locations not visible from bridge or trail.

6. Limbs and brush should be concealed if fire hazard prohibits burning.

7. Dispose of all portions of old bridge so as not to be visible.

8. Keep wood portions out of dirt on rock abutments to prevent rot.

9. Fill material often erodes away from bridge approaches. These should be checked and refilled where necessary.

OBLITERATION

All evidence of abandoned trails, unauthorized campsites and effects of man should be obliterated wherever possible.

Every effort should be made to obliterate sections of trails that have been relocated so as to prevent their further use. Logs, brush and rock are often effective if used in sufficient quantity.

Switchback cutoffs should be obliterated or blocked wherever possible.

- * -

APPENDIX H

GREAT SMOKY MOUNTAINS NATIONAL PARK

TRAIL MAINTENANCE MANUAL

APPENDIX H

_____

Supervisor's Name

_____

Date

This Manual shall be kept on the Employee's person during all working hours.

I N D E X

Page

Section I - General Information

INTRODUCTION

This manual is to serve as a guide for all members of trail crews and others having an interest in trails in Great Smoky Mountains National Park.

There are more than 850 miles of trails in the park and it is your job to maintain and improve them for those who visit these wilderness areas.

Most of the trail work must be accomplished during the summer almost entirely with seasonal personnel, many of whom do not return from year to year. You are on your own more than any other employee.

This booklet is furnished as an outline of some of the more important requirements and functions of trail work. The practices outlined have been developed from experience over the years in this park.

All employees are invited to make recommendations and suggestions regarding new ideas and methods of improvements. What follows will apply to trail construction crews as well as trail maintenance crews.

ORGANIZATION

Trail Maintenance is the responsibility of the Chief of Park Maintenance. Two Facility Managers are in direct charge of all trail work within their Districts of the Park; they are assisted by a Foreman in each District. Individual crew leaders report to the Foreman II assigned to their areas. Crew leaders are key men and should report briefly the extent of work accomplished on each trail and the work that will be needed the following season. He should also report when trails are clear of snow pack and any unusual conditions.

SPECIAL NOTE

COOPERATION WITH PARK RANGERS

Park Rangers are in the backcountry to assist the visitor, fight fire, and enforce regulations. Crew leaders should work closely with them where mutual assistance is needed.

REGULATIONS

While no attempt is made here to repeat all regulations, each employee is expected to familiarize himself with those regulations that may affect him.

STANDARDS OF PERSONAL GROOMING

AND

APPEARANCE

As employees in Great Smoky Mountains National Park, we are official representatives of the National Park Service, Department of the Interior. As such we are expected to maintain certain standards of personal grooming and appearance. Acceptance of a position in the Park means acceptance of the standards as set forth below.

Personal Appearance: Here at Great Smoky Mountains National Park hair, including facial hair, shall be neat, clean and well groomed. Any style which distracts the visitor from the matter at hand must be considered improper. Hair length and styles should not interfere with the proper wearing of the traditional work hat. Appearance should be such that there would be no hesitancy on the part of the public to seek assistance for first aid, emergency rescue, or request for information, and that they readily accept the employee as a person representing the Park. Additionally, appearance must not interfere with our ability to communicate effectively in all our visitor contacts.

Backcountry maintenance employees are often times the only personal contact the visitor has with the National Park Service. Consequently, the

public relations contacts you make can contribute towards the enjoyment of the park visitor.

While you are not empowered to make arrests, you should assist in enforcement of the regulations. If you can prevent a violation by the innocent but uninformed visitor cutting trees for firewood, fishing in closed areas, you should do so without the use of force. Infractions that you do not feel you should handle should be reported to your supervisor or a Ranger as soon as possible. You may be requested to appear as a witness for law enforcement. Your attention is called to the following:

Firearms: All firearms and bows and arrows prohibited.

Wheeled Vehicles: None permitted on Park trails. This includes bicycles, motor scooters, tote gotes, etc.

Fires: Are permissable with written backcountry use permit only (when not with backcountry maintenance crew). Extinguish all fires. Use only dead wood or down timber. Cut no live trees or standing snags.

Right-of-Way: Saddle and pack stock have right-of-way on trails - get completely off trail, on the down hill side, and stand still while stock is passing.

The following activities are strictly prohibited: Picking flowers, cutting live trees or bushes, collecting specimens, plants, animals, rocks or historic objects, and shortcutting on switchbacks.

EXPLOSIVES

To be used only by authorized personnel. All authorized personnel must have permit card in their possession when using explosives. Only authorized personnel will be permitted in the blasting area while explosives are being handled.

MOTORIZED EQUIPMENT

Motorized equipment such as trail buggys, chain saws, rock hammers, etc., will be used only with special written clearance by the Superintendent, except in emergencies.

RADIO

The radio system is used by many people in all divisions for routine operations as well as fires, searches and other emergencies. Familiarize yourselves with the correct operation and standard procedure. Each crew will check in with their respective supervisor or leader at least once a day.

FIRES

Be on lookout for abandoned live fires of hikers and fires from any cause. You may be the first one to detect a fire and your initial action -- or lack of it -- may be the difference between an insignificant brush blaze and a major conflagration. Consider all fires potentially dangerous.

Backcountry maintenance employees are expected to be available for fire suppression at all times.

Report all fires as soon as possible.

* * * * * * * * * *

WORKING HOURS

The working day shall be from 8:00 AM to 4:30 PM unless specific times are otherwise designated; based upon a 40 hour workweek.

TRAVEL TIME

Employees will travel from camp or designated point of assembly to work on government time.

CLOTHING

Each employee is expected to furnish his own clothing and rugged boots, which should be broken in before reporting for work. Employees will not be permitted to enter on duty without adequate footwear. Tennis shoes and street shoes are not adequate. A safety hard hat will be furnished by the Park and its use mandatory.

Seasonal employees with more than four month appointments will receive uniform allowance and be required to wear specified clothing. Those with less than four month appointments do not receive uniform allowance, but are encouraged to wear the same type uniform shirt.

FIRST AID

Each crew is equipped with first aid kits. The crew leader should see that it is complete and available at all times and should be familiar with basic first aid practices.

EMERGENCIES

You might be the first to learn of an injured, sick or lost person. The action that you take may require only a call to Park Headquarters by radio, notifying them of the situation, or it may be necessary to give further assistance. In any event, you are morally obligated to take some action that will help the visitor.

SAFETY

Backcountry maintenance work is generally rough and strenuous. A good safety record depends on the training of the crew and the safety consciousness of each crew member.

All applicable sections of the U.S. Forest Service "Health and Safety Code" must be followed.

The safety of the Park visitor should be utmost in the minds of all crew members. Keep the work area passable and safe at all times.

No member of a crew will be permitted to operate a chain saw and/or handtools until he is qualified to do so.

WILDLIFE

You will be working in bear country; keep your pack and bedding free of food and cooking odors

to avoid attracting bears to your camp. Do not store food in your tent where you sleep. Burn food scraps and pack out all unburnable scraps.

PERFORMANCE RATING

Every employee's performance is rated by his supervisor during his time on the job. He is rated on his willingness to work, ability, cooperation, quality and initiative. He is recommended by his supervisor for "rehire" or "no rehire" for the next season.

* * * * * *

QUARTERS AND MEALS

In the backcountry, you are expected to keep your campsite clean and neat and, when vacating, the site should be thoroughly cleaned of all debris.

Backcountry crews will be furnished with tents, cooking utensils, sleeping bags, which, along with food, will be packed in by the crew.

PER DIEM

All personnel will receive Per Diem while in travel status. A Per Diem rate of $7 per ~~day~~ will be paid if the government does not furnish your food and a Per Diem rate of $3 per day if the government furnishes your food during travel status.

SANITATION

Camps are to bekept clean and sanitary at all times. Pollution of the environment is a primary concern of this Service and the control of same must be reflected in your actions at all times. Soap, detergents, and any other possible pollutants are to be kept out of streams at all times.

USE OF STOCK

All regulations regarding the use of stock and protection of wilderness areas apply to Park Operations as well as others. In fact, we should set the example. Training courses on the care and use of pack animals will be conducted.

APPENDIX I

NPS TRAILS MANAGEMENT HANDBOOK

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NPS TRAILS MANAGEMENT HANDBOOK

United States Department of the Interior
National Park Service
Denver Service Center

CONTENTS

ILLUSTRATIONS

INTRODUCTION

This "Trails Management Handbook" presents guidelines for foot and horse trails. It has been prepared to assist NPS employees in selecting trail locations; in designing trails; in preparing the bases of trails, using various construction techniques; in following sign specifications; in choosing drainage methods; in considering overnight trail facilities; and in maintaining trails. Developing a well-planned trail will enhance and reinforce the visitors' experience.

Trails are not simply avenues for getting from one place to another; they offer visitors to the national parks opportunities to participate in numerous recreational activities. Trail users have special interests that are manifested in their desires to pursue specific trail-related activities. Whether viewing beautiful scenery, testing outdoor skills, escaping the confines of a structured environment, socializing with other users with similar interests, or even becoming better informed, the degree to which these pursuits are satisfied is a measure of the appropriateness of a trail.

Providing quality recreational opportunities while protecting the resource is a major trail management concern and challenge. Mode of travel, trail environment or setting, physical demands on the user, imposed controls, expectations of the user, and volume of use are translated into trail planning objectives and management criteria.

In addition, a trail should be designed and constructed to produce minimum disturbance to the natural environment, to ensure the safety and enjoyment of the users, to protect adjacent resources, to consider the aesthetic quality of an area, and to adequately function for the intended use. Long-term planning is needed to accomplish these goals. Anticipation of a potential environmental impact should be reflected in proper trail planning and development to minimize adverse effects or eliminate them entirely.

The information in this handbook should be used as a guideline. Each park designs its own plan of operation, which includes particular management objectives, imposed controls, construction standards, and cost analysis.

The guidelines are also presented to assist in trail management decisions. A supervisor in charge of a trail project, given the guidelines and the objectives of trail management, will make the appropriate decisions related to the specific trail that is being considered.

The topics discussed are in the normal sequence in which trail development occurs. Employees are encouraged to submit any comments as to the applicability or completeness of the information contained in this handbook. After a field-testing period of at least one year, the handbook will be reevaluated for accuracy and content. Comments should be sent to the following address:

Lennon Hooper, Trails Coordinator
National Park Service
P.O. Box 25287
655 Parfet Street
Denver, CO 80225

For definitions of unfamiliar terms, please refer to the glossary in the back of the handbook.

SAFETY MESSAGE

The NPS "Safety Management Handbook," Occupational Safety and Health Administration regulations, and other federal agency safety standards should be used for safety guidelines in trail work. New employees will be given safety instructions and be trained or tested to ensure that they are physically able to competently use all of the tools on the job.

Trail crews frequently work in isolated areas where medical facilities are not readily available, and transportation of an injured person is often difficult and dangerous. Good safety practices demand that each crew member keep in good physical condition and maintain a high level of safety consciousness at all times, in camp as well as on the job. One member of the crew should be assigned the responsibility for safety. In addition, every employee must be his or her own safety inspector on the job, work in a safe manner, and point out unsafe practices to other crew members.

THINK SAFETY

LOCATION GUIDELINES

The specific objectives of trail location are to design a trail that produces a minimum impact on the land, to choose a corridor that is visually pleasing, to take advantage of natural terrain and vegetation, and to provide a trail that requires minimum maintenance.

In addition to a knowledge of the location objectives, a trail locator should envision the completed trail while proceeding along a selected corridor. A mental perspective is gained through experience in laying out trails, in supervising or observing construction, and in critiquing the final product against the location criteria. A well-located and well-designed trail should reflect the mood and atmosphere of the area it traverses.

A trail locator should also be aware of the terrain, vegetation, soil types, weather (wind, rain, snow), drainage patterns, and cultural resources along and adjacent to a trail corridor. All of these factors and many more directly influence where the trail should be located and subsequently how well the trail will function.

GENERAL CRITERIA

The following general guidelines are to assist in selecting a trail location:

Existing trails should be integrated with new construction as much as possible providing old trails were properly laid out and have good drainage.

Terrain and elevation changes should not be extreme.

The route should be planned for minimum maintenance while providing maximum ecological variety (i.e., use forest edges bordering meadows, rather than crossing meadows, when possible).

Location should be suitable for both winter and summer activities to the degree that visitor or management needs, terrain, and climatic patterns will allow.

Access points to trailheads should be provided as feasible.

Exposure on high elevation ridges may be necessary and scenic but not mile after mile.

For interpretative purposes, the trail should meander to take advantage of scenic panoramas and historic, cultural, and natural resources.

Main trail networks should be located to disperse visitors away from fragile or heavily used areas.

Aerial photography should be used to locate features of scenic, scientific, and recreational values. An aerial flight over a proposed trail corridor would also be helpful.

SPECIFIC CRITERIA

The following specific guidelines must also be considered when selecting a trail location:

Wildlife

Areas of critical or sensitive habitat should be avoided.

Trails should skirt areas where big-game species concentrate; however, trails should contain vistas, observation points, or overlooks for observing wildlife at a distance.

A trail should avoid areas where potentially serious impacts on plants or animals may occur.

Soils

Trails should be located on stable soils except where short sections, up to 50 yards, could be structurally contained and/or a relocation could create more conflict in construction and maintenance.

A trail should be routed around extended bedrock areas except where grade or possible scenic features make a crossing desirable.

Soil maps should be developed and used to locate unstable soil areas and to identify feasible areas for trail location and construction.

Some soils are not suitable for trail tread, and alternative material must be provided.

Road and River Crossings

Special attention should be given to the problems that traffic and traffic-related noise could create for hikers and horse riders.

When roads are crossed at grade, adequate sign marking and visibility must be provided.

Scenery and Drinking Water

A trail should be located to overlook streams and lakes but not be directly adjacent to the water's edge.

Meander trails should provide water access points for visitors, as well as for pack and saddle stock. Water should be available every one to four hours of travel.

Safety Hazards

Talus slopes or rockslide areas should be avoided.

Avalanche zones should also be avoided.

Abrupt or unexposed cliffs should be avoided.

Areas with concentrated numbers of snags should be avoided if possible. If not, plan during construction to remove snags that are adjacent to the trail.

A trail should, if possible, avoid areas of erosion, snowbank, bogging, or icy surface potential.

Severe high wind corridors and lightning prone areas should be avoided.

Natural shelters along a trail should be used.

Bridge crossings should be avoided if a relocation of a trail could make the structure unnecessary.

Natural or existing features should be used to allow visitors an easy and quick crossing without breaking the continuity of a trail.

Trail crossings over or under roads, aqueducts, underpasses, bridges, and power transmission lines should be made at right angles to minimize cost if a structural installation is necessary and to avoid prolonged visual contact with those features.

A trail should enter and leave water on a descending and ascending grade parallel to the shoreline to prevent water from draining down the trail.

Stream fords should be over cobblestone-sized (or smaller) rocks. Any abundance of 10-inch diameter (or larger) rocks that make horse crossings dangerous should be removed or avoided.

Provisions for User Facilities

Accesses at varying distances along the trail should be provided. The locations must be well thought-out so that users can choose trips of various lengths.

Areas where stock could be stabled, corralled, or tethered should be located away from and downwind from campsites, but within sight of the stockman's campsite.

Existing nearby parking areas, campgrounds, stock handling areas, or other trailhead facilities should be used where possible.

Hitching rails should be located near trails so riders can secure their horses at rest stops and scenic areas.

Spur accesses should be provided to campsites rather than locating a main trail through a campground.

Shelters and comfort stations should be provided where needed according to each park's general management plan and development concept plan.

Alignment

The ideal alignment should offer visitors the best views from the trail.

The alignment should follow the contours of the land and be generally curved. Sharp angular turns over 50 degrees and long straight stretches should be avoided.

Hillside alignments should, wherever possible, angle across the natural slope and take advantage of natural drainage to minimize the need for major drainage modifications. Proper drainage is a long-term investment, which pays off in reduced future trail maintenance.

The most desirable alignment for a switchback uses a topographic feature as a turning point to prevent cutting across the natural terrain. Provisions for screening and protecting the switchbacks with trees or brush should be incorporated into the design when the trail cannot be constructed around a natural topographic feature.

A trail should not appear to be carved out of a hillside.

Grade

A clinometer or Abney level should be used to determine grades. (Do not set by guesswork.)

Trail grades should be contoured to avoid steep topography where possible.

As a general rule, a grade should not be steeper than 10 percent (10-foot rise in 100 linear feet). Grades of less than 7 percent are ideal.

Generally, steps are recommended for any short stretches where a grade is steeper than 25 percent. (Steps are not recommended on horse trails.)

No grade should be so steep that erosion is a continuous problem.

Trails should not be located at zero grades, if possible, because some grade is desirable to provide for proper drainage.

A grade should undulate gently to provide natural drainage and to eliminate monotonous level stretches and long steep grades that are tiring to trail users.

Grades should be reduced at approaches to switchbacks, and the turns should be as nearly level as practical.

A trail designed especially for hikers could incorporate short sections of steps or steeper grades within the controls indicated if these will not cause undue disturbance and adequate drainage can be provided to prevent erosion.

Major consideration must be given to soil types, climatic conditions, volume and type of use, and location when planning grades to ensure minimum trail erosion.

DESIGN GUIDELINES

The design of trails should be in keeping with the purpose of a trail. In general, a trail should be designed to produce minimum disturbance to the natural environment. A trail design should also consider the safety and enjoyment of the users, the volume and type of traffic, the protection of adjacent resources, and the aesthetic quality of an area. The design should also incorporate features to minimize adverse impacts on the environment, result in a trail of high quality and durability, and require the lowest cost to maintain.

SPECIFIC DESIGN ELEMENTS

Dimensions

Trail dimensions should be based on the type and volume of use anticipated, on the stability of native materials, and on the type of terrain along the route. Generally, a trail tread width should not be less than 18 inches (minimum) for foot trails and 24 inches (minimum) for horse trails. Additional width could be required to reduce impacts from heavy traffic.

The following exceptions to the above trail dimensions should be noted:

Along a precipice, steep hillside, or hazardous area, where possible, a trail base should be at least 36 to 60 inches wide to allow trail users and horsemen to safely use the trail at the same time.

A tread at least 36 inches wide should be used for special trail sections, such as fords through small streams or built-up sections across flat areas.

Switchback landings and graded trails should be designed to minimize the amount of excavation and the amount of bank that has to be cut.

Clearing Requirements

Clearing requirements vary with the intended trail use.

Bushes and trees should be cut flush with the ground, and then exposed stumps should be covered with soil. Trees and stumps should be removed if the tree roots will interfere with grading. Leaning trees that might fall across the trail should be cut.

Clearings at waterholes, resting places, and scenic points should be wide enough to allow stock to pass if riders of a party are dismounted.

Chain saws should not be used to clear limbs because of safety and noise factors and the likelihood of scarring tree trunks. Tree limbs should be cut flush to the tree and then scattered away from the trail. The butt ends of limbs should face away from the trail. Limb stubs should be

painted to hide tree scars if desirable in scenic locations. Every effort should be taken to make the scene look natural, with minimal impact from man.

Trail Structures

Structures should generally be of quality material to permit long life and be designed to harmonize with the surrounding environment.

Minor structures such as corduroy, puncheon (elevated sections), retaining walls, and foot bridges (under 30 feet) could be built of suitable native material if it is available. When native material is used, the site from which it was removed should be left with as natural an appearance as possible.

Bridges located in high volume areas should be solid and have hand railings so constructed that children cannot easily slip through.

Wheelchair accessibility, where provided, requires a smooth transition from the trail surface to the bridge.

In designated wilderness areas, structures should be limited to those necessary for user safety, built from native material when possible, and must conform to the requirements of the Wilderness Act.

If a bridge is not necessary for horses to cross a stream, a large log with a hand railing may be provided for trail users.

The Denver Service Center will provide special designs for crossings of rivers when needed.

Trail Surface

When native soil cannot support the traffic, tread-surfacing material should be used which blends with and preserves the natural environment. This material should also be used to minimize severe conditions of erosion, dust, mud, or loose rock in crossing rockslide areas.

User Facilities

Trailhead loading docks, sanitary facilities, parking areas, and water supplies should be given individual analysis and design. If it is administratively decided to construct such facilities, local trail clubs may be helpful. Also, the Denver Service Center may provide plans and guidance.

Revegetation

During the design process, adequate revegetation should be planned for cut-and-fill slopes, borrow pits, or other areas where surface vegetation

has been removed. Follow-up action should be included to ensure complete revegetation. Seed mixes, volume of application (pounds per acre), and season of application should be keyed to local conditions.

BASE CONSTRUCTION GUIDELINES

The existing ground surface should not be unnecessarily disturbed to obtain a trail base, especially on flat areas. On level ground, the trail base should be formed by building up rather than cutting down. All duff should be removed before making cuts or fills for the tread.

Construction of hillside trails usually requires grading a shelf for the trail, but if the existing surface is flat and provides a suitable tread, it should be left undisturbed. Hillside excavation may not be necessary on slopes less than 10 percent.

On slopes, grading should start at the upper slope stake and continue down to the finished grade. The usual procedure is to scratch a continous line between the upper slope stakes, using a shovel or Pulaski. Excavation should begin along this line. The working surface should be kept level or slightly in-slope until the final grade is reached. On slopes 20 percent or over, the trail base should be constructed totally in native soils. Fills on slopes greater than 20 percent are hard to maintain, and fills on slopes that exceed 40 percent are often unsafe for horse traffic. They tend, when wet, to overload the downslope, leading to soil creep and slump not only in the fill section but also in the underlying slope, and to extensive shear-cracking in the tread. (Some park specifications require full-bench construction on sideslopes of over 20 percent.)

A soil berm along the outside of a trail should only be used when the trail fill consists of loose, disintegrated granite or other unstable material that may erode easily. The use of a soil berm is related to special handling of surface runoff drainage (see Berm Surface illustration). In areas with annual precipitation of 80 inches or more, or heavy spring runoff, berms are not recommended. In areas of this type that have heavy annual precipitation, the outer edge of the trail should be at least 2 inches lower than the inside.

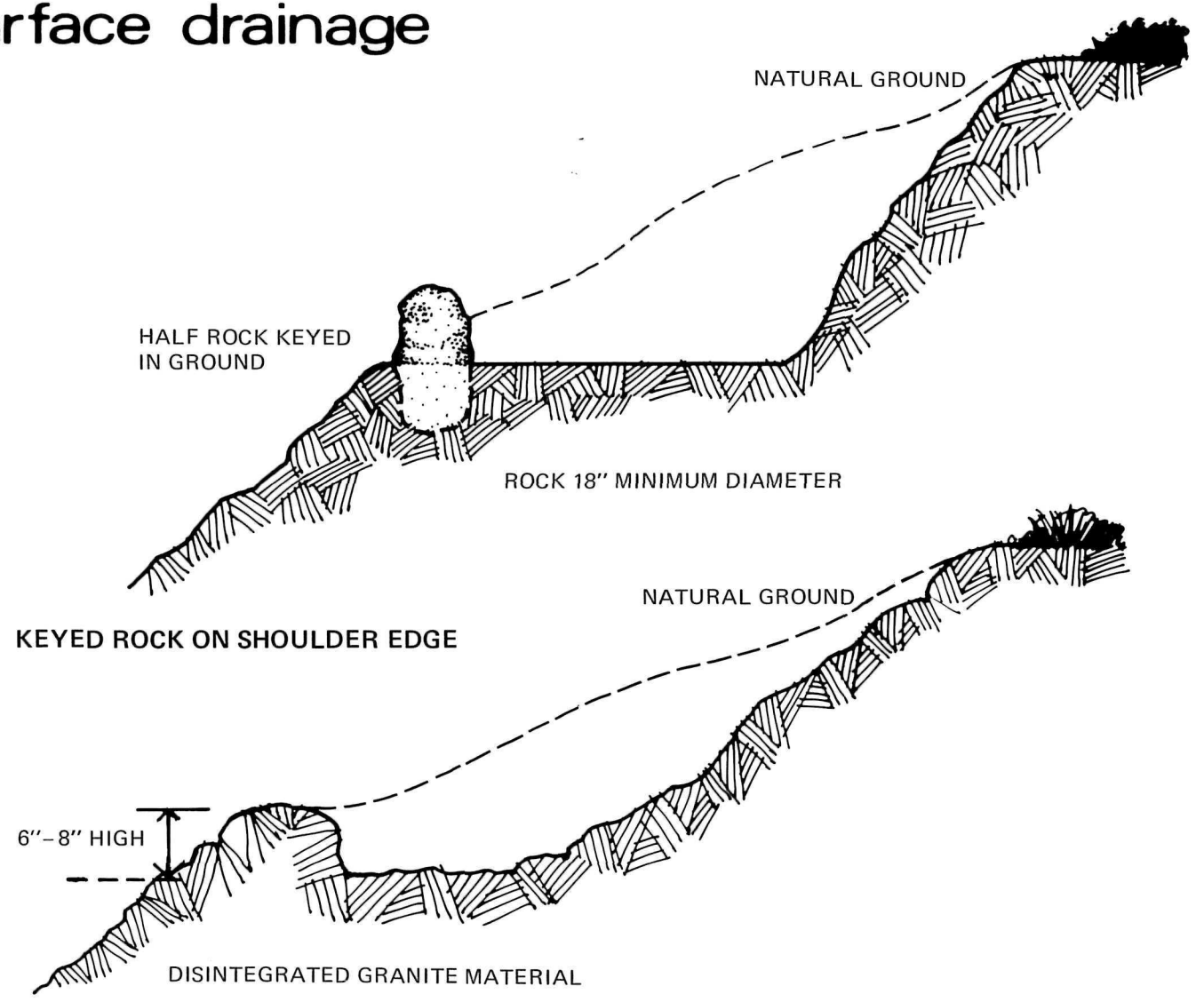
A rock berm should be used for safety purposes on horse trails where the sideslope is 80 percent or greater to keep the horse from walking on the outer edge. The trail base should also be widened to provide an adequate tread area. If soil or rock berms are used, more frequent maintenance is usually required to keep the berm intact.

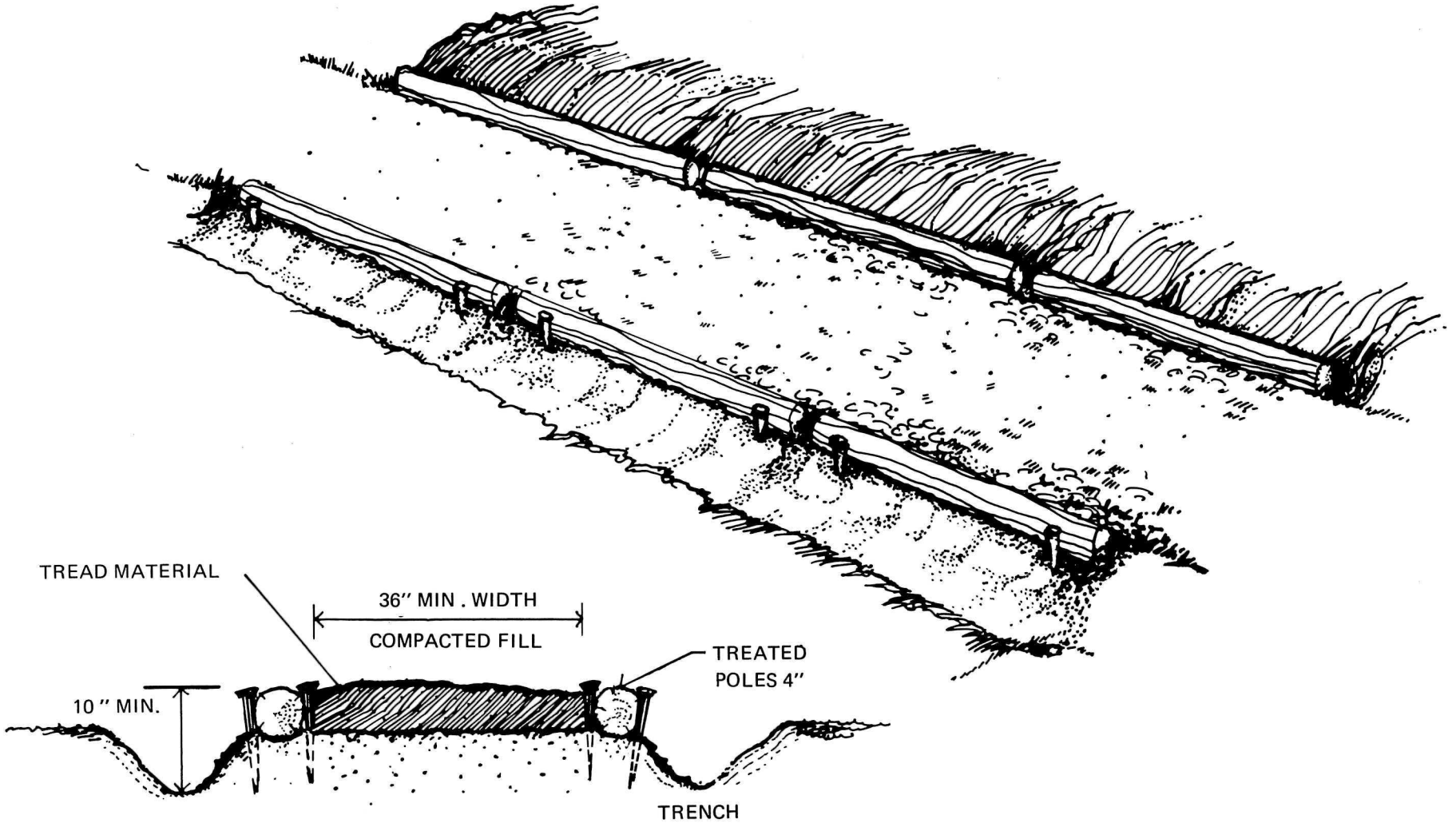
Every effort should be made to locate a trail around problem areas. Constructing a trail in lowland areas normally requires special construction techniques, such as turnpike, puncheon, or corduroy.

TURNPIKE CONSTRUCTION

Turnpiking is a process of using material from parallel side ditches to build up the trail base (see Turnpike Section illustration). This process should be used primarily in flat areas that are wet or become wet during the rainy season. The most important consideration should be to get the water level down below the trail base and carry the water under and away from the trail at frequent intervals. When ditch material is of poor

berm-surface drainage





turnpike section

boggy soil, it may be necessary to import better material from nearby areas to build up the base. Blasting techniques may be used to form these ditches. Only properly trained and certified personnel may be permitted to do the blasting.

Small boggy areas in the trail should be filled with large flat rocks, if practical. This is an effective way to treat these areas, but to give a satisfactory footing the rocks should be covered with gravel or another stable material as a tread.

PUNCHEON CONSTRUCTION

Puncheon construction uses sawed, treated timber or native logs to elevate the trail tread above wet areas that are not feasible to drain or to use a turnpike process (see Built-up Puncheon illustration).

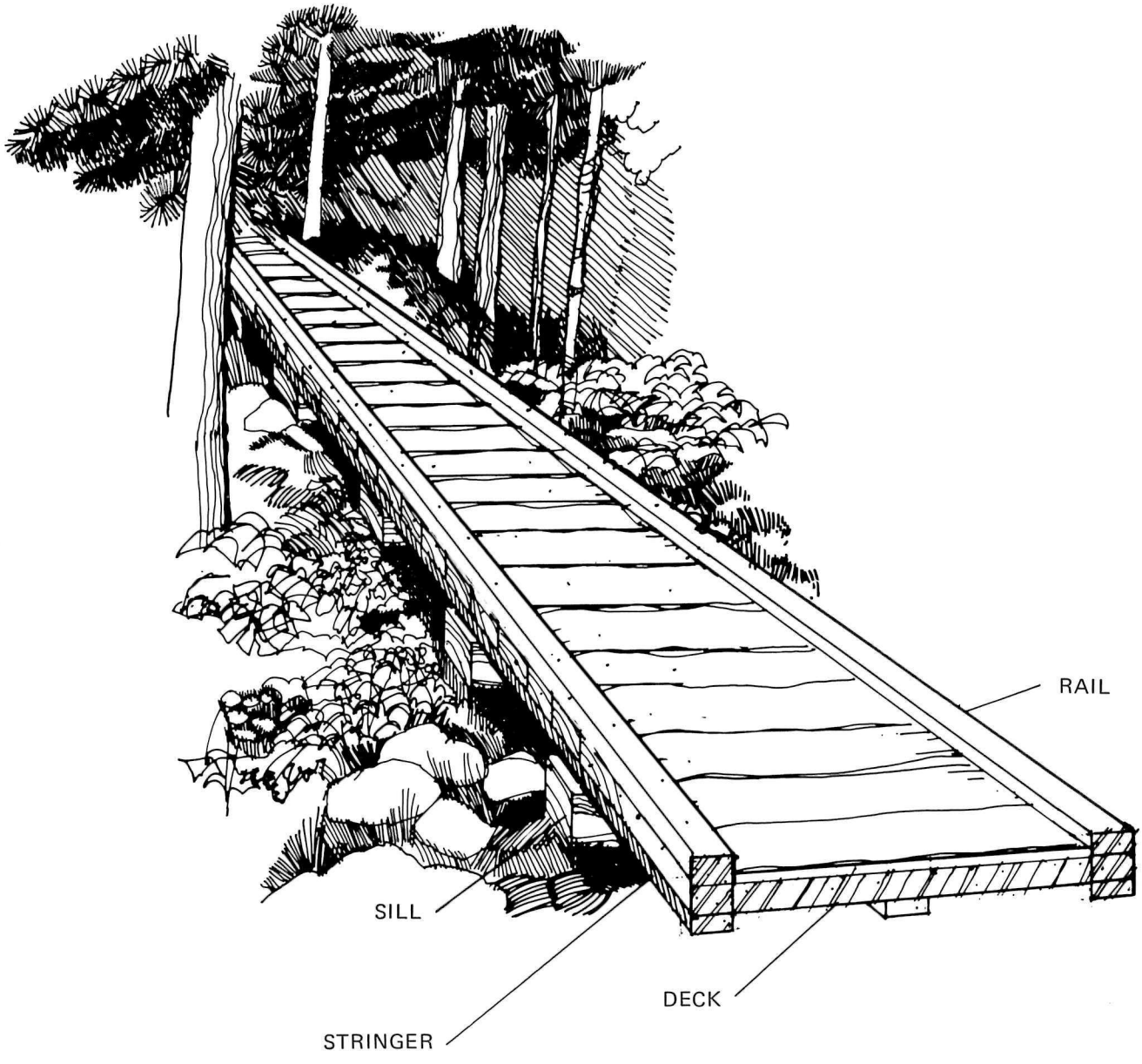
Puncheon consists of a deck, or flooring, approximately 4-feet wide using treated planks or adzed logs laid on stringers. The stringers should be set on mud sills and should generally be placed at each edge of the widened trail at about 3-foot centers. The mud sills should be set at right angles to the trail at 6- to 8-foot intervals. Proper subdrainage should be provided under the stringers and mud sills.

The puncheon should be leveled from side-to-side, and the entire structure should extend far enough so that soft spots or jump-offs do not develop at the ends. Approaches to each end should be installed on a modest grade, not to exceed 5 percent. In backcountry areas, a step up may be used.

The decking should be securely spiked to the stringers, and a binding pole or guard should be spiked along each edge to keep traffic in the center of the puncheon. Where practical to do so in areas with less than 60 inches of rainfall a year, the utility and life of the structure can be increased by covering the deck with a layer of dirt to cushion the traffic and save wear on the deck planks caused by shod horses.

CORDUROY CONSTRUCTION

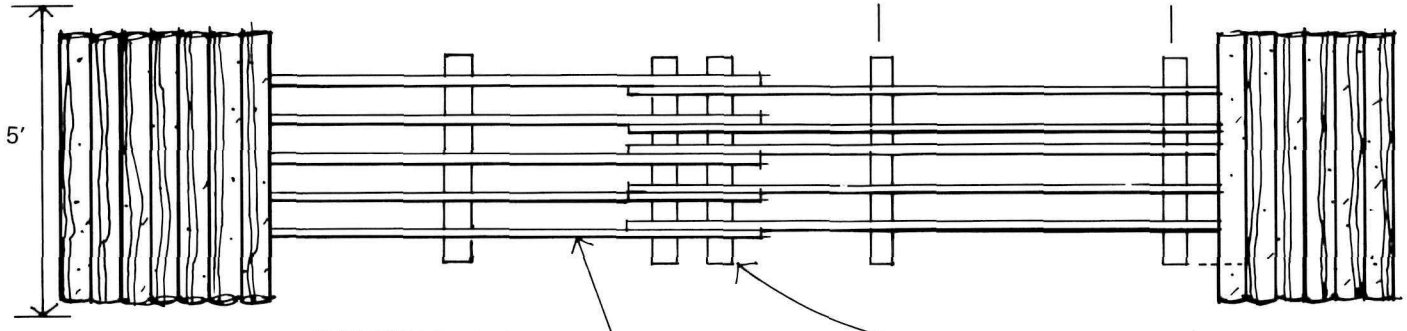
Corduroy construction is basically a primitive type of puncheon. This process consists of laying three native logs (about 6 inches in diameter) on the ground as stringers, with approximately 5-foot cross logs (4- to 6-inch diameter) laid side-by-side across the stringers and bound together with wire or nails (see Corduroy Construction illustration). If native soil is placed over the deck, logs should be lashed along the edges to retain the material. The top of the deck should be flattened for ease of walking if soil is not used. Corduroy, normally short-lived, is considered a temporary measure until a more permanent solution can be installed. This type of construction is found frequently in backcountry areas.



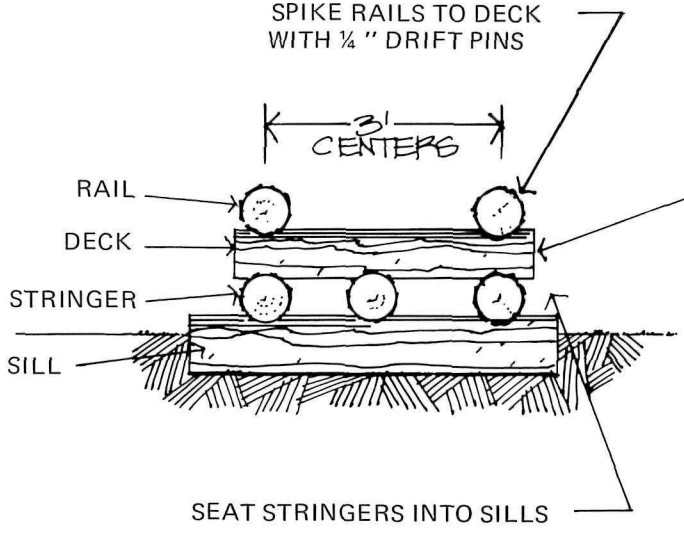
built up puncheon

USING DIMENSION LUMBER

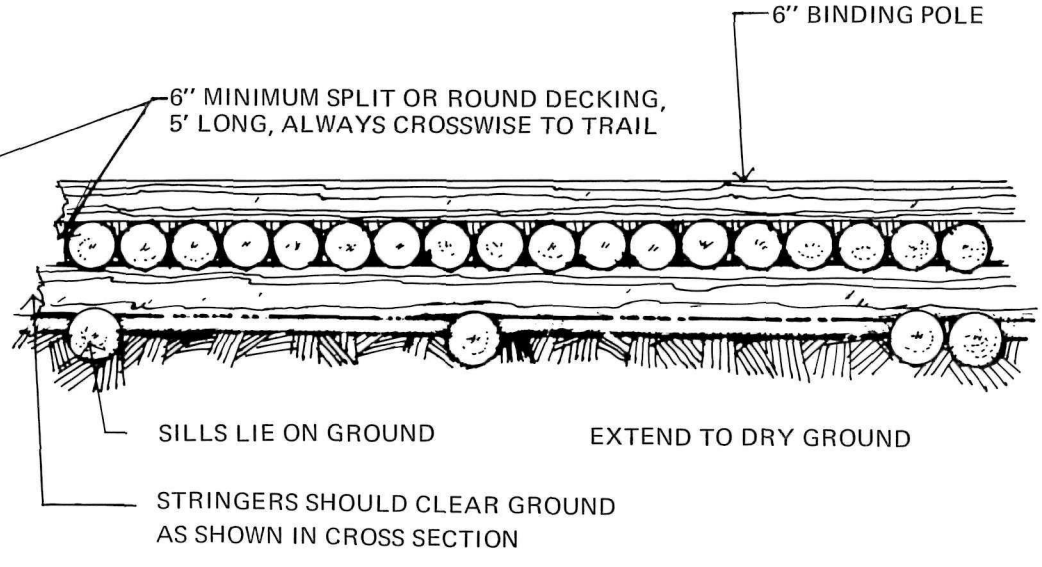
corduroy construction



PLAN



CROSS SECTION



LINEAR SECTION

TREAD CONSTRUCTION

Normally, native soil used to construct a trail base is adequate to handle foot traffic and light horse use. Hauling in tread material is costly and should only be used for extreme needs, such as on heavily used trails, in wet areas, or across rockslide areas, or to provide footing across solid rock areas (see Typical Tread Base Cross Section illustration).

If surfacing is required, native gravel in the area should be used first. If no gravel is available onsite, gravel should be imported from another area. Gravel should be loaded by hand and hauled by duffel carrier, wheelbarrow, or packhorse panniers, when mechanized access is not possible and practical.

The depth-and-width of surfacing should be determined in each case based on the quality of the native material and the use anticipated on a trail. As a general rule, 3 inches of gravel should last three to five years, allowing for 10 to 15 horses per day over the trail.

RETAINING WALLS (CRIBBING)

Retaining walls are structures of wood or stone designed to stabilize a trail base on a sideslope. Sound durable rocks having a good bearing surface are the preferred structural material. Native logs or other untreated timber should be used only if rock is not readily available and only when sideslopes do not exceed 50 percent. A solid foundation on earth or rock is a must to obtain a rigid, safe retaining wall.

The thickness of a rock retaining wall at the base should be at least one-half the height of the wall, or a minimum of 2 feet if the vertical height is less than 5 feet.

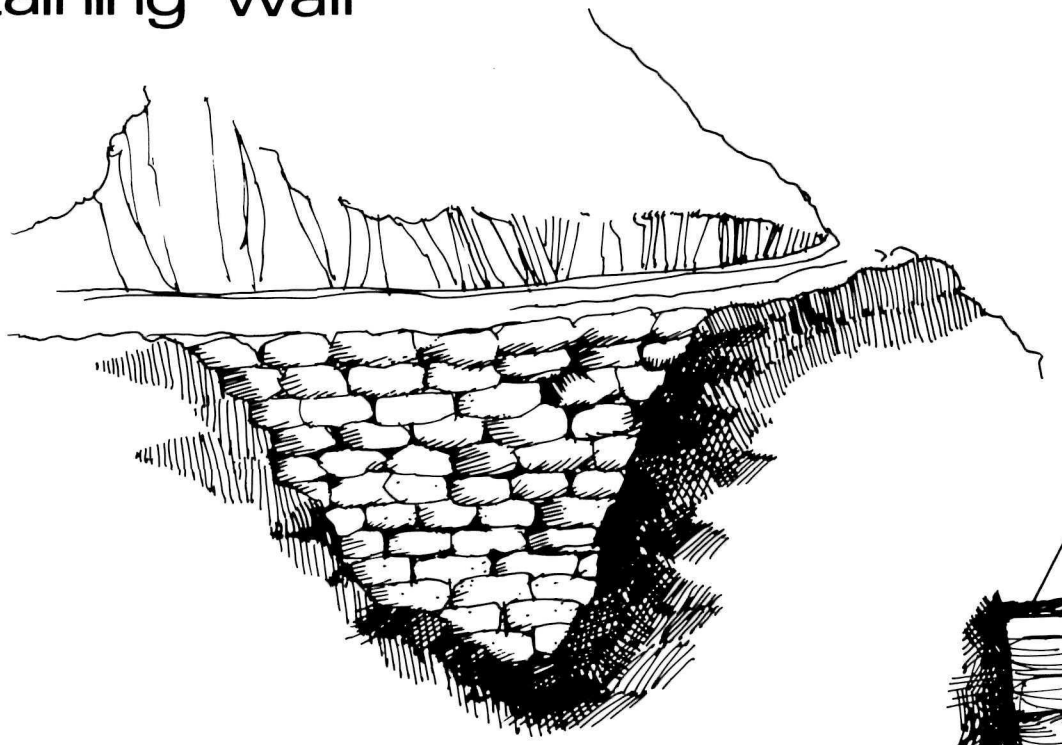
Joints in the walls should always be staggered at least 6 inches or more horizontally. At least one-fourth of the front and rear faces of the wall should be headers having a length of at least two and one-half times their thickness. All headers should be laid with their greatest dimension extending into the wall and never parallel to it except at corners. Here, alternating headers should cross. All projecting points should be removed from the top and the bottom of the main rocks so that each is laid with good bearing on the broadest face. The outer face of the wall should have an inward slope of at least 3 inches to every foot of height. The wall should have a front and rear face well-tied together with header stones of suitable size.

Drainage is required around, beneath, or through the retaining wall so that water will not accumulate behind it.

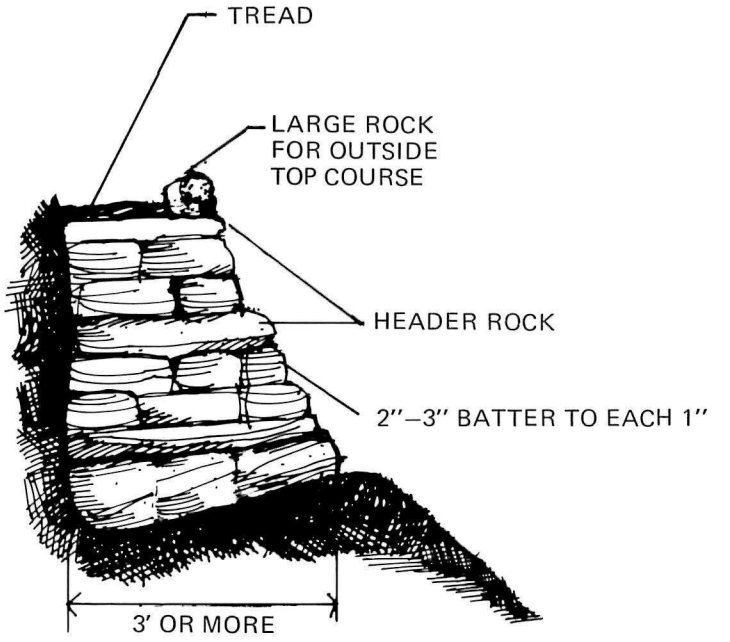
SWITCHBACK CONSTRUCTION

Switchback construction is a method of gaining required elevation in steep country without making the trail too steep or when there is a limited working area. The technique is to reverse trail direction as often as

retaining wall



PREPARE A FOOTING IN SOLID EARTH OR ROCK
USE LARGEST ROCKS ON BOTTOM
FOR HEADERS' USE LARGE LONG ROCKS



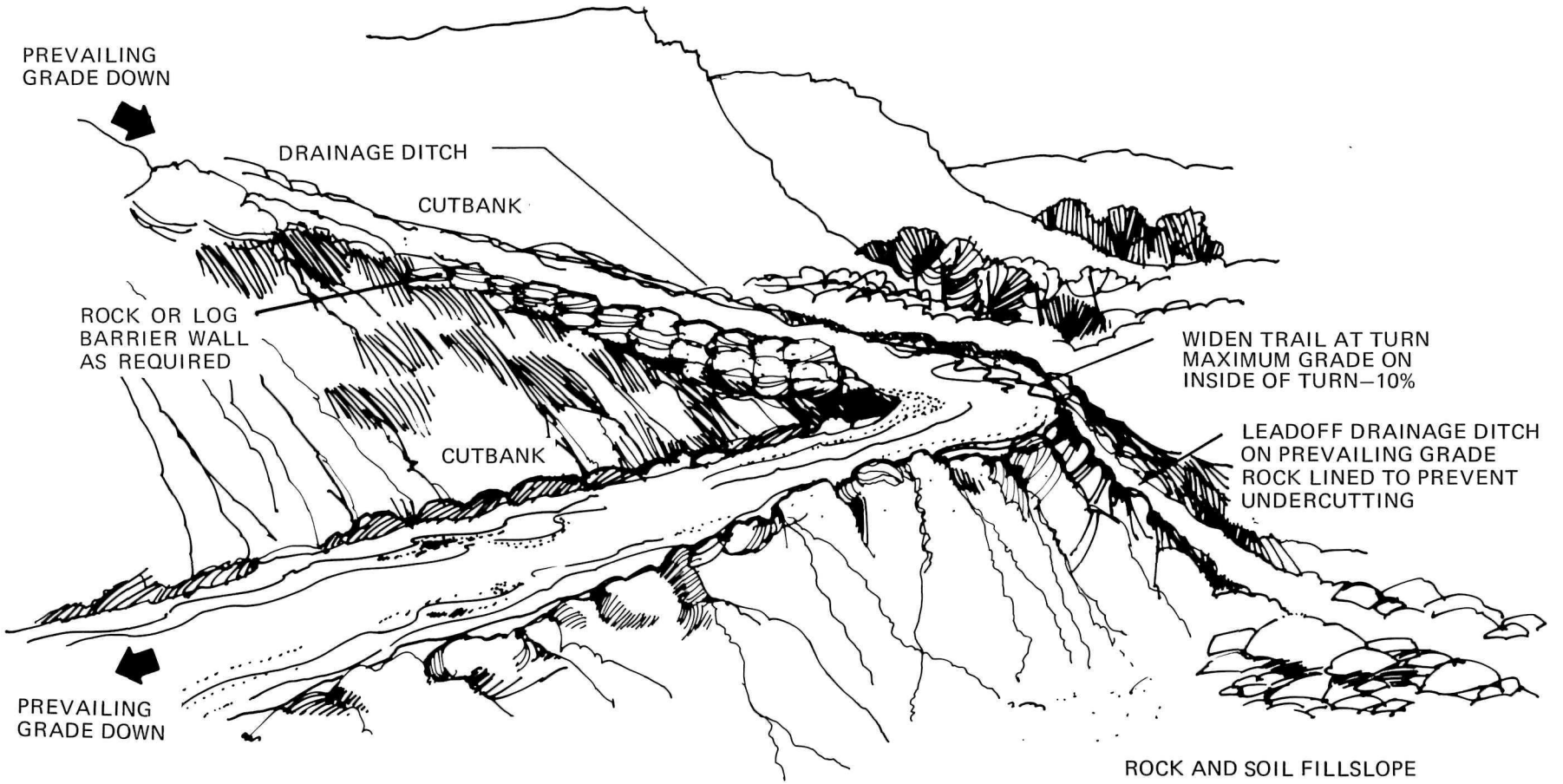
CROSS SECTION

necessary to achieve the required elevation gain (loss) while maintaining grade. Switchbacks also help prevent erosion by reducing the required steepness of the climb and by providing plans for water to leave the trail.

When switchbacks are necessary, the turns should be constructed as flat as possible. On sideslopes of less than 20 percent, the switchback should be treated as any other section of the trail by following a long radius curve. If this results in the centerline grade being steeper than desired, the radius should be shortened, and a conventional 8-foot radius switchback should be built, with the grade of the upper and lower legs meeting at the radius point. Excavation should start along the upper slope stake line of the upper leg and should be carried down to grade at the radius point before starting the lower leg. In order to provide proper drainage, the upper leg should be cut well out beyond the radius point, then shaped, and the turn area completed (see Switchback illustration). When possible the frequency and visibility of turns should be limited to avoid shortcutting. Also, the layout should vary.

Rock or log barriers should be installed between the lower and upper legs of the switchback. Provide 15 to 30 feet of barrier back from the turning point to prevent foot or horse traffic from cross-cutting inside the switchback, creating ruts followed by erosion.

switchback


PREVAILING
GRADE DOWN
DRAINAGE DITCH
CUTBANK
ROCK OR LOG
BARRIER WALL
AS REQUIRED
WIDEN TRAIL AT TURN
MAXIMUM GRADE ON
INSIDE OF TURN–10%
CUTBANK
LEADOFF DRAINAGE DITCH
ON PREVAILING GRADE
ROCK LINED TO PREVENT
UNDERCUTTING
PREVAILING
GRADE DOWN
ROCK AND SOIL FILLSLOPE

SIGNING

Trail signing should meet the objectives of the park's resource management plan. An approved sign plan should be developed to effectively meet those objectives; this may be developed and maintained as part of a trail log and condition survey.

Appropriate symbols for trails in the National Park System should be posted at beginning terminus and, as necessary, at other access points (see Trail Sign illustration). Trails should be adequately marked to warn visitors of safety hazards, to inform visitors of limitations and restrictions, and to guide visitors along the trail.

Signing needs vary according to the type of trail. Users of primitive trails do not want a constant stream of messages, whereas users of highly developed trails desire more information. The use of trail signs or wayside exhibits normally increases with more developed trails, but efforts should be made to use them only when there is a good reason. The sign should be located just far enough off the trail so vandals must step off the trail to push sign over or mark on.

Handmade signs should be prohibited on all trails, although occasional temporary emergency signs to warn of safety hazards could be expected. Nonprofessional signs reduce the aesthetic quality of a park.

Trail signing should conform to the requirements of the NPS "Sign System Specifications" manual.

GENERAL CRITERIA

Signs at trailheads and junctions should identify the trail by name and distance to major points along the trail. If the trail is accessible for wheelchairs, the proper symbol should be incorporated on the sign.

Trailblazes, symbols, and cairns may be used to delineate and define a trail. They can be used to mark trails in both wilderness and nonwilderness areas.

Cairns should be used in alpine areas where vegetation is low to the ground. They should be constructed to resist extreme weather conditions and the pushing and rubbing of animals. They should be built as broad as they are tall, using large rocks, and placed at short regular intervals from 100 to 300 feet apart.

A trailblaze (a standard 4-inch by 5-inch diamond made of wood, metal, or plastic) can be attached to trees or posts using aluminum nails and drive about 1 inch, so as the tree grows it will not push the sign off the first couple of years. A trailblaze should not be used on trails in wilderness areas.

Trailblazes and blazes should be of any color except orange. (Local and state standards should be checked.) Orange is the standard color reserved for snowmobile trails. White is being used for the Appalachian Trail, blue for its connecting trails.

Destination and directional signs should be used on trails to inform visitors of particular features, roads, or spur trails that appear on trail maps.


TRAIL USERS
Permits are required for all backcountry camping.
Firearms,pets, and vehicles are prohibited on trails.

trail sign

DRAINAGE GUIDELINES

No factor in trail construction is more important than proper drainage. Many sections of trail have been damaged or destroyed by erosion that could have been prevented. All drainage should be planned far ahead of construction.

DRAINAGE METHODS

Perhaps the most troublesome drainage problem in trail construction is subsurface water. The best solution for extensive subsurface water on flat ground is to relocate the trail on a hillside, if possible, and bypass the trouble. If this is not practical, the next best solution is to lower the water table and permit the ground above to dry out sufficiently to support the trail loads. As a last resort, puncheon or turnpike construction should be used to raise the trail level.

In some cases, drainage ditches can be dug to divert subsurface water into a stream. Drainage ditches should be designed and built to provide continuous service without unusual maintenance. Perforated culverts, or French drains, should be used when open ditches are not practical.

Surface water will flow along a trail and erode the trail surface if allowed to accumulate above a certain critical combination for soil type, slope, and velocity. Any provision for the discharge of surface water should include precautionary measures to prevent silting, erosion, or gullying of areas off a trail. Rock placement at the discharge point should help dissipate the water and stop erosion.

Surface water can be diverted by outsloping, grade dips, water bars, culverts, ditches, and by varying the trail grade when it is constructed. Approximately ½ to 1 inch per 18 inches of slope across the trail tread is normally sufficient, but this should be based on a specific soil type. The best method to use when dealing with surface water would be to reduce the length of time running water is allowed to stay on the tread by increasing the frequency of structures designed to remove water.

Outsloping

Outsloping is most satisfactory when used in combination with grade dips and should not exceed 1 inch in 18 inches. Outsloping of the tread is probably the best, most commonly used method to divert surface water. This method requires periodic maintenance to prevent the formation of a rut or channel in the trail.

Grade Dips (Coweeta Dips)

Grade dips are sections of trail where a short piece of the trail, generally 5 to 15 feet, has been built with a grade slightly adverse to the prevailing grade of the trail (see Grade Dips illustration).

The trail should be outsloped at a low point in a dip to divert the water from the trail. Grade dips are most satisfactory when they are built as part of the original construction and when the designed grade allows for the adverse grade. They are cost-effective in controlling erosion and reducing the monotony of long-sustained grades. They are far more maintenance-free than water bars. In some cases the upper portion of a grade dip may be too steep for proper maintenance. An alternate method in this case is to build water bars.

Water Bars

Effective water bars minimize the speed, volume, and distance travelled by water down a trail. The actual number and spacing of water bars depends on the steepness of slope, the amount of water entering a trail, the construction of the tread (hillsides or steps), and the availability of places to divert water. Generally, the greater the slope and the more water channeled by a trail, the greater the need for water bars. Placement should be near the top of the slope to catch water before it gains momentum.

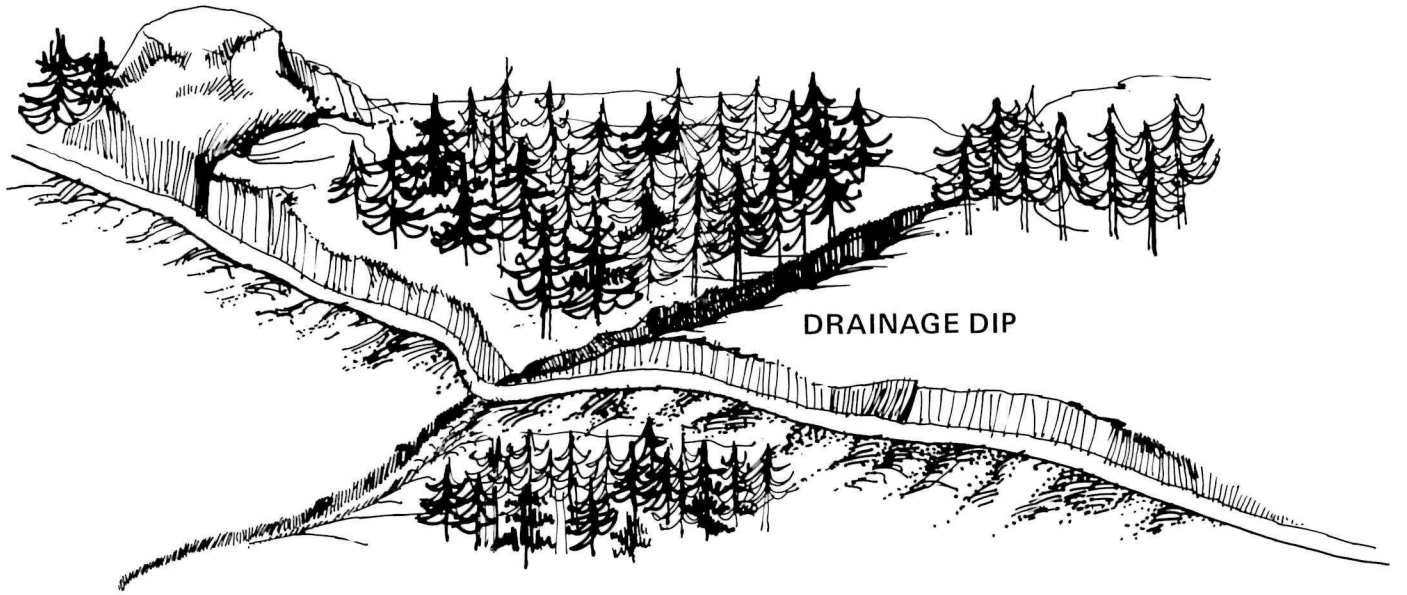
To build either a rock or log water bar, a trench should be dug across the trail at a 30- to 45-degree angle. Bars placed at less than 30 degrees may slow water too much, causing the bar to clog with silt and debris. Bars placed at 30 to 45 degrees or more tend to clean themselves as water flows freely off the trail. Bars placed at more than 45 degrees produce scour erosion along the bar face. The trench should be free of rocks and roots (see Rock Water Bar illustration).

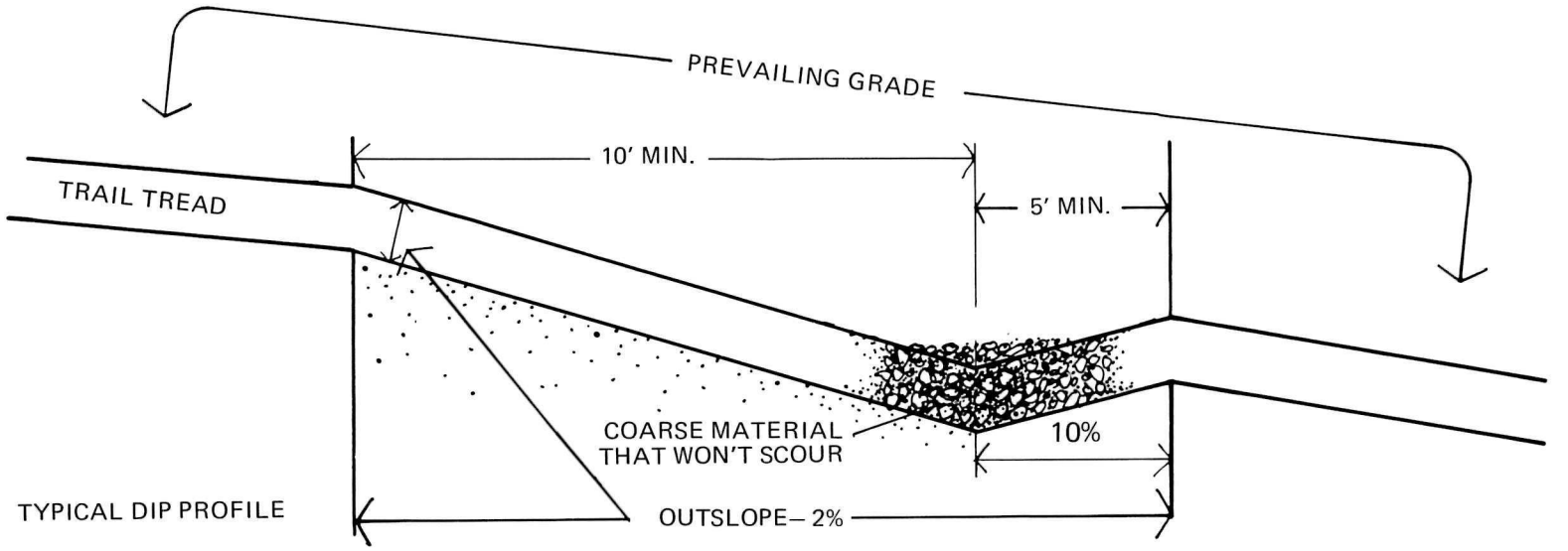
If using wood, a log should be placed in the trench, with over half of its diameter below the tread. The log should be solidly placed, if possible, wedging it between rocks and a ledge. If using stakes, the uphill side of the log should be notched before installation to accept each stake driven. Set into the log in this way, the stakes should not catch debris that could clog the water bar (see Log Water Bar illustration). Water bars are normally found only on general hiking trails.

Culverts

Culverts are primarily used to pass water under and across a trail. Culverts are most effective in natural drains where minimum excavation is required. In flat lowlands requiring turnpike tread sections, culverts act as equalizing channels to reduce the damming effect of the built-up tread.

Culverts may be metal, concrete, wood, rock, plastic, or any other suitable material (see Log Culvert and Rock Culvert illustrations). Culverts should be installed with a gradient of at least 2 percent and properly bedded to ensure continued performance. The exception would be flatland application. A minimum of 6 inches of soil (free of sharp rocks) is recommended for pipe cover. Pipe diameters less than 12 inches may present frequent cleaning problems.



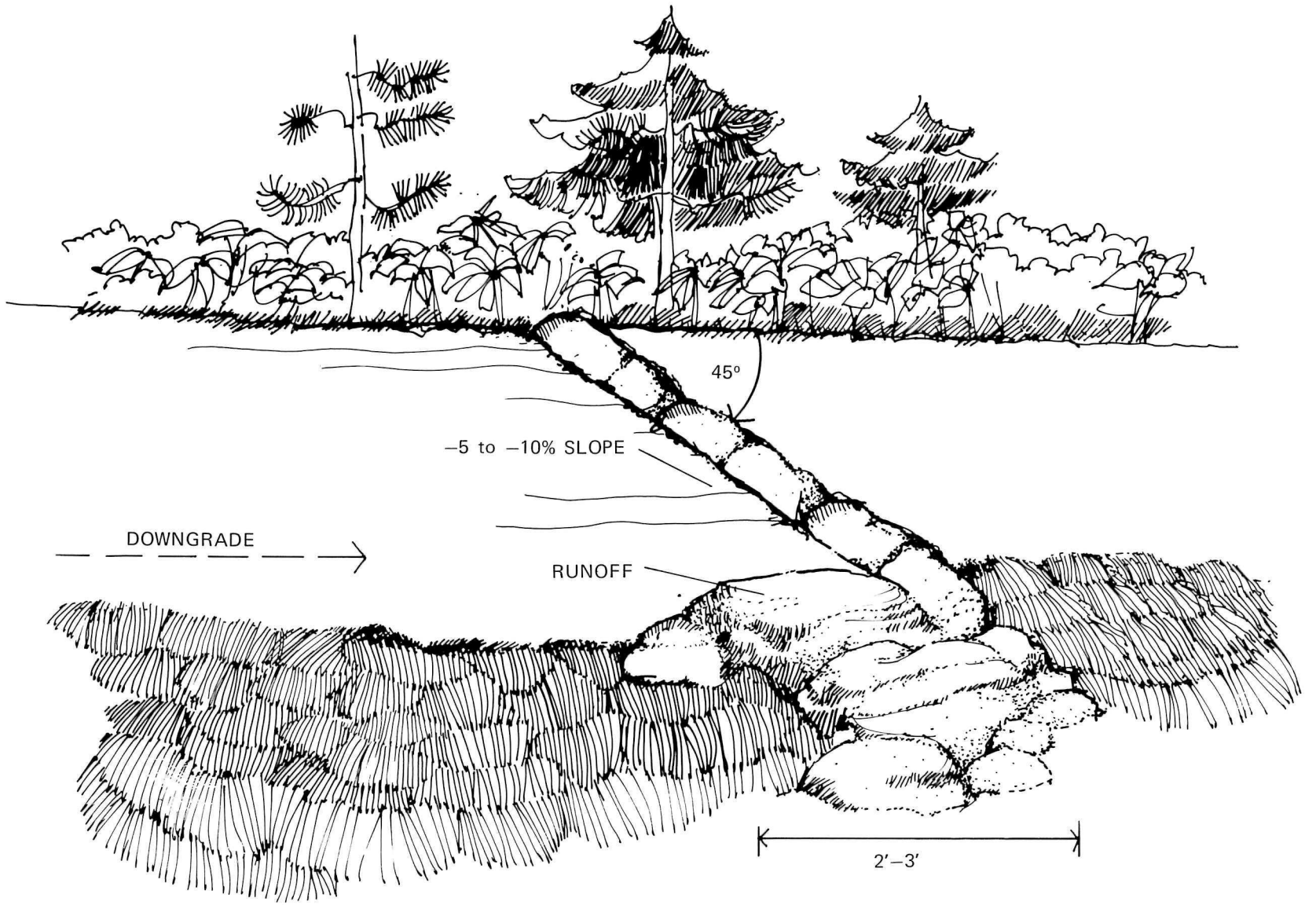


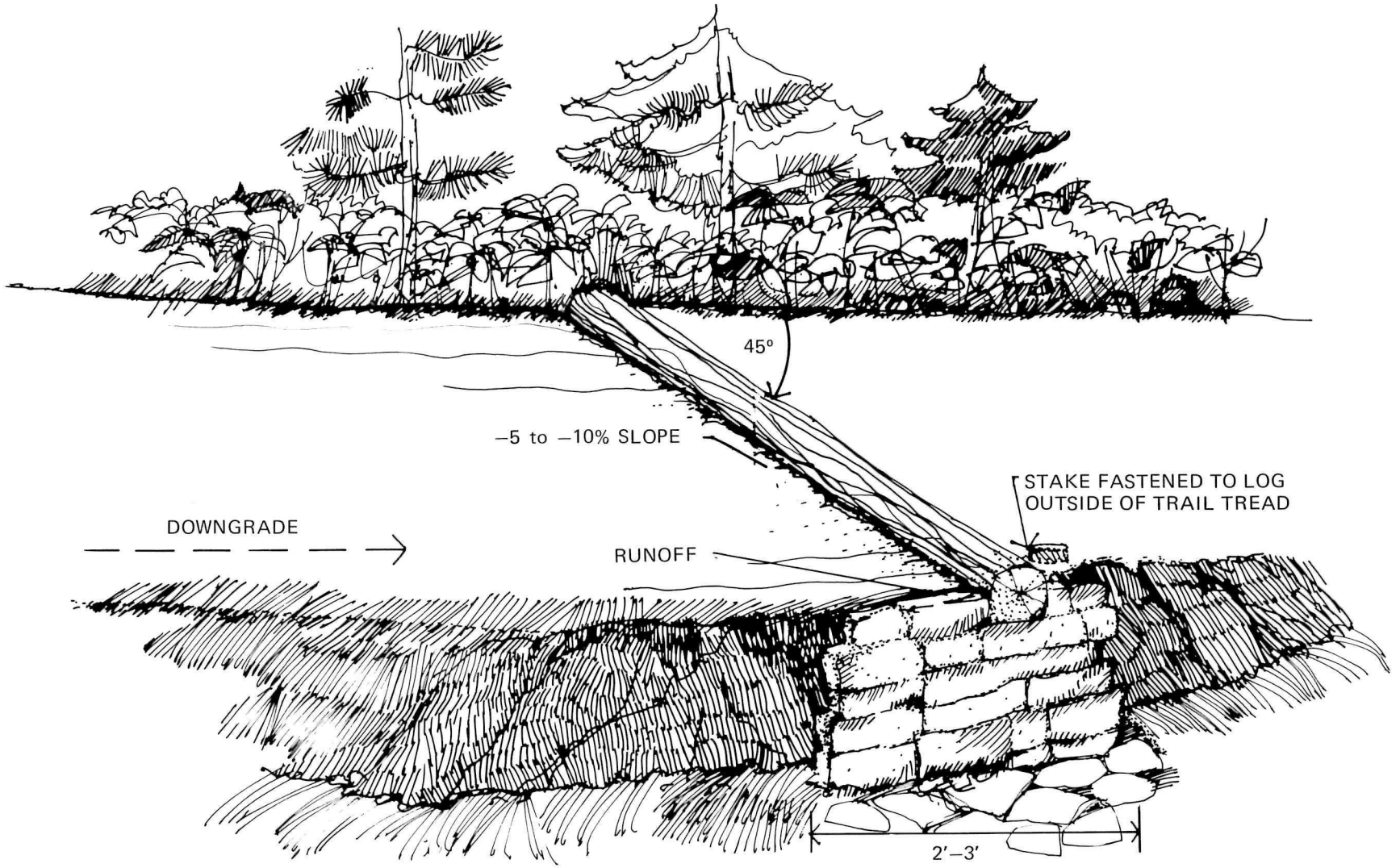
TOP VIEW

grade dips

DRAINAGE DIPS

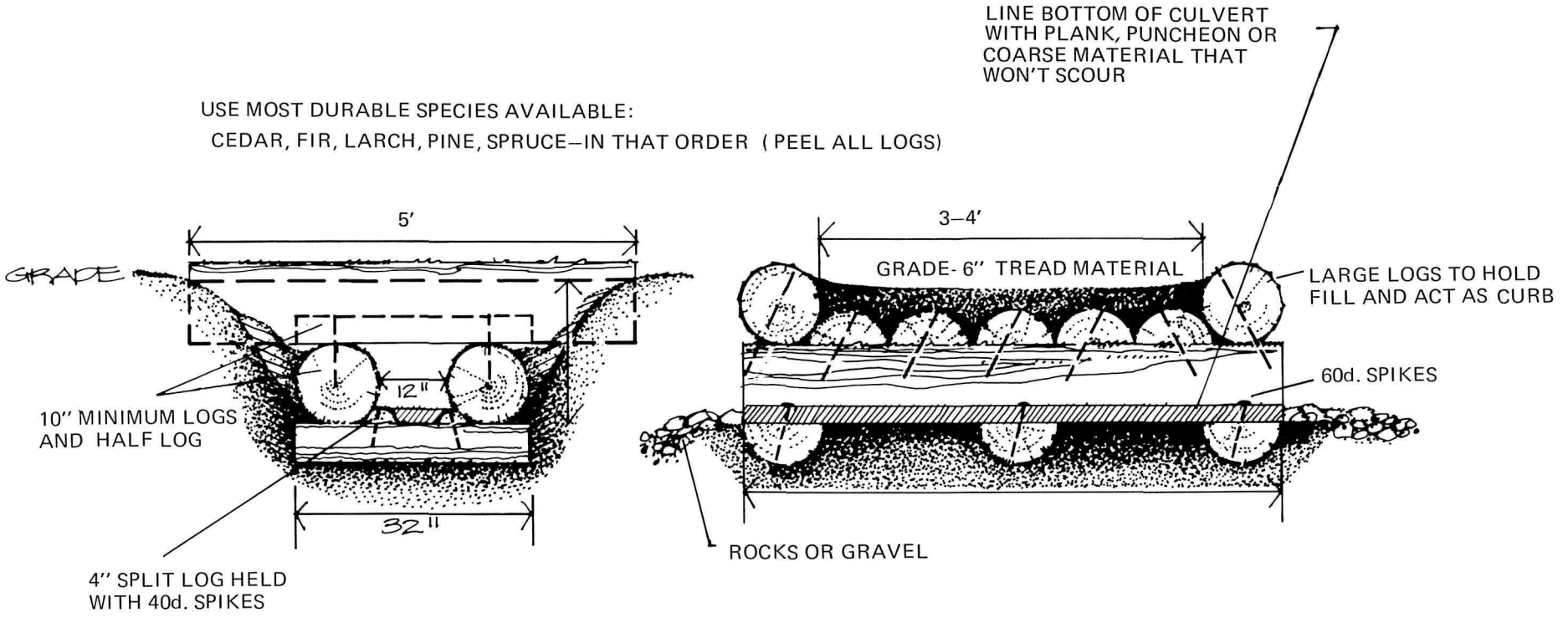
rock water bar





log water bar

log culvert



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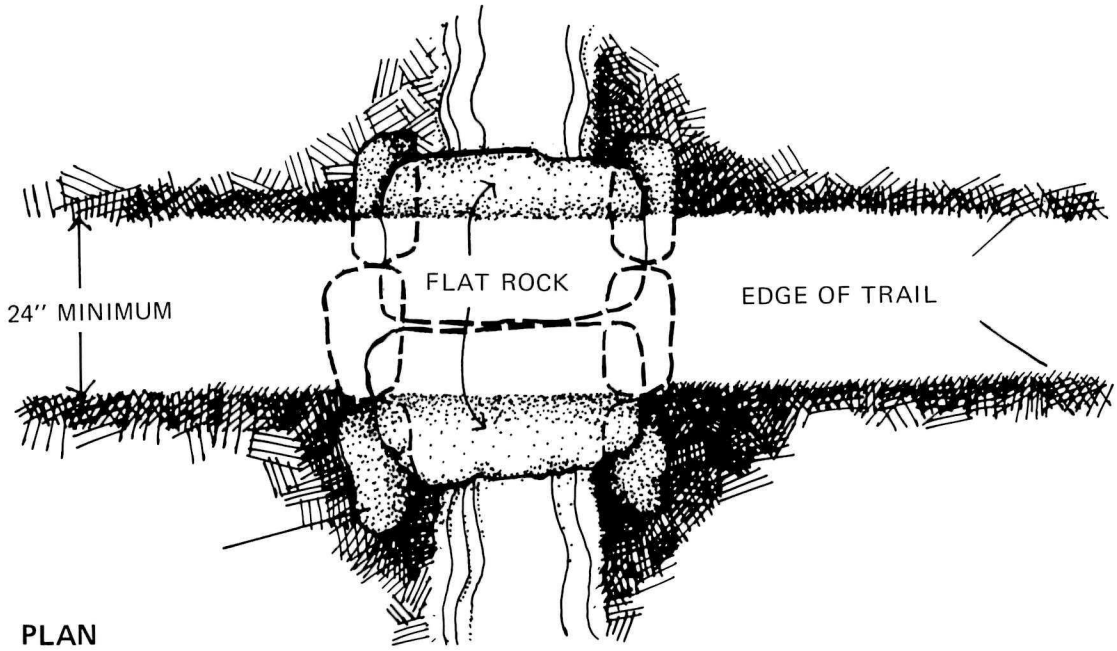
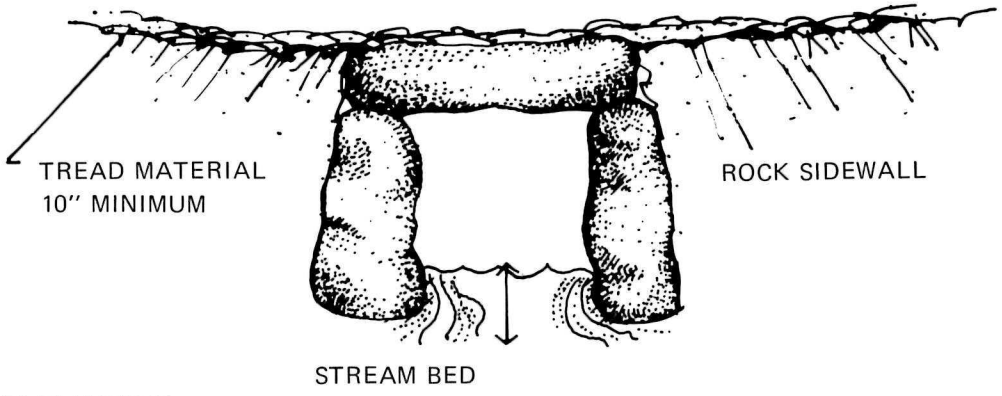
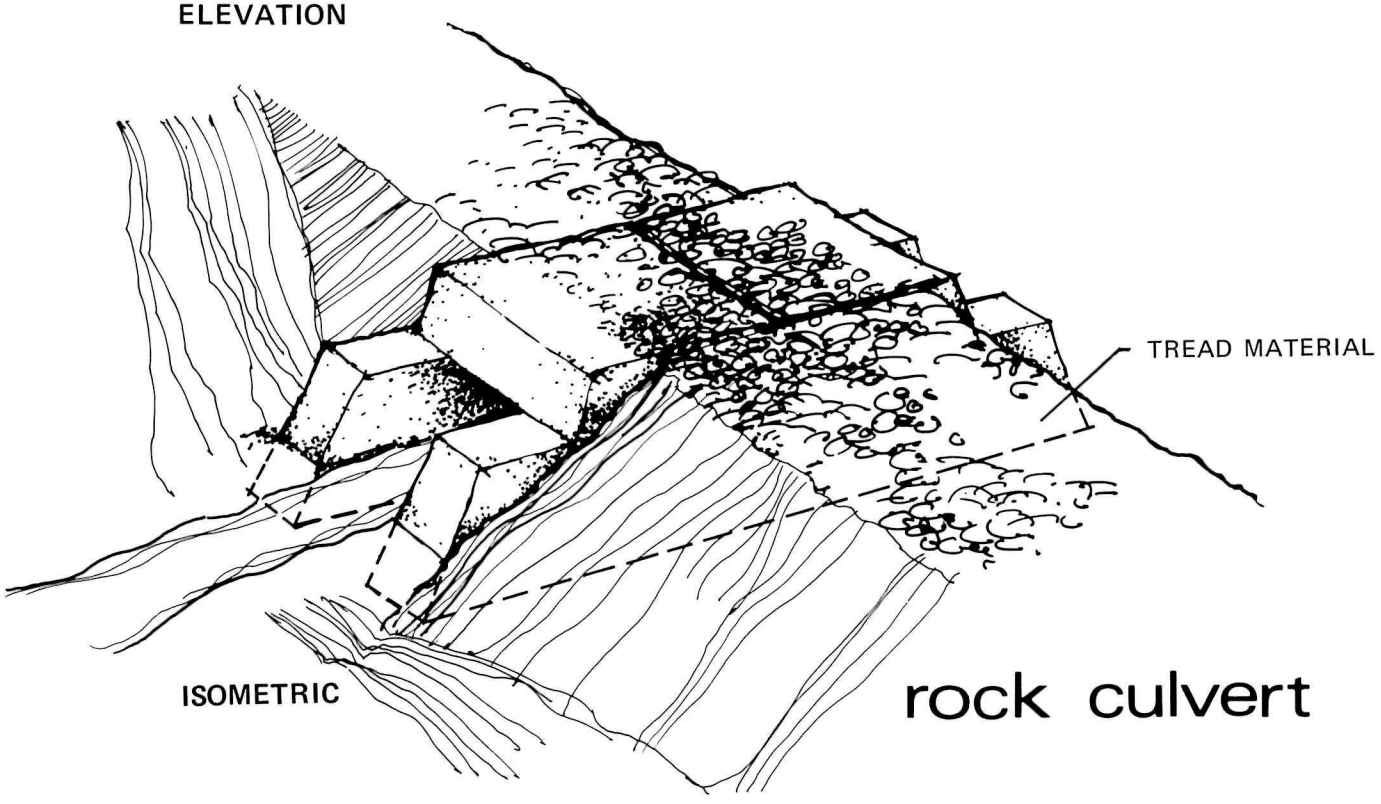


PLAN



ELEVATION



ISOMETRIC

rock culvert

Rock Drains

Rock, or French, drains consist of a systematically placed row of rocks graduated in size (largest on bottom) in a boggy or springlike water source, usually below the surface. This structure, in effect, collects the water in the trail area and transmits it under the trail base, normally permitting a dry trail surface. If an adequate volume and graduated size of rocks is available within a reasonable distance of the planned trail, rock drains are a cheap and effective way to drain small wet areas of a trail. The drain should be on a gradient to be effective (2 percent minimum, more if drained area will permit).

CRITERIA FOR FORDS AND BRIDGES

Fords

Fords normally represent natural sites where convenient crossings may be made. Some improvement of the stream channel may be required to provide good footing. Often fords are necessary in conjunction with a foot bridge for pack and saddlehorse use (see Foot Bridge illustration). Fords should not be located where the water flow is swift or if water depth exceeds 2 feet during the normal season of use. Safety of the user is a major concern in determining whether to use a ford or a bridge.

In fast-moving streams, the tread across a ford can often be improved by moving the larger rocks into a line across the stream parallel with the trail and below the downstream edge of the crossing. This technique allows sand and gravel to deposit above the barrier and develop a smooth level tread. In all streams, larger rocks should be moved out of the way to improve footing for horses.

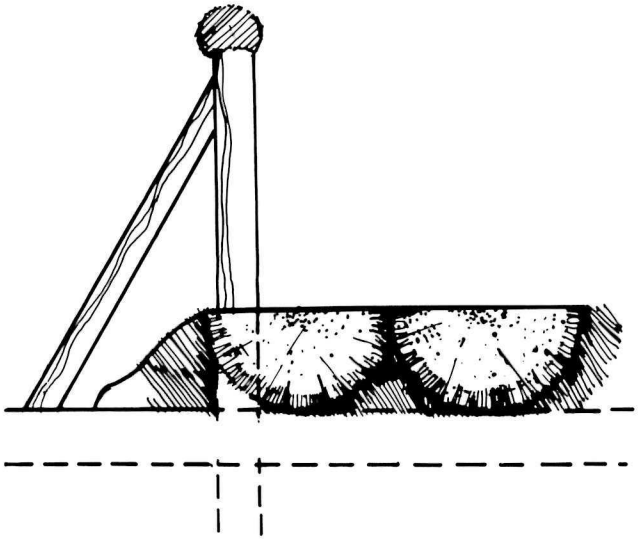
Bridges

Some form of bridge construction is required on most trails to provide safe and convenient passage over and across areas where earthen trail tread construction is impractical. Safety of the user is the prime consideration in any bridge design.

The basic difference between a horse and foot bridge is the load-carrying ability and width of the structure.

In designing a bridge, its height above the stream should be determined by the passage of water, ice, and debris. Only bridges built with an adequate opening to accommodate each year's floodwaters will survive. Occasionally, cribs can be avoided if a high bank, large rock, or ledge happens to be in the correct location. Most sites require two cribs, one on each side of the stream.

The location of the bridge should probably determine the type of material to be used--wood, aluminum, concrete, or steel. In some heavily used areas, a weathering steel (cor-ten) is being used to replace wooden



BED ENDS ON ROCK OR
LOG ABUTMENT

DETAIL

ONE OR TWO LOGS

18″ MINIMUM DIAMETER
20′ MAXIMUM LENGTH

24″ MINIMUM DIAMETER
30′ MAXIMUM LENGTH

footbridge

structures. This type of steel gives a rustic appearance and is virtually maintenance-free and vandal-proof.

In building a wooden bridge, high standard workmanship in the selection, fabrication, and fitting of logs could mean the difference between an unsafe or short-lived and a long-lived bridge. If possible, the logs should be cut a year in advance. In order to reduce cracks or splits, the logs should be seasoned with the bark on them and peeled immediately before use. During the seasoning period, the logs should be set on blocks to keep them from contact with the ground. Adequate equipment should be on hand for moving and handling the logs. No misfit joints or uneven bearing surfaces should be allowed; these factors could detract materially from the life of a bridge.

When repairing or replacing a bridge, the job is not completed until the replaced or unused material is properly disposed of. Left over material at the site can remain an eyesore to backcountry users for years to come. Any replaced or unused material should be hauled to a wooded area and allowed to return to the ecosystem. Material that will not decompose (nails, spikes, wire) should be removed and hauled away.

OVERNIGHT TRAIL FACILITIES

Campsites, huts, or shelters are needed on long-distance trails and should be considered in the trail design. Sites for overnight facilities must be carefully selected to withstand impacts from trail users. Use should be diverted from heavily eroded, delicate, or impacted sites. Visitors should be directed to overnight sites by maps, guidebooks, and signs.

In selecting a site for campsites, shelters, and huts, the following should be considered:

Overnight facilities should be located no more than one day's hike apart and away from major trailheads.

They should be located at least 1 mile from public roads to reduce vandalism and other unauthorized use.

Level ground and soils able to withstand impacts with little erosion potential are the best choice for campsites, shelters, or huts.

Attractive vegetation or topographic features that provide partial shade and shelter from high winds should be considered in site selection.

Overnight facilities should be located at least 200 yards from main trails.

An adequate water supply should be provided if possible. Methods to purify the water should be posted.

Pit toilets should be provided where waste can be handled by aerobic compost methods or by relocating the waste to a nearby site. Toilets should be located at least 100 feet downwind of facilities and 100 feet from any stream.

The carrying capacity of a site should generally be considered. A maximum of ten persons per site is recommended.

Small fireplaces should be provided at frequently used sites.

Facilities should not be located on lake shorelines, or near rock cliffs that present high safety risks or potential damage to the site.

Facilities must not be located in areas subject to unexpected flash flooding, rockfall, lightning, or other environmental hazards.

MAINTENANCE GUIDELINES

Maintenance begins immediately following trail construction and continues until such time as the trail has been obliterated. The objectives of trail maintenance are to provide for user safety, user access, and convenience; to protect adjacent resources; and to preserve trail investment. Based on the objectives, the priorities for performing maintenance work are as follows:

Unsafe conditions should be corrected, or the use that normally would be permitted on a trail must be restricted. Safety conditions are always a first priority.

Resource and trail damage should be prevented.

The intended convenience and comfort of the trail user should be considered.

Determent of maintenance activity to a later fiscal year would allow little resource or trail damage.

MAINTENANCE PROCESS

To ensure that the maintenance objectives are met, a systematic maintenance process should be followed. This process has been developed to provide guidelines for effective maintenance planning, scheduling, performance, and evaluation.

Each area in the National Park System has a trail inventory, which consists of a park trail data inventory and a trail maintenance and development program inventory (see trail inventory in the "Trails and Walks" binder). The trail inventory lists general statistics such as the number of shelters provided, the annual number of trail users, the current budget, the number of campers, and other general information. The trail inventory gives an overview of a park's entire trail system.

Steps in the maintenance process are as follows:

A trail log should be prepared for each trail (or segment) in a park.

Condition/corrective surveys should be performed on each trail (or segment), usually annually, according to the trail's priority.

An annual trail maintenance plan should be prepared, again by priority, using trail needs noted in the condition/corrective surveys.

Continuous updating of the trail inventory is a most important function of this process. Information in the trail log and the surveys can be used for this purpose.

Trail Log

The trail log is a separate inventory system. The log consists of a complete inventory of physical features within or adjacent to a trail (see Trail Log example). Typical inventoried data in a trail log should include such features as the following:

type of terrain	retaining wall	intersection	fence
ground cover	puncheon section	bridge	sign
% of side slope	turnpike section	drainage dip	cairn
trail tread width	rock section	water bar	gate
grade	drainage ditch	culvert	vista
surfacing and depth	stone barrier	stream ford	stile
switchback	barricade	underdrain	shelter
climbing turn	turnout	steps	special features

The trail log is normally prepared only once in the life of a trail; however, changes in trail location, addition or deletion of trail structures, combining with adjacent trails, or abandonment of various sections of a trail would require updating the trail log.

The log should be prepared in sufficient detail to allow for appropriate trail maintenance decisions. Using a measuring wheel (cyclometer), trail features should be located and described to the nearest foot (if needed) in the trail log. Measurements should commence at the beginning terminus of a trail. The trail log should be kept as part of an individual trail file.

An accurate and well-prepared trail log will pay dividends many times the original cost of gathering data. This inventory is imperative to trail maintenance planning. Without the log, an effective or efficient trail maintenance system cannot exist.

In addition to inventorying the physical features of a trail, the maintenance level (1 through 5) and the type of trail being inventoried (major, minor, wilderness) should be determined and recorded as part of the trail log.

Maintenance Levels. The maintenance level assigned to a trail depends on land management objectives, purpose of the trail, volume and type of traffic, existing trail standards, and fund availability. The maintenance level is used to define and predict the type, amount, and frequency of maintenance work required to ensure continued service of the resource to the extent required for the allowed use.

Each trail (or segment) should be assigned one of the following maintenance levels:

> Level 1--Level 1 trails are maintained for high use. These trails are the major trails in a park, usually reaching visitor facilities and other primary points of interest. Traffic is heavy. The tread is

TRAIL LOG AND CONDITION/CORRECTION SURVEY

Park ROMO Trail Name and No. Glacier Creek #25

Dist. F/Range Length 6.5 Mi. Page 1 of 5

Maint. Level: 3 Type of Trail: B

Logged by: A. Hagood | Surveyed by: P. Swaringen

Date: 8/13/82 | Date 10/18/82

Sta.	Feature	Condition/Correction	M.H./Equip.
0.00	Trailhead sign: Distance to overlook	Sign needs painting	
0.76	Water bar	Replace log	
1.67	Rock wall	Rebuild top Large rock available	Jackhammer
3.41	12" CMP culvert	Clean inlet & outlet	
4.68	Drainage dip	Clean before season	

maintained at the highest standards. This level also includes bicycle and handicapped trails. Level 1 trails require maximum maintenance.

Level 2--These trails are maintained for concentrated use, at relatively high standards. Traffic is medium to heavy. The tread is maintained at a high standard for convenience and comfort. Level 2 trails require high maintenance.

Level 3--Level 3 trails are maintained for intermediate use. Traffic is medium. Tread is maintained for user convenience. These trails are designed for any permitted mode of travel. Level 3 trails require a medium amount of maintenance.

Level 4--These trails are maintained for semiprimitive use. Traffic is low to medium. The tread is often not smooth, having a dirt and rock surface. Level 4 trails are maintained for either pedestrian or horse use. Less maintenance is required for level 4 trails than the preceeding levels.

Level 5--Level 5 trails are maintained for primitive use. Traffic is low. These foot trails require custodial care. Minimal maintenance is required.

Types of Trails. Each trail (or segment) should also be designated according to the following types:

Type A - Major Trails--Major trails are marked routes that are improved and maintained for foot and horseback traffic. A major trail in a park usually reaches many of the main visitor attractions and serves as a terminus for minor or wilderness trails. These highly developed trails contain the necessary bridges, corduroy elements, drainages, and shelters where needed. Minimum tread width is usually 24 inches, and overall grade is less than 10 percent. For grade distances less than 150 feet, grade should not exceed 15 percent. Type A trails are to have first priority for maintenance.

Type B - Minor Trails--Minor trails are also marked, improved, and maintained to accommodate foot and horseback traffic but contain an overall lower construction standard than type A trails. These trails serve special scenic areas, fishing areas, and access points. The tread does not have to meet the maximum standard and may be limited to the space required to form a single-file trail except on grades where the maximum is justified. The overall grade is less than 15 percent. For distances less than 150 feet, grade should not exceed 18 percent.

Type C - Wilderness Trails--Wilderness trails are marked but are generally unimproved except for clearing and some work on dangerous areas. These trails are normally used by experienced wilderness trail users, for access to backcountry campsites and cross-country areas, for certain routes for mountain climbers, and for fire suppression and administrative purposes. Minimum tread width is 18 inches, with an overall grade less than 15 percent. For

distances less than 150 feet, grade should not exceed 20 percent. Type C trails have the lowest maintenance priority except where safety is concerned.

Type D - Walks--Walks include sidewalks, boardwalks, gravel, oyster shell, marl, and bituminous trails that interconnect developed areas, or serve as short scenic walks, and interpretive trails. These walks are normally for foot and wheelchair travel and are usually built to high standards. Walks are not further discussed in this handbook (see "Special Trails Handbook").

Type E - Other--Other trails include snowmobile, water, ski (cross-country), bicycle, motorbike, and underground (cave) trails. These trails are not further discussed in this handbook (see "Special Trails Handbook").

After the physical features of a trail have been inventoried and a maintenance level and the type of trail have been designated, the condition/corrective surveys should be prepared. These surveys are vital to the maintenance process. Without them, trail maintenance decisions would be based on assumed data and guesswork.

Condition/Corrective Surveys

The trail log should be used as a working tool for the condition survey. Often the initial condition survey is performed at the same time the log is prepared. A condition survey identifies. and documents the physical conditions of a trail including all structures and facilities and lists the deficiencies that will require maintenance efforts (see Trail Log and Condition Survey example).

Trails in a heavy use category require condition surveys annually or more often, whereas those that receive less use may only require infrequent inspections. When identifying trail deficiencies, the maintenance objectives, maintenance levels, and operational status should be considered.

Generally performed at the same time as the condition survey, the corrective survey documents the maintenance activities required to remedy the deficiencies identified in the condition survey. This basic information, coupled with maintenance activity specifications, yields manpower, equipment, material costs, and scheduling data for maintenance work.

Maintenance Activities

The following checklist groups general maintenance activities under broad trail maintenance areas. Some of the more common maintenance activities that could be required to remedy the deficiencies documented in the corrective survey are as follows:

Trail Maintenance-Vegetation

Brushing clearing areas
Logging out
Hazard tree removal
Litter cleanup
Slope revegetation
Backslope grooming
Vista maintenance

Tread Maintenance

Grading tread
    slough and slide removal
    slump repair
    grubbing rocks, roots, stumps
Spot surfacing
Turnpike section repair
Surface replacement (similar material)
Surface repair and removing loose rocks

Drainage Maintenance

Cleaning and repairing structures
    culverts
    underdrains
    water bars
    grade dips
    drainage ditches
Replacement of existing drainage structures
    culverts
    underdrains

Installing additional drainage structures
    water bars
    culverts
    rock drains
    water bars
    grade dips
    drainage ditches

Structure Maintenance

Bridge repair
Cribbing and retaining wall repair
Barrier and guardrail repair
Steps and terrace repair
Fence, gate, stile repair
Shelter repair

Sign Maintenance

Sign repair and rehabilitation
Sign replacement
Blaze and trailblazer repair and replacement
Cairn repair
Barricade or closure device repair

In order to provide more details of the maintenance activities, the following guidelines are presented under each broad category.

Trail Maintenance-Vegetation. All side branches extending into the trail corridor should be cut flush with the parent branch or stem, leaving no stubs and allowing for natural healing to take place. Paint should not be used for tree wounds (see the "Clearing Requirements" section for an exception to this statement).

Trees and brush outside the tread should be cut as close to the ground as possible, leaving no sharp-pointed stumps or stems. Stumps should be treated with herbicides (after approval of a pesticide control coordinator) to prevent regrowth and sprouting. Herbicides should be used only for stump treatment on trails. Strict adherence to the manufacturer's directions is required.

Brushing in open grassy areas, around longleaf pine trees, or around similar timber types having sparse underbrush may be accomplished by using power mowers except where prohibited, such as in wilderness areas.

Small trees and shrubs within the tread should be grubbed out to prevent tripping, and holes should be filled and compacted.

Any fallen tree lying on or over a trail should be removed, or if a large tree, the portion lying across the trail. When cutting a log, the cuts should be made at a sufficient angle to permit the cut section to be rolled free with minimum effort. Generally, the uphill cut should be made first to permit the lower section to hold the upper portion from sliding onto the trail and possibly injuring the workers whose footing is unstable for the upper cut. If possible, the entire windfall or the portion below the uphill cut should be rolled below the trail (see Travelway Clearing illustration).

In order to remove hazardous trees in high use and backcountry camping areas, all dead or dying trees that have a possibility of falling across the camping area or trail must be removed. In wilderness areas, only those trees that are a serious hazard to users should be removed. The debris should be disposed of away from the trail and out of sight where practical.

Weeds and light new growth may be left along trails because they soon disappear. Debris from clearing and pruning should be disposed of by chipping or removed from the trail corridor. Debris should be considered for control of traffic or erosion. Slash should be scattered on the downhill side of a trail.

Tread Maintenance. When tread repair is needed, it should be restored to the original design condition, free of rolling stones, rock points, stumps, and shrub roots. Attention should be given to dips and outsloping. High standard treads should be smooth and firm. Paved treads may require patching or sweeping.

Drainage Maintenance. No factor in trail maintenance is more important than proper drainage. Many sections of trail are damaged or destroyed by erosion that proper drainage could have prevented. Trails should be routinely inspected to ensure that all culverts, waterways, and dips are clear of debris and ready to function properly at all times, especially during the rainy season or spring runoff. Drainage structures constitute the largest simple capital outlay item, and proper and careful maintenance is both necessary and rewarding in labor, material, money saved, and in the number of days the trail may be kept useable by the public. If repairs are necessary, they should always be performed to their standard construction specifications.

Structure Maintenance. Bridges and dams should be inspected annually. Minor maintenance of structures should be accomplished by a trail crew. Deficiencies requiring major efforts should be planned as a separate project.

The major consideration in structure maintenance is safety. Unsafe structures must not be allowed to remain unattended. If work must be deferred, alternative trail routes should be provided to temporarily bypass the hazard.

Sign Maintenance. Sign maintenance is extremely critical to the operation of a successful trail system. A sign plan should be the basic source of information used for sign location and wording. Priorities for sign maintenance are as follows:

signs required for user safety
user restrictions and advisory signs
guide signs
informative and interpretive signs

All signs damaged or weathered so that they no longer serve the intended purpose should be repaired or replaced in accordance with trail standards. Periodic painting of signs in most parks is a necessity.

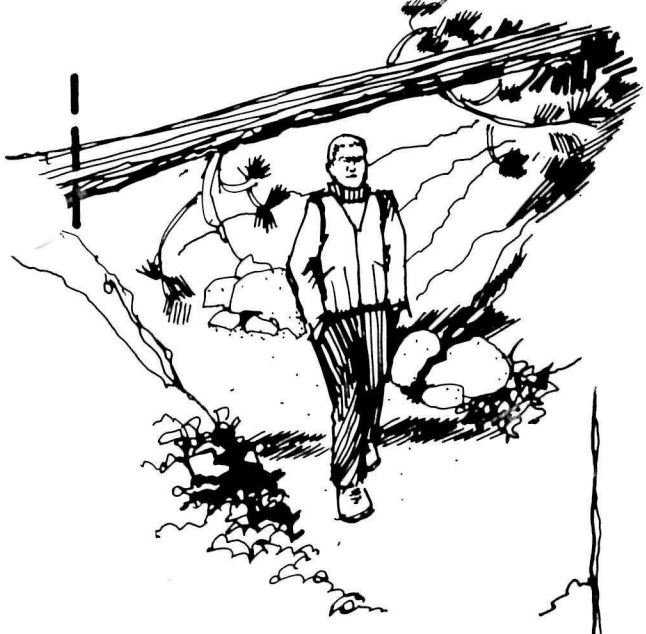
Annual Maintenance Plan

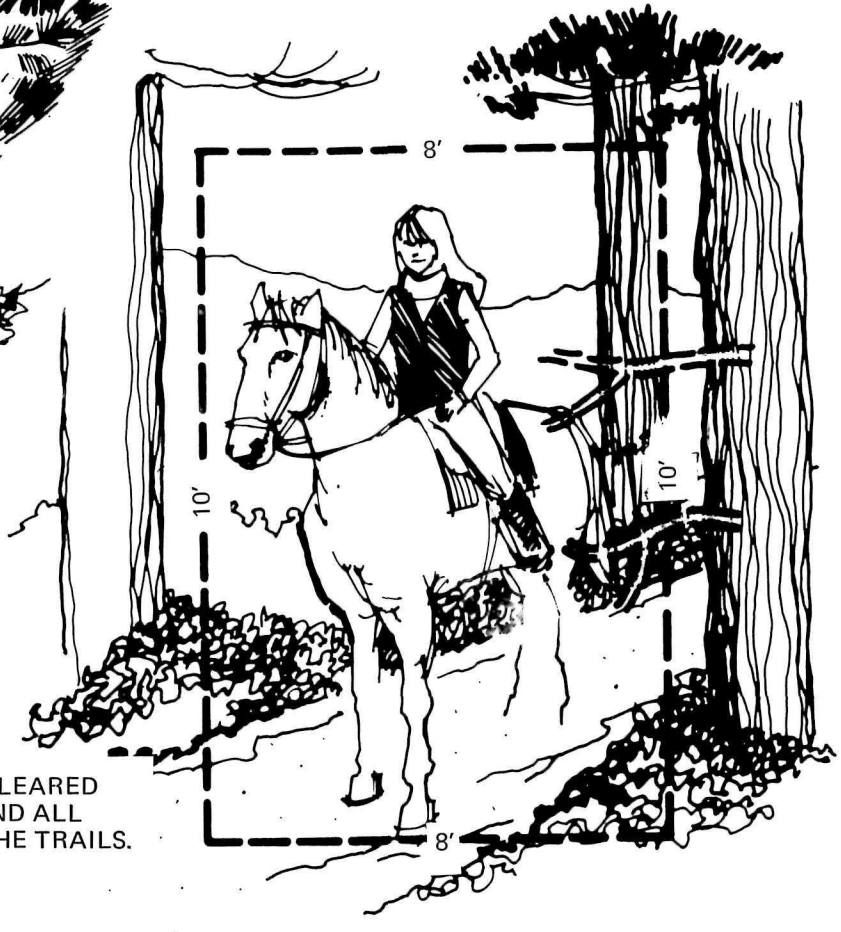
After the trail log and the condition/corrective surveys have been completed and the trail inventory updated, a chief of maintenance should use the information from these sources to produce an annual maintenance plan. Because the National Park Service is faced with the problem of apportioning a limited amount of manpower, finances, and time, it is imperative to effectively plan and schedule the maintenance work in order to optimize limited resources for the most cost-effective results.

The annual plan should define and schedule required maintenance activities, manpower, equipment, material, and cost for the fiscal year. This final determination is derived by integrating (1) the trail inventory and trail log (what and how much is out there), (2) the condition survey (present physical condition of the trail facility), (3) the corrective survey (maintenance activity needed to correct deficit facilities), and (4) the estimated unit costs for accomplishing the maintenance work.

A good maintenance plan will provide positive support for budget requests. The plan should also assist the chief of maintenance to evaluate performance against maintenance work standards. The plan should also be used to identify more efficient maintenance methods and to update costs and base data.

When preparing the annual maintenance plan, long-range goals for maintenance, reconstruction, and construction over a five- to ten-year period should be considered. Without these long-range goals, the annual plan would tend to lack consistency and direction, becoming a reaction response to immediate problems without regard to long-term priorities. Long-range goals are absolutely essential to efficient utilization of cyclic maintenance and construction funds and the use of volunteer groups on any appreciable scale. The long-range goals should be realistic, embracing not only what needs to be done but also the probable means of accomplishment.





HIKING TRAILS SHOULD BE CLEARED OF DOWNED LOGS, DEBRIS AND ALL PROJECTING LIMBS WITHIN THE TRAILS.

travelway clearing

COST ESTIMATING

Providing reliable cost data for maintaining trails is essential for planning work on existing and future trails. Park managers have the responsibility of determining the amount of money needed to maintain a satisfactory trail system within the park they manage.

Cost of trail maintenance varies greatly depending on type of trail, usage, remoteness, location, difficulty of terrain, and many other factors. Usually the minimal cost for maintenance of a foot trail is about $400 per mile per year. Depending upon the type of trail and maintenance needed, this cost can exceed $5,000 per mile.

GLOSSARY

ABUTMENT	The foundation of either extreme end of a bridge that supports the superstructure (sills, stringers, trusses, or decks).
BACKSLOPE	The cut bank formed by the excavation extending upward from the tread.
BASE	The primary excavated bed of a trail upon which the tread, or finished, surface lies.
BERM	The ridge of dirt or rocks placed on the outside of the trail base.
BRIDGE	Any structure spanning and permitting passage over a river, stream, chasm, canyon, or road.
CAIRN	A constructed mound of rock located adjacent to a trail. Used in open alpine areas or mountain areas where the tread is indistinct.
CLINOMETER	Instrument used for measuring angles of elevation or inclination.
CORDUROY PUNCHEON	A log structure laid on the ground for the purpose of crossing swampy areas. Usually consists of stringers, decking, and often a soil or loose gravel tread on top of decking.
DECK OR FLOORING	That part of a bridge structure that provides direct support for trail traffic.
DRAINAGE, CROSS	Running water in swamps, springs, creeks, drainages, or draws that the trail must cross.
DRAINAGE, SURFACE	Rain or snow runoff from the surface of the tread.
DUFF	Organic matter or a deep mat of tree needles or leaves in various stages of decomposition on the ground of a forest.
FORD	A natural stream crossing improved sufficiently for use by saddle or pack animals and trail users.
GRADE DIP	A reverse in the grade of the trail accompanied by an angling outslope that will divert water off the trail.

GRADE, MAXIMUM	The steepest grade permitted on any part of a trail.
GRUBBING	To dig, to clear of roots, to uproot shallow roots near or on the ground surface; also grubbing of tree stumps.
HEADER	A long, uniform stone laid with its end towards the face of a retaining wall or crib used intermittently to structurally tie in the other rocks laid in the wall.
MEASURING WHEEL, OR CYCLOMETER	An instrument that measures circular arcs. A device that records the revolutions of a wheel and hence the distance travelled by a wheel on a trail or land surface.
OUTSLOPING	A method of base grading that leaves the outside edge of the trail lower than the inside.
PUNCHEON	See Corduroy.
RUN PLANK	Usually wood planks laid lengthwise (along the axis) on top of bridge decking used as the tread surface.
SIDESLOPE	The natural slope of the ground measured at right angles to the centerline of the trail, or the adjacent slope which is created after excavating a sloping ground surface for a trailway, often termed a cut-and-fill-slope, left and right of the trail base and tread.
SILL	A crosswise member at the top of an abutment or pier that supports the stringers, beams, or trusses.
SKEW	Deviation from a straight line; slant.
SPECIFICATIONS	The standard of workmanship and type of materials for all component parts of a trail base, trail tread, clearing, grade, bridge, culvert, puncheon.
STAKES, GRADE AND SLOPE	Stakes set by the trail locator to establish the elevation and cross section of the completed tread.
STAKES, LINE	Stakes set by the trail locator to establish the centerline of the trail.
STATION	One hundred feet measured along the centerline of the trail.
STILE	A step or set of steps for passing over a fence or wall.

STRINGER	The lengthwise member of a structure that supports the bridge deck.
SWITCHBACK	A sharp short radius curve in a trail that is used on hillsides to reverse the direction of travel and to gain elevation.
TRAILHEAD	The start or end of a trail often accompanied by various public facilities, such as a horse unloading dock or chute, parking areas, toilets, water, directional and information signs, and a trail use register. A picnic or campground may also be a part of the trailhead facility.
TREAD	The surface portion of a trail excluding backslope, ditch, and shoulder. The tread surfaces could include native material or gravel surface crushed to size. Another tread surface could be soil cement, which is a combination of local trailbed soil mixed with a cement to form a hardened soil cement trail tread. Asphalt is a various combination of asphalt mixes with a controlled blend of small crushed gravel or screened pit run gravel to provide a hard surfaced trail tread.
WATER BAR	A device for turning water off the trail, usually made of logs, stones, soil cement, or by contouring the native material within the trail prism. An enlarged modification of a dip installed at an angle across the trail base, with approximately a 30-degree skew.

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NOTES:

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☆ U.S. GOVERNMENT PRINTING OFFICE: 1983—676-031/59 REGION No. 8

As the nation's principal conservation agency, the Department of the Interior has basic responsibilities to protect and conserve our land and water, energy and minerals, fish and wildlife, parks and recreation areas, and to ensure the wise use of all these resources. The department also has major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

Publication services were provided by the editorial and graphics staffs of the Denver Service Center. NPS 2023

Form 10-404 Rev. (11-78)

U.S. DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

BACKCOUNTRY USE PERMIT

The visitor must have this permit during the visit.

When signed, this single-visit permit authorizes.

NAME

ADDRESS

CITY STATE ZIP

To visit

Give best estimate of start and finish dates — FROM MO/DAY — THROUGH MO/DAY

Location of entry

Location of exit

Primary method of travel

Number of people in group

Number of pack or saddle stock

Number of watercraft or other craft

CAMPSITE NAME	ZONE -- SITE	NIGHTS

REMARKS

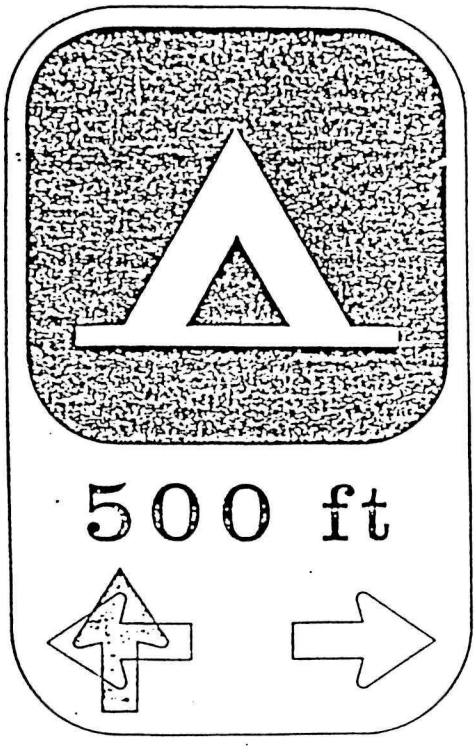
DATE (VISITOR'S SIGNATURE)

DATE (ISSUING OFFICER'S SIGNATURE)

FASTEN THIS TAG TO YOUR PACK, SADDLE, BOAT OR TENT

APPENDIX K

APPENDIX L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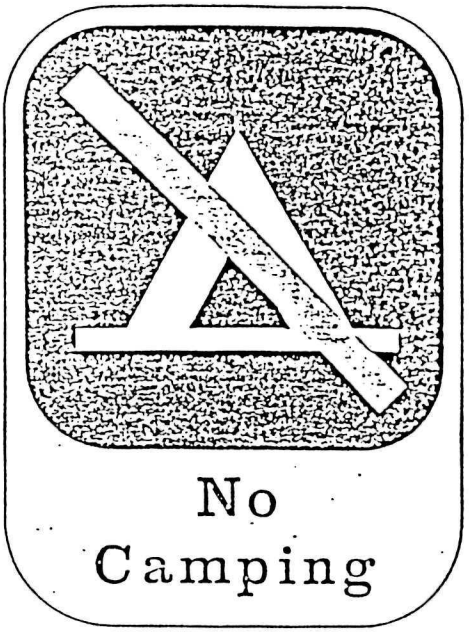
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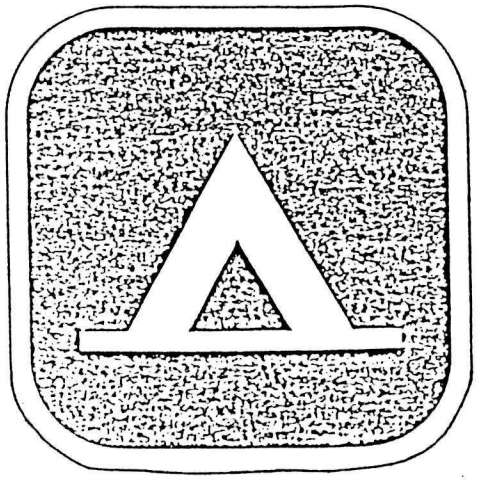

APPENDIX M

BACKCOUNTRY CAMPSITE EVALUATION

Site Name_____ Site No._____ Date_____ UTM ____E ____N

1. Plane table map completed? Yes____ No____

2. Photographs taken? If yes, how many?____ Yes____ No____

3. Site evaluation:

		Max. Points Possible	Rating
a. Bare soil:	From plane table map. Subtract 1 point for every 100 sq. ft. in excess of 2,000 (June 1 - Sept. 15).	35	
b. Firewood:	Area cleared of down and dead, 3-5" diameter wood should not exceed 200 feet from edge of campsite. Average 4 estimates and subtract 1 point for every 10 ft. in excess.	10	
c. Bears:	Number of incidents with PD/PI this year to date: Subtract 0 -3 0 4 -6 5 7 -10 10 11-20 15 More than 20 Automatic closure	15	
d. Human Waste:	Subtract Not evident or small amt. 0 Some 5 Excessive 15	15	
e. Horse Waste:	Subtract Not evident or small amt. 0 Some 5 Excessive 10	10	
f. Damage to Vegetation:	Subtract Light 0 Moderate 5 Severe 15	15	
		Total Possible	Total Score
		100	

NOTE: For d & e, "excessive" means would interfere with enjoyment of camping experience.

4. General comments (erosion/drainage, garbage, illegal camping problems, specific damage by horses, visitor complaints):

_____

_____

_____

_____

_____

_____

_____

5. Compaction (20 readings, kg/cm^2):

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

6. Recommendation:

- ☐ No action
- ☐ Ban wood fires
- ☐ Temporary closure (non-emergency)
- ☐ Reduce capacity
- ☐ Relocation nearby
- ☐ Closure (recommendation for closure to follow)
- ☐ Closure to horses

Narrative supporting recommendation: _____

_____

_____

_____

7. Evaluated by _____
(please print)

8. Reviewed by: (only if change is proposed)

Recommended	Not Recommended		
☐	☐	Sub-District Ranger	Date
☐	☐	District Backcountry Ranger	Date
☐	☐	Assistant Chief Ranger	Date
☐	☐	Chief Park Ranger	Date
☐	☐	Facility Manager	Date
☐	☐	Backcountry Use Committee Chairperson	Date

Approved	Disapproved		
☐	☐	Superintendent	Date

Comments: _____

APPENDIX N

RECOMMENDATION FOR BACKCOUNTRY CAMPSITE CLOSURE

1. IDENTIFICATION OF CAMPSITE

Site No._____ Site Name_____

Capacity: People_____ Horses_____

Location: UTM_____E _____N Grid Square_____

Vegetative type_____

2. HISTORY OF USE

Year established (if known)_____

Backpacker Use:	Year			
No. Visitor Nights				
No. Party Nights				

Horse Use:	Year			
No. Horse Nights				
No. Party Nights				

Known use by organized groups or special use permittees:

3. EVALUATION OF IMPACTS

Rating:	Year				
	Score				

Bare Soil:

Year	Sq.ft.	Percent Change (+/-)

General Comments (firewood, erosion, human/horse waste, litter, visitor complaints, illegal camping problems, other):

4. WILDLIFE

Bear incidents past 4 years:

Year	No. PD	No. PI

Bear incidents by month this year:

Apr	May	Jun	Jul	Aug	Sep	Oct	Nov

Periods of closure this year: From_____ To_____

From_____ To_____

Other wildlife considerations (hogs, skunks):

_____

_____

5. CONTACTS WITH GROUPS, INDIVIDUALS, SPECIAL USE PERMITTEES

6. ATTACH SEPARATE SHEET FOR ADDITIONAL COMMENTS IF NECESSARY.

7. SUBMITTED BY: _____ _____ Date

8. REVIEWED BY:

Recommended	Not Recommended		
☐	☐	Sub-District Ranger	Date
☐	☐	District Backcountry Ranger	Date
☐	☐	Assistant Chief Ranger	Date
☐	☐	Chief Park Ranger	Date
☐	☐	Facility Manager	Date
☐	☐	Backcountry Use Committee Chairperson	Date

Approved	Disapproved		
☐	☐	Superintendent	Date

Comments: _____

_____

APPENDIX O

11/85

APPENDIX N

BACKCOUNTRY CAMPSITE CRITERIA

Existing Site_____ Capacity: People_____

Proposed Site_____ Horses_____

ite Name_____

Site No._____ UTM: _____E _____N

Location of Proposed Site:_____

_____

Criteria: Rating

1. Distance from trailhead (at least 2 miles) _____miles
2. Distance from nearest campsite (at least 2 miles) _____miles
3. Distance off trail or from tree line of lakeshore (100-300 ft.) _____feet
4. Distance to surface water (100' to ¼ mile) _____feet
5. Elevation _____feet
6. Slope (maximum 5%) _____%
7. Screened from main trail or lakeshore? Yes_____ No_____
8. Size of near flat, open area is at least 900 sq. ft. per party? Yes_____ No_____
9. Logical location in relation to trail and campsite system? Yes_____ No_____
10. Is site well drained? Yes_____ No_____
11. Satisfactory area for human waste? Yes_____ No_____
12. Compaction (20 readings, kg/cm^2):

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Critical Elements: (Failure to meet any one of the following elements will automatically eliminate a proposed site from further consideration. It will also be cause for immediate closure of an existing site.)

1. Endangered plants present? Yes_____ No_____

   Determined by Uplands. Inspected by_____

   Date_____

2. Endemic endangered animals? Yes_____ No_____
3. Located in grassy bald? Yes_____ No_____

Horse Campsite Criteria: | Rating

1. Sufficient water for authorized number of stock? Yes_____ No_____
2. Area for hitchrack:
   a. Size (at least 50 sq. ft. per horse) _____sq. ft.
      (No. horses X 50 = _____sq. ft. per horse)
   b. Should be at least 100 ft. downstream from _____ft. downstream
      campsite and 100 ft. from nearest surface water
      _____ft. from nearest water source

Significant Elements:

1. Elevation exceeds 4,000 ft. _____ft.
2. Is spring only water source? (No horsecamps where spring is sole water source.) Yes_____ No_____
3. Located in spruce-fir, beech gap, virgin forest. (Circle appropriate type if applicable.)

General Comments/Recommendations: (e.g., will alleviate heavy use elsewhere, will make loop trip possible, will make backpacking possible between two points; other comments to support specific location. Attach separate sheet if necessary.)

_____

_____

Submitted by: _____ _____ Date

Reviewed by: (for new site only)

Recommended	Not Recommended		
☐	☐	Sub-District Ranger	Date
☐	☐	District Backcountry Ranger	Date
☐	☐	Assistant Chief Ranger	Date
☐	☐	Chief Park Ranger	Date
☐	☐	Facility Manager	Date
☐	☐	Science Division	Date
☐	☐	Backcountry Use Committee Chairman	Date

Approved	Disapproved		
☐	☐	Superintendent	Date

Comments: _____

_____

_____

APPENDIX P

APPENDIX P. - to be developed

APPENDIX Q

IN REPLY REFER TO:

United States Department of the Interior

NATIONAL PARK SERVICE

Great Smoky Mountains National Park
Gatlinburg, Tennessee 3773..

_____ _____
Date

Memorandum

To: Superintendent, Great Smoky Mountains
Through: Chief,_ _____ ____

From:

Subject: Use of Motorized Equipment - Backcountry Area

I request permission to use _____
(List Equipment)

_____at the following locations in the

wilderness or backcountry:

A. Locations: (Itemize)

B. Justification: (Complete all items on reverse side)

C. Work Dates to Start and Finish: From: _____ To: _____

_____
Signature of District Supervisor

(Request Concur - Denied)

_____ _____
Division Chief Superintendent
(Approved - Disapproved)

1. Signed by District Supervisor (or Acting)
2. Reviewed and action by Division Chief
3. Approval by Superintendent

If more space is needed under A and B, use reverse side

B. Justification:

1. Comparison of time and cost, power vs hand equipment.

2. Impacts of present condition on visitor access, safety and resources.

3. Probably effects of temporary closure pending response with non-mechanized equipment.

4. Numbers and dimensions of slides, down trees, etc.

APPENDIX R

GSM-M9

JOB REQUEST
(Submit in Triplicate)

Date:_____ Check box if project is: of emergency nature requiring action within 7 days ☐ a safety hazard ☐ quarters related ☐

Originator: Location/Description of Work _____

_____

_____

_____

Account: _____ Signed: _____

APPROVED BY:

_____
(Division Authority) (Title) (Date)

District Facility Manager: _____ Date: _____

REFER TO:

☐ Division Head: _____ Date: _____

☐ Chief of Maintenance: _____ Date: _____

☐ Safety Officer: _____ ☐ Quarters Committee: _____

☐ Assistant Superintendent: _____ Date: _____

REMARKS: _____

_____

_____

REPLY TO ORIGINATOR: (Route through Asst. Supt. if request denied _____)
Initial

Proposed Date for: Start _____ Completion _____

Request Denied/Modified Because: _____

_____

Signed: _____

Date Completed: _____ Cost: _____ Signed: _____

RETURN COMPLETED JOB REQUEST TO CHIEF OF MAINTENANCE OFFICE.

ESTIMATE - COST LOG

PERSONAL SERVICES

POSITION, TITLE, GRADE AND SURNAME	EST. M/DAYS	DAILY RATE	EST. COSTS	ACT.M/DAYS	ACTUAL

EQUIPMENT RENTAL

TYPE OF EQUIPMENT	EST. HRS./MIS	RATE	EST. COSTS	ACT.HRS/MIS.	ACTUAL COSTS

MATERIALS AND OTHER COSTS

ITEM	EST. COSTS	ACTUAL COSTS

COST ACCOUNT	PERSONAL SERVICES	EQUIPMENT RENTAL	SUPPLIES AND MATERIALS.	OTHER	TOTAL

REQUESTED BY *(Title & Signature)*	CONCURRED BY *(Title & Signature)*	APPROVED BY *(Title & Signature)*

COMPLETED BY	DATE COMP.	INSPECTED BY	DATE INSPECT

REMARKS: _____

APPENDIX S

APPENDIX S

TITLE 36, CODE OF FEDERAL REGULATIONS (7-1-85 Edition)
Backcountry Management Related Regulations

Part 1.5 Closures and Public Use Limits.

(a) Consistent with applicable legislation and Federal administrative policies, and based upon a determination that such action is necessary for the maintenance of public health and safety, protection of natural or cultural resources, aid to scientific research, implementation of management responsibilities, equitable allocation and use of facilities, or the avoidance of conflict among visitor use activities, the superintendent may:

(1) Establish, for all or a portion of a park area, a reasonable schedule of visiting hours, impose public use limits, or close all or a portion of a park area to all public use or to a specific use or activity.
(2) Designate areas for a specific use or activity, or impose conditions or restrictions on a use or activity.
(3) Terminate a restriction, limit, closure, designation, condition, or visiting hour restriction imposed under paragraph (a)(1) or (2) of this section.

(b) Except in emergency situations, a closure, designation, use or activity restriction or condition, or the termination or relaxation of such, which is of a nature, magnitude and duration that will result in a significant alteration in the public use pattern of the park area, adversely affect the park's natural, aesthetic, scenic or cultural values, require a long-term or significant modification in the resource management objectives of the unit, or is of a highly controversial nature, shall be published as rulemaking in the FEDERAL REGISTER.

(c) Except in emergency situations, prior to implementing or terminating a restriction, condition, public use limit or closure, the superintendent shall prepare a written determination justifying the action. That determination shall set forth the reason(s) the restriction, condition, public use limit or closure authorized by paragraph (a) has been established, and an explanation of why less restrictive measures will not suffice, or in the case of a termination of a restriction, condition, public use limit or closure previously established under paragraph (a), a determination as to why the restriction is no longer necessary and a finding that the termination will not adversely impact park resources. This determination shall be available to the public upon request.

(d) To implement a public use limit, the superintendent may establish a permit registration, or reservation system. Permits shall be issued in accordance with the criteria and procedures of 1.6 of this chapter.

(e) Except in emergency situations, the public will be informed of closures, designations, and use or activity restrictions or conditions, visiting hours, public use limits, public use limit procedures, and the termination or relaxation of such, in accordance with 1.7 of this chapter.

(f) Violating a closure, designation, use or activity restriction or condition, schedule of visiting hours, or public use limit is prohibited. When a permit is used to implement a public use limit, violation of the terms and conditions of a permit is prohibited and may result in the suspension or revocation of the permit.

Part 1.6 Permits.

(a) When authorized by regulations set forth in this chapter, the superintendent may issue a permit to authorize an otherwise prohibited or restricted activity or impose a public use limit. The activity authorized by a permit shall be consistent with applicable legislation, Federal regulations and administrative policies, and based upon a determination that public health and safety, environmental or scenic values, natural or cultural resources, scientific research, implementation of management responsibilities, proper allocation and use of facilities, or the avoidance of conflict among visitor use activities will not be adversely impacted.
(b) Except as otherwise provided, application for a permit shall be submitted to the superintendent during normal business hours.
(c) The public will be informed of the existence of a permit requirement in accordance with 1.7 of this chapter.
(d) Unless otherwise provided for by the regulations in this chapter, the superintendent shall deny a permit that has been properly applied for only upon a determination that the designated capacity for an area or facility would be exceeded; or that one or more of the factors set forth in paragraph (a) of this section would be adversely impacted. The basis for denial shall be provided to the applicant upon request.
(e) The permit shall contain special conditions the superintendent deems necessary to protect park resources or public safety.
(f) A compilation of those activities requiring a permit shall be maintained by the superintendent and available to the public upon request.
(g) The superintendent may suspend or revoke a permit for violation of its terms or conditions.
(h) Violation of the terms and conditions of a permit is prohibited.

Part 1.7 Public Notice.

(a) Whenever the authority of 1.5(a) is invoked to restrict or control a public use or activity, to relax or revoke an existing restriction or control, to designate all or a portion of a park area as open or closed, or to require a permit to implement a public use limit, the public shall be notified by one or more of the following methods:

(1) Signs posted at conspicuous locations, such as normal points of entry and reasonable intervals along the boundary of the affected park locale.
(2) Maps available in the office of the superintendent and other places convenient to the public.
(3) Publication in a newspaper of general circulation in the affected area.

(4) Other appropriate methods, such as the removal of closure signs, use of electronic media, park brochures, maps and handouts.

(b) In addition to the above-described notification procedures, the superintendent shall compile in writing all the designations, closures, permit requirements and other restrictions imposed under discretionary authority. This compilation shall be updated annually and made available to the public upon request.

Part 2.1 Preservation of natural, cultural and archeological resources.

(a) Except as otherwise provided in this chapter, the following is prohibited:

(4) Using or possessing wood gathered from within the park area: Provided, however, that the superintendent may designate areas where dead wood on the ground may be collected for use as fuel for campfires within the park area.

(b) The superintendent may restrict hiking or pedestrian use to a designated trail or walkway system pursuant to 1.5 and 1.7. Leaving a trail or walkway to shortcut between portions of the same trail or walkway, or to shortcut to an adjacent trail or walkway in violation of designated restrictions is prohibited.

Part 2.10 Camping and food storage.

(a) The superintendent may require permits, designate sites or areas, and establish conditions for camping.

(b) The following are prohibited:

(1) Digging or leveling the ground at a campsite.

(2) Leaving camping equipment, site alterations, or refuse after departing from the campsite.

(3) Camping within 25 feet of a water hydrant or main road, or within 100 feet of a flowing stream, river or body of water, except as designated.

(5) The installation of permanent camping facilities.

(8) Failing to obtain a permit, where required.

(9) Violating conditions which may be established by the superintendent.

(10) Camping outside of designated sites or areas.

(c) Violation of the terms and conditions of a permit issued in accordance with this section is prohibited and may result in the suspension or revocation of the permit.

(d) Food storage. The superintendent may designate all or a portion of a park area where food, lawfully taken fish or wildlife, garbage, and equipment used to cook or store food must be kept sealed in a vehicle, or in a camping unit that is constructed of solid, non-pliable material, or suspended at least 10 feet above the ground and 4 feet horizontally from a post, tree trunk, or other object, or shall be stored as otherwise

designated. Violation of this restriction is prohibited. This restriction does not apply to food that is being transported, consumed, or prepared for consumption.

Part 2.13 Fires.

(a) The following are prohibited:
(1) Lighting or maintaining a fire, except in designated areas or receptacles and under conditions that may be established by the superintendent.
(2) Using stoves or lanterns in violation of established restrictions.
(3) Lighting, tending, or using a fire, stove or lantern in a manner that threatens, causes damage to, or results in the burning of property, real property or park resources, or creates a public safety hazard.
(4) Leaving a fire unattended.
(5) Throwing or discarding lighted or smoldering material in a manner that threatens, causes damage to, or results in the burning of property or park resources, or creates a public safety hazard.
(b) Fires shall be extinguished upon termination of use and in accordance with such conditions as may be established by the superintendent. Violation of these conditions is prohibited.
(c) During periods of high fire danger, the superintendent may close all or a portion of a park area to the lighting or maintaining of a fire.

Part 2.14 Sanitation and refuse.

(a) The following are prohibited:
(1) Disposing of refuse in other than refuse receptacles.
(3) Depositing refuse in the plumbing fixtures or vaults of a toilet facility.
(6) Polluting or contaminating park area waters or water courses.
(8) In developed areas, the disposal of human waste, except at designated locations or in fixtures provided for that purpose.
(9) In nondeveloped areas, the disposal of human waste within 100 feet of a water source, high water mark of a body of water, or a campsite, or within sight of a trail, except as otherwise designated.
(b) The superintendent may establish conditions concerning the disposal, containerization, or carryout of human body waste. Violation of these conditions is prohibited.

Part 2.16 Horses and pack animals.

The following are prohibited:
(a) The use of animals other than those designated as "pack animals" for purposes of transporting equipment.
(b) The use of horses or pack animals outside of trails, routes or areas designated for their use.
(c) The use of horses or pack animals on a park road, except: (1) Where such travel is necessary to cross to or from designated trails, or areas, or privately owned property, and no alternative trails or routes have been designated; or, (2) when the road has been closed to motor vehicles.
(d) Free-trailing or loose-herding of horses or pack animals on trails, except as designated.
(e) Allowing horses or pack animals to proceed in excess of a slow walk when passing in the immediate vicinity of persons on foot or bicycle.
(f) Obstructing a trail, or making an unreasonable noise or gesture, considering the nature and purpose of the actor's conduct, and other factors that would govern the conduct of a reasonably prudent person, while horses or pack animals are passing.
(g) Violation of conditions which may be established by the superintendent concerning the use of horses or pack animals.

Part 4.3 Bicycles.

(c) In natural and historical areas, the use of bicycles is prohibited, except on established public roads and parking areas, and on routes designated for their use by the posting of signs or by marking on a map which shall be available at the office of the superintendent, or both.

Part 7.14 Great Smoky Mountains National Park.

(b) Beer and alcoholic beverages. The possession of beer or any alcoholic beverages in an open or unsealed container, except in designated picnic, camping, or overnight lodging facility, is prohibited.

APPENDIX T

APPENDIX T. - to be developed

APPENDIX U

APPENDIX U. - to be developed