

Agreement # G4840010001
Replaces MOU #MU-4840-95-01

GENERAL AGREEMENT

Between

Shenandoah National Park

And

Potomac Appalachian Trail Club

For

Maintaining Certain Park Trails,
Huts and Maintenance Buildings

July 1, 2001

APPENDICES

- A. Trails Maintained by the Potomac Appalachian Trail Club**
- B. Trail Maintenance Standards**
- C. Maintenance Standards for Huts and Maintenance Buildings**
- D. Administrative Road and Closed Skyline Drive Access/Gate Keys Policy**
- E. Volunteer In the Parks Program Agreement(s)**
- F. Cooperative Agreement - PATC Shenandoah Crew**

ARTICLE I: BACKGROUND AND OBJECTIVES

Background:

Shenandoah National Park (SHEN), as a unit of the National Park Service, and the Potomac Appalachian Trail Club (PATC), as a member of the Appalachian Trail Conference, have been jointly involved in stewardship of certain trails and backcountry structures within the Park since the 1930s. According to the PATC mission Statement, *“The Potomac Appalachian Trail Club, through volunteer efforts, education and advocacy, acquires, maintains and protects the Trail and lands of the Appalachian Trail, other trails and related facilities in the mid-Atlantic region for the enjoyment of present and future hikers.”* The PATC has responsibilities for maintaining the Appalachian National Scenic Trail (AT), most blue-blazed trails, AT “huts” and “maintenance buildings.” The PATC contributes thousands of volunteer hours each year in assisting SHEN by maintaining trails and backcountry structures, thus protecting valuable resources and visitor experiences and reducing SHEN’s need to expend a considerable amount of staffing resources and funds.

SHEN and PATC desire to continue working together in maintaining the AT and blue-blazed trails, listed at Appendix A, and in maintenance and preservation of AT huts and maintenance buildings as listed and described at Appendix C.

Objectives:

This General Agreement (GA) here entered into by SHEN and the PATC serves to describe more specifically the understandings, working relationships, and delegated responsibilities between SHEN and PATC for maintenance of trails and maintenance and preservation of huts and maintenance buildings, backcountry structures not addressed by Concessions Permit.

The PATC and SHEN enter into this GA in order to accomplish the following:

1. To coordinate maintenance on the AT and those trails listed in Appendix A at the standards described in Appendix B.
2. To provide procedures for accomplishing changes in the Park’s trail system.
3. To correct trail conditions which are hazardous for public use and/or are the cause for resource degradation.
4. To identify the standards, guidelines, procedures and responsibilities for maintenance and preservation of huts and maintenance buildings.

Authority:

This General Agreement is authorized by:

1. The National Park Service Organic Act, 39 Stat. 535, 16 U.S.C. Subsection 1a-1.
2. The National Trails System Act, 82 Stat. 919, 16 U.S.C. Subsection 1241-1251 and in particular 16 U.S.C. 1246(h)(1).

This General Agreement replaces Memorandum of Understanding 4840-95-01.

ARTICLE II: STATEMENT OF WORK

Both parties agree to:

1. Cooperatively develop an annual work plan for maintaining the trails and backcountry structures subject to this agreement.
2. Identify and accomplish work consistent with the SHEN Backcountry and Wilderness Management Plan.
3. Conduct an annual meeting to discuss trail maintenance activities, trail system management, maintenance and preservation of backcountry structures, and other topics or issues of mutual interest.
4. Consult on proposed changes to the trail system addressing those trails of PATC responsibility.
5. Comply with SHEN policies for processing the Project Clearance Form to initiate projects. Comply with the National Environmental Policy Act and National Historic Preservation Act (section 106) for all trail relocations, new trail construction, and routine maintenance of historic structures. A baseline evaluation of structural conditions will be conducted for all buildings, upon which a 5- year work plan will be developed jointly by the PATC and SHEN.
6. Conduct one annual joint field inspection of each backcountry structure in late summer to review and document structural and grounds conditions and to identify, plan and schedule for repairs. Both parties will assure that the PATC hut or maintenance building overseer is present for the field evaluation. Joint follow-up inspections will be conducted as agreed to by the PATC overseer and NPS inspector. An annual work plan for all buildings will be developed upon this annual joint evaluation for which SHEN will process the Project Clearance Form to approve maintenance work. Backcountry structural maintenance standards and the evaluation form are found at Appendix C.

The Shenandoah National Park agrees to:

1. Recognize PATC officers, trail overseers and trail crew members, District Managers, hut overseers and maintenance building overseers as volunteers in the NPS Volunteer in the Parks Program (VIP) while performing work in the Park in accordance with this GA. Agreement for Sponsored Voluntary Services, form 10-86, is attached to this GA at Appendix E. Completion of the 10-86 insures that volunteers are covered by the Federal Tort Claims Act.
2. Cooperate with PATC in the orientation and training of new trail, hut and maintenance building overseers.
3. Coordinate all official trails and hut and maintenance building communication and direction to PATC through the Park's Backcountry, Wilderness and Trails Manager and the Park's Trails Coordinator. These managers will work through other park units in fulfilling this agreement.
4. Notify PATC of changing conditions on the AT, blue-blazed trails and at backcountry structures that warrant PATC's attention. Informal monitoring of conditions of trails and structures are routine. Provide PATC with specific guidance and direction for historic structure maintenance requirements.
5. Perform major tread repairs and clear treefalls on PATC assigned trails, within the limits of available resources, when notified by PATC that the work is beyond PATC's capabilities.
6. Coordinate with PATC to accomplish major repairs to trails associated with this agreement. SHEN reserves the authority to perform trail maintenance activities at any time, including those to safeguard the safety of visitors and to minimize or prevent resource damage.
7. Grant a Non-Fee Permit to all officers and overseers assigned to maintain trails, huts and maintenance buildings in the Park. This permit allows free entry year round to facilitate PATC volunteer support in maintenance of trails and structures.
8. Provide a block of gate keys to the designated PATC key officer for distribution to those overseers and officers as deemed appropriate by the PATC. Guidelines and policy for PATC administrative road and gate key use are provided at Appendix D.
9. Provide "weed-free" gravel material for hut and maintenance building grounds and provide materials for picnic table repairs as agreed to by PATC and SHEN.
10. Maintain overall responsibility for the construction and maintenance of designated campsites and associated access trails, signs and food storage structures even if those facilities are contained within PATC land assignments at huts.

11. Provide a timely report to PATC upon completion of annual and follow-up joint hut and maintenance building condition evaluations.

The Potomac Appalachian Trail Club agrees to:

1. Perform to the Trail Standard at Appendix B all routine and recurring trail maintenance such as clipping and clearing of vegetation, blazing, clearing treefalls, constructing and cleaning waterbars and other drainage structures, etc. on the AT and trails identified in Appendix A.
2. Accept full financial and labor responsibility for all structural maintenance, repairs and replacements unless otherwise stated in this Agreement or as agreed to by both parties. Perform maintenance to huts and maintenance buildings in accordance with standards and guidelines provided at Appendix C. Preserve the rustic and historic fabric of all backcountry structures and ensure structural soundness.
3. Recruit and obtain volunteers (overseers) who will perform maintenance to trail sections and backcountry structures. A list of all overseers assigned to trails and to huts and maintenance buildings will be provided to SHEN annually. Maintain a log of volunteer hours to report to SHEN annually by October 15 (fiscal year).
4. Maintain a log of maintenance building overnight use by PATC trail workers and provide a report to SHEN annually by January 15 of “visitor use nights” incurred at each facility (calendar year).
5. Provide training and certification for trail overseers on chainsaw use in the Park to Appalachian Trail Conference standards. PATC chainsaw operators should work only to their level of training and leave excessively large treefalls, leaners or hazard trees requiring technical chainsaw skills to SHEN personnel.
6. Comply with the “traditional hand tool” use requirement in those areas designated within the National Wilderness Preservation System. Use of motorized equipment and mechanical transport is not permitted within designated wilderness. SHEN shall be notified of work which can not be accomplished in wilderness within the capability of PATC. The “Wilderness Minimum Requirement Decision Guide” will be applied by SHEN for waiver and documentation of prohibited activities in wilderness on a case-by-case basis as necessary to meet the “minimum requirements” for administration of the area as wilderness.
7. Cooperate with SHEN to preserve and protect cultural resources along trails and at huts and maintenance buildings.

8. Assure that Club members in possession of a Park gate key are aware of and abide by the guidelines and policy for use of administrative roads and gate keys as stated in Appendix D.
9. Maintain a register of all Non-Fee Permits issued. This register shall be submitted annually by January 15 (calendar year).

ARTICLE III: TERM OF AGREEMENT

The term of this General Agreement is five (5) years from the date of signing by the PATC. At the end of the term this General Agreement may be renewed with or without changes upon mutual agreement for successive five year terms.

ARTICLE IV: KEY OFFICIALS

Incumbent of the following positions:

Superintendent
Shenandoah National Park
3655 U.S. Highway 211 East
Luray, Virginia 22835-9036
(540)999-3400

Backcountry, Wilderness, Trails Manager
Shenandoah National Park
3655 U.S. Highway 211 East
Luray, Virginia 22835-9036
(540)999-3141

President
Potomac Appalachian Trail Club, Inc.
118 Park Street, SE
Vienna, Virginia 22180-4609
(703)242-0693

Supervisor of Trails
Potomac Appalachian Trail Club, Inc.
118 Park Street, SE
Vienna, Virginia 22180-4609
(703)242-0693

Shelter Committee Chair
Potomac Appalachian Trail Club, Inc.
118 Park Street, SE
Vienna, Virginia 22180-4609
(703)242-0693

ARTICLE V: PROPERTY UTILIZATION

Not Applicable

ARTICLE VI: PRIOR APPROVAL

Not Applicable

ARTICLE VII: REPORTS AND/OR DELIVERABLES

Not Applicable

ARTICLE VIII: TERMINATION

This GA may be terminated at the request of either party not less than sixty (60) days after notifying the other party in writing of its intent to terminate. Termination of this agreement also terminates the Agreement for Voluntary Services, form 10-86.

Amendment:

This GA may be amended at any time upon the mutual agreement of both parties.

ARTICLE IX: STANDARD CLAUSES

1. Civil Rights

During the performance of this agreement, the participants agree to abide by the terms of USDI-Civil Rights Assurance Certification, non-discrimination and will not discriminate against any person because of race, color, religion, sex or national origin. The participants will take affirmative action to ensure that applicants are employed without regard to their race, color, religion, sex or national origin.

2. Officials Not to Benefit

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 provision shall not be construed to extend to this agreement if made with a corporation for its general benefit.

3. Promotions

The Potomac Appalachian Trail Club shall not publicize, or otherwise circulate, promotional material (such as advertisements, sales brochures, press releases, speeches, still and motion pictures, articles, manuscripts or other publications) which states or implies Government, Departmental, bureau or Government employee endorsement of a product, service or position which the PATC represents. No release of information relating to this agreement may state or imply that the Government approves of the PATC's work product, or considers the PATC's work product to be superior to other products or services.

4. Public Information Release

PATC must obtain prior Government approval from Shenandoah National Park for any public information releases which refer to the Department of the Interior, any bureau, park unit, or employee (by name or title), or this agreement. The

specific text, layout, photographs, etc., of the proposed release must be submitted with the request for approval.

ARTICLE X: AUTHORIZING SIGNATURES

IN WITNESS HEREOF, the parties hereto have signed their names and executed this General Agreement.

NATIONAL PARK SERVICE

Superintendent, Shenandoah National Park

Date

POTOMAC APPALACHIAN TRAIL CLUB

President, Potomac Appalachian Trail Club, Inc.

Date

Appendix A: Trails Maintained by PATC; Updated 5/01

North District Trail Inventory: AT & Blue Blazed Trails

Trail Name	Miles	Comments
Appalachian Trail - ND Note: 1.5 mile of AT in ND is located In Wilderness.	24.2	NPS co-overseer for Horse Trail portion (2.0 mile) Possums Rest to Compton Gap. Elsewhere NPS assists as needed with blowdown removal.

Blue Blazed Trails: Non-Wilderness: PATC Maintained

Dickey Ridge Trail	8.6	
Snead Farm Loop Trail	0.7	
Possum Rest Trail	0.2	
Indian Run Maintenance Hut	0.5	
Compton Peak East	0.2	
Compton Peak West	0.2	
Gravel Springs Hut	0.2	
Elkwallow Trail	2.0	
Pole Bridge Link Trail	1.0	
Little Devils Stairs	2.0	
Sugarloaf Trail	1.4	
Beahms Gap Spur Trail	0.1	
Pass Mountain Hut	0.2	
17.3		Total miles

Blue Blazed Trails: Wilderness: PATC Maintained

(Note: A portion of these trails are found in Designated Wilderness)

Big Devils Stairs Trail	1.6	NPS as co-overseer
Tuscarora Trail	1.5	
Overall Run Trail	0.7	
Tuscarora/Overall Run Trail	2.0	Overall Run Falls view point to Thompson Hollow Trail
Overall/Beecher Trail	0.7	
Piney Branch Upper Trail	4.2	
Thompson Hollow Trail	0.4	NPS as co-overseer
Piney Ridge Trail	3.2	
Knob Mountain Cutoff Trail	0.5	
Jeremys Run Upper Trail	5.3	
Fork Mountain Trail	1.1	
Thornton River Upper Trail	2.9	
Pass Mountain Trail	2.7	
26.8		Total miles

Central District Trail Inventory: AT & Blue Blazed Trails

Trail Name	Miles	Comments
Appalachian Trail - CD	34.3	NPS assists as needed on blowdown removal by chainsaw.

Blue Blazed Trails: Non-Wilderness: PATC Maintained

Leading Ridge Trail	1.1	
Meadow Spring Trail	0.7	
Crusher Ridge Trail	1.8	
Passamaquaddy Trail	1.0	
Millers Head Trail	0.8	New for 2000: assign to PATC overseer.
Crescent Rock Trail	1.1	New for 2000: assign to PATC overseer.
Betty's Rock Trail	0.3	New for 2000: assign to PATC overseer.
Lower Hawksbill Trail	0.9	
Upper Hawksbill Trail	0.9	
Salamander Trail	0.7	New for 2000: assign to PATC overseer.
Rock Spring Cabin Trail	0.2	
Mill Prong Trail	1.0	
McDaniel Hollow Trail	0.4	
Laurel Prong Trail	2.2	
Powell Mountain Trail	3.6	
Staunton River Trail Lower	4.3	
Jones Mountain Trail	5.5	
Cat Knob Trail	0.5	
Jones Mountain Cabin Spur	0.3	
Bearfence Hut Spur	0.2	
Lewis Mountain Trail-East	1.0	
Pocosin Hollow Trail	2.6	
Pocosin Cabin Trail	0.1	
Saddleback Mountain Trail	1.1	
	32.3	Total miles

Blue Blazed Trails: Wilderness: PATC Maintained

(Note: A portion of these trails are found in Designated Wilderness)

Buck Hollow Trail	3.7
Buck Ridge Trail	2.3
Catlett Spur Trail	1.1
Catlett Mountain Trail	1.2
Sams Ridge Trail	1.6
Broad Hollow Trail	2.4

Hannah Run Trail	3.7	
Corbin Cabin Cutoff	1.4	
Hot Mt-Short Mt Trail	2.2	
Nicholson Hollow Trail	5.5	
Indian Run Trail	2.3	
Corbin Mountain Trail	3.8	
Corbin Hollow Trail	2.0	
Robertson Mountain Trail	2.4	
Cedar Run/Whiteoak Link	0.9	
Cedar Run Trail	3.0	
	39.5	Total miles

Blue Blazed Trails: Non-Wilderness: NPS Maintained

White Oak Canyon (entire)	5.1	NPS/PATC co-overseer arrangement (see Note below)
AT Connector	0.1	Currently unassigned: NPS to do routine maintenance.
Dark Hollow Falls Trail	0.8	Assigned to NPS for all trail maintenance.
Lewis Spring Falls Trail	1.8	Assigned to NPS for all trail maintenance.
Blackrock Trail	0.3	Assigned to NPS for all trail maintenance.
Bearfence Loop	0.8	Assigned to NPS for all trail maintenance.
South River Falls Trail	1.6	Assigned to NPS for all trail maintenance.
	10.5	Total miles

Blue Blazed Trails: Wilderness: NPS Maintained

(Note: A portion of these trails are found in Designated Wilderness)

Ridge Trail	3.1	NPS/PATC co-overseer arrangement (see Note below)
Saddle Trail	1.1	NPS/PATC co-overseer arrangement (see Note below)
Rose River Loop	1.8	NPS/PATC co-overseer arrangement (see Note below)
	6.0	Total miles

Note: NPS Crew does tread maintenance and clears major blowdowns. PATC Overseers do blazing, trim vegetation, clear light blowdowns.

South District Trail Inventory: AT & Blue Blazed Trails

Trail Name	Miles	Comments
Appalachian Trail - SD	36.7	NPS assists as needed with blowdown removal by chainsaw.
Blue Blazed Trails: Non-Wilderness: PATC Maintained		
Hightop Hut	0.1	
Hightop Road	0.7	NPS assists with one annual mowing & regrade road as needed.
Eaton Hollow	0.3	
Pinefield Hut	0.1	
Ivy Creek Maintenance Building	0.2	
Blackrock Hut	0.3	
Rockfish Spur Trail	0.2	
	1.9	Total miles
Blue Blazed Trails: Wilderness: PATC Maintained		
(Note: A portion of these trails are found in Designated Wilderness)		
Gap Run Trail	2.2	
Rocky Mt Trail	5.4	
One-Mile Run Trail	3.7	
Brown Mountain Trail	5.3	
Rocky Mountain Run Trail	2.7	
Rockytop Trail	6.0	
Big Run Loop North	2.7	
Lewis Peak Trail	2.6	
Lewis Peak Summit Trail	0.3	
Austin Mountain Trail	3.2	
Furnace Mountain Summit Trail	0.5	
Furnace Mountain Trail	3.4	
Trayfoot Mountain Trail	5.4	
Riprap Trail	4.4	
Wildcat Ridge Trail	2.5	
Turk Mountain Trail	1.1	
	51.4	Total miles
Blue Blazed Trails: Non-Wilderness: NPS Maintained		
Doyles River Trail	2.2	PATC as co-overseer, if overseer is available.
Doyles River Cabin	0.1	PATC as co-overseer, if overseer is available.
Jones Run Trail	2.5	PATC as co-overseer, if overseer is available.
	4.8	Total miles

APPENDIX B

TRAIL MAINTENANCE STANDARDS

Trail Maintenance Standards for Blue-blazed Trails and the Appalachian Trail

Much more than just a convenient travel zone for visitors to provide recreation and access to destination backcountry sites, trails function as a management tool to confine human use and associated resource impacts, serve to regulate access to or away from specified backcountry areas, and improve visitor safety in difficult or unfamiliar natural conditions. Although standards for trail conditions may vary, well maintained trails are important to these objectives so that resource conditions and a quality visitor experience are preserved.

Blazing

Objective: The objective in blazing is to mark the trail often enough to guide the hiker and keep the trail distinguishable, but not so often that blazes become a visual intrusion. On the low-use Wilderness and Non-wilderness trails, blazing is not necessarily intended for the convenience of the hiker, but to keep the trail distinguishable, open, and maintained for hikers of various ages and experience levels typically travelling in SNP backcountry.

General Standards for blazing:

- Use 2" X 6" vertical rectangles.
- Place at eye-level on live trees. Avoid painting rocks.
- Use double blazes (one above the other) for sharp turns and trail junctions
- Blazes should be visible across an intersection with another trail, a stream, or road.
- Where two blazes of different colors are used on the same trail, the two blazes are to be placed side-by-side.
- Avoid overblazing.
- Cairns, metal diamond markers, etc. should not be used to mark trails.

Standards for low-use Wilderness and Non-wilderness Blue-blazed trails

- Use blue paint for maintained foot trails.
- Reblaze only as necessary (generally no more than every three years) to keep blazes visible. Carefully remove excess blazing.
- No more than one blaze should be visible at any time, unless special conditions warrant (i.e. trail difficult to follow due to overgrown vegetation).
- When standing at one blaze, pick a prominent spot ahead, walk past it a short distance and blaze the next prominent spot. Blazes should be 300-700 feet apart if possible. Avoid abrupt changes in frequency.

Standards for moderate-use and high-use Wilderness and Non-wilderness Blue-blazed trails and for the Appalachian Trail

- Use blue paint for maintained foot trails; white blazes for the AT.
- Reblaze every few years to keep blazes visible and to replace missing or enlarged blazes. Carefully remove excess blazing.

- No more than one blaze should be visible at any time, unless special conditions warrant.
- When standing at one blaze, pick a prominent spot ahead, walk to it, pick the next good spot and place the blaze there. Blazes should be 300-500 feet apart. Avoid abrupt changes in frequency.

Techniques for Blazing:

- Pick prominent, large, living trees; dark-colored bark provides a better contrast for the blaze.
- Choose trees which are prominent when foliage is out (clip away low bushes or protruding branches to clear the blaze area).
- Scrape a 3" X 7" rectangle on thick barked trees.
- Rub moss and lichen off a 3" X 7" rectangle on thin barked trees.
- Paint neatly; avoid using too much paint (it will run down the tree).
- Blaze in the direction you are hiking; walk back to blaze the other direction.
- Avoid blazing rocks.
- To avoid overblazing, err on the side of too few blazes; more can be placed later if needed.

Equipment for Blazing:

- 1 gallon bucket with bail,
- 1" brush,
- blaze paint,
- paint scraper,
- rags, paper towels, aluminum foil to wrap brush in until cleaning, etc., and
- brush cleaner and hand cleaner for afterwards.

Vegetation Maintenance

Objective: To keep trails from being overgrown with vegetation by removing branches, weeds, and brambles that interfere with passage along the trail.

General Standards:

- Width will vary with type of trail.
- Steep slopes with thin and unstable soils should have narrower trail tread as roots help to stabilize the slope.
- Height should be sufficient to allow a tall backpacker.
- Cut branches flush with the main stem; shrubs and trees should be cut flush with the ground to avoid leaving hazardous stubs (see Techniques below).
- Remove debris from trail; scatter if there are large amounts.
- Do not grub or remove trailside plants; the remaining plants and root systems help stabilize the soil.

Standards for low-use Wilderness and Non-wilderness Blue-blazed trails

The purpose for trail vegetation maintenance in these areas is to keep the trail open for light travel. Visitor convenience is not a primary objective.

- Trail vegetation should be maintained to allow hikers to pass (not necessarily in shorts) single file without contacting shrubs, weeds, briars, or branches about 1-2 feet on each side of trail.
- Trail vegetation should be trimmed as necessary in late spring; additional work during summer months may be necessary to maintain the required width and height.

Standards for moderate-use Wilderness and Non-Wilderness Blue-blazed trails

The purpose for vegetation maintenance in these areas is to keep the trail open for moderate travel. Visitor convenience and safety are also considerations.

- Trail vegetation should be maintained to allow hikers to pass for the most part easily without contacting shrubs, weeds, briars, or branches about 2-3 feet on each side of trail.
- Entire trail should be maintained in spring and at least once during late spring; additional vegetation maintenance may be necessary to maintain the required width and height.
- Areas in front of blazes should be kept open to allow maximum visibility of blazes.

Standards for high-use Wilderness and Non-wilderness Blue-blazed trails and for the Appalachian Trail

The purpose for vegetation maintenance in these areas is to keep the trail open and maintained for heavy travel. Visitor convenience and safety are also primary considerations.

- Trails should be maintained to allow hiker to pass easily without contacting shrubs, weeds, briars, or branches about 3 feet from each side of trail.
- The entire trail should be maintained in the spring and at least once more during the summer; wet areas, old field, and other sections prone to weed and briar growth should be cleared more often if necessary.
- Areas in front of blazes should be kept open to allow maximum visibility of blazes.

Techniques for Vegetation Maintenance:

The amount of vegetation maintenance is dependent upon the level of use the trail receives. For low-use areas, a minimal amount of maintenance should be undertaken.

- Low shrubs and young trees are cut flush with the ground to prevent tripping and to reduce sprouting from the stump and roots.

- Trim branches 1" from the main trunk of the stems to prevent snagging passing hikers and to prevent tree injury.
- Branches growing towards the trail should be cut back to the next limb growing away from the trail (to encourage growth away from the trail).
- It is better to remove all lateral branches than to remove the tree top since removal of the terminal bud will encourage lateral growth across the trail.
- Grubbing with a cutter mattock or pulaski may be necessary to clear the tread of long neglected trails; do not remove any more vegetation than is necessary to define the tread.

Equipment:

- Long handled clippers (loppers),
- Weeders (swing blades),
- Small saws,
- Pulaskis or cutter (#3) mattocks (for grubbing out vegetation in the trail tread),
- Power weeders (except in designated wilderness areas),
- Proper safety equipment (goggles, ear protection, gloves).

Clearing Fallen Trees and Windfalls

Objectives: Perform safe removal of dangerous trees and allow passage along the trail while retaining features contributing to trail maintenance and to user enjoyment. Timely removal of trail obstructions minimizes visitor-created detour trails which degrade the resource and complicate effective trail maintenance.

General Standards:

- Safety is the primary consideration. Do not attempt to remove large or "hung-up" trees alone. Do not exceed the capability of equipment or personal skills.
- Clearing should be done at least once each year in early spring to remove winter storm damage; additional work may be necessary during the year due to storms.
- Clear to the same width of cleared vegetation.
- Appropriate safety equipment must be worn (goggles, ear protection, chaps, helmet, gloves). Personnel should also protect themselves from tick infestation (long sleeves, tick repellent). Personnel should clear trees in pairs and must be checked out by a supervisor before performing chain saw work. Primitive tool crosscut saw and grip hoist work can be even more dangerous than chainsaw work in some situations; safety equipment including gloves and a helmet must be worn.

Standards for low-use Wilderness and Non-wilderness Blue-blazed trails

- Remove only those trees, windfalls, or other obstructions which do not lie flat on the ground or which cannot easily be stepped over or walked under by a person carrying a backpack.
- The cleared width should allow persons to walk or ride single file.

- In wilderness, if the width of deadfalls are so large that a tremendous amount of effort and manpower will be required to remove the deadfall, or if worker safety is seriously compromised with primitive tool work, consideration should be given to relocating the trail around the obstacle, but only as a last resort. Steepness of slope, length of detour, difficulty in getting around the obstacles are factors which should be considered. Chainsaw use under these circumstances requires parkwide project clearance and compelling evidence for use of mechanized equipment.

Standards for moderate-use and high-use Wilderness and Non-wilderness Blue-blazed trails and for the Appalachian Trail

- Remove all fallen trees, windfalls, and other obstructions from trail, except those which prevent erosion (by acting as waterbars), prevent access by vehicles at trailheads, and which can be easily stepped over without breaking stride. Trees not removed should lie flat on the ground and should be less than 12" in diameter.
- All obstructions should be removed as soon as possible (particularly from spring through autumn) to prevent danger to users and discourage hikers from walking off the trail).

Techniques for Clearing Fallen Trees:

- Remove material far enough from trail side to prevent snagging of hikers.
- Watch the tension on fallen trees; saw so the natural tension opens the cut rather than pinches the saw.
- Use pry poles or levers to relieve tension and open the saw cut.
- Drag windfalls away from the immediate sight of the trail. Try to reduce the visual impact of cut trees by turning cut ends of logs away from view of the trail. Flush cut stumps to the ground to reduce visual impact and to encourage rapid decay of the stump.

Equipment:

- Bow saws,
- Cross-cut saws,
- Axes,
- Clippers,
- Chain saws (for non-employees, use only as authorized by General Agreement with the Park or as advised by a district supervisor for Volunteers-In-Park personnel; chainsaws and other motorized equipment are prohibited in wilderness except as approved by Superintendent).
- Grip hoist (especially for use as primitive tool to drag trees and large rocks off trails in wilderness).

Trail Tread (Erosion Control and Prevention)

Objective: Maintain or restore a trail tread (the footpath surface) which is safe for users and prevents the deterioration of the trail resources.

All maintenance activity expected to occur outside of the original footpath and associated water control features must have park-wide project clearance completed and approved. Use of natural materials is required in trail construction work; use of dimension lumber is discouraged and use of pressure-treated or creosote-treated lumber is not permitted.

General Standards:

- Install grade dips or install waterbars on all slopes at a frequency sufficient to eliminate water from the trail before erosion occurs.
- Install checkdams in badly eroded trails to retain sediment and restore tread. Checkdams are less effective than waterbars.
- Keep culverts clear of silt and organic debris.
- Clear debris from streams downstream from trail crossing (to prevent damming and flooding on the trail).
- Dig channels for small streams and channels for streams to cross the trail without travelling along the trail.
- Remove accumulated silt and organic debris from waterbars in spring or when needed.
- Remove loose stone and other debris which could cause hikers to trip or twist an ankle.
- Discourage shortcutting of switchbacks by blocking shortcuts with branches and other debris. Heavy materials such as stumps or rocks might be used so that people do not remove them.

Standards for low-use Wilderness and Non-wilderness Blue-blazed trails

- Annual maintenance may be sufficient; sections with unusual problems may require additional maintenance. The prevention of resource damage (erosion) should dictate the frequency of maintenance, with minimal amount of work.

Standards for moderate-use and high-use Wilderness and Non-wilderness Blue-blazed trails and for the Appalachian Trail

- All waterbars should be cleaned and restored at least once each year due to erosion damage and wear from heavy foot.

Techniques:

Waterbar construction:

- Choose locations along the trail which naturally tend to allow water to run off the trail such as turns in the trail. Restore old waterbars if possible. Place waterbars near the top of a slope to prevent water from gaining momentum.
- Construct a waterbar by digging a shallow trench at a 30-40 degree angle from the perpendicular of the trail and placing in it 10-12" rocks or a log. Strip bark from logs to slow rotting and use hardwoods like black locust. (Do not cut standing trees for this material!) Rocks or logs should protrude about 6" above the level of the tread on the downhill side (use a 10" to 12" diameter log). Cover rocks with small rocks and soil to create a mound. Secure logs with wooden stakes (natural stakes are preferable) or rocks on the downhill side. Cover stakes or rocks with soil and compact well. Another alternative is to construct a waterbar with well packed soil alone.
- Slope the trail above the bar gently toward the bar to create a broad trench. The lowest point of the trench should be at the bar and should be below the level of the trail tread on the downhill side. Do not expose so much of the downhill side of the waterbar that it becomes undermined by erosion.
- The waterbar should extend past the tread on both sides of the trail.
- The trench should extend beyond the waterbar and should be fanned out to assure that water is adequately dispersed and does not return to the trail.
- Drainage ditches alongside the trail may be used to move water to a suitable location for drainage away from the trail.
- Compact waterbars well so that use will not damage them. Do not leave protruding rocks or stakes which could trip a hiker.
- Fallen logs laying directly on the ground and which can be easily stepped over make good waterbars and checkdams.

Checkdam construction:

- Where a drainage waterbar cannot be constructed due to high berms on both sides of the trail, construct a simple wood or rock dam perpendicular to the trail to collect silt and debris washing down the trail. Construction should be substantial enough to prevent hikers stepping on the dam from breaking it down.
- When the area behind the dam is full, build another dam further down the slope.

Waterbar maintenance:

- Remove all loose material from the trench; clear trench outside of tread to allow water to move away from the trail.
- Dig or scoop out accumulated silt from the trench; put all accumulated soil on the backside of the waterbar. Do not throw the soil to the side of the trail. Soil is a precious commodity as evidenced by eroded trails. The bottom of the trench next to the bar should be slightly below the level of the tread on the downhill side of the bar.
- If necessary, rebuild or repair the bar itself.

Obtaining tread material:

The following are good sources for tread fill material:

- Deposited material from up-trail erosion (ie., waterbars, checkdams).
- Material from the footpath.
- Material may also be pulled from the banks or berms of the footpath area.

The source for tread material needs beyond the above must be approved by park staff. Borrow pits are not to be dug. Any disturbance of the soil beyond the trail tread, berms, and associated water control features itself must have project clearance.

Equipment:

- Pick mattock, cutter-mattock, or Pulaski
- Shovel,
- Ax,
- Saw,
- Fire rake or McCleod.

New Trail Construction or Relocations

All proposed new trail constructions or relocations must be approved by the Superintendent and are subject to project clearance. Project clearance must be obtained anytime the soil is to be disturbed outside of the existing trail tread, berms, and associated water control structures. Any trail relocations and new trails are to be constructed in a manner promoting hiker safety and resource protection. No new trails will be constructed within designated Wilderness.

APPENDIX C

MAINTENANCE STANDARDS for HUTS and MAINTENANCE BUILDINGS

These buildings are historic structures eligible for the Historic Register. All buildings are more than 50 years old and must be treated as eligible unless determined otherwise.

Hut Use

The purpose of the seven Appalachian Trail huts is to provide overnight accommodations for self-contained and self-propelled long-distance Appalachian Trail hikers.

Occupancy of the huts is on a first-come, first-served basis. It is intended that only one night stay will be permitted. A PATC official or Park official may waive this rule in the event of injury, illness, or other compelling circumstances. A backcountry camping permit is required for overnight camping at huts. If the hut is filled, camping activity must be in strict compliance with the park's backcountry camping regulations which includes use of designated campsites located nearby. SHEN posts hut use policy and backcountry camping regulations at huts. PATC hut overseers are permitted vehicle access to huts per the gate key and administrative road use policy at Appendix D.

Listing of Huts:

Hut Locations	District	Approximate Mileage South of Compton Gap via AT	Approximate Mileage North of Rockfish Gap via AT
Gravel Springs	North	12	91
Pass Mountain	North	25	78
Rock Spring	Central	40	63
Bearfence	Central	51	52
Hightop	South	63	40
Pinefield	South	71	32
Blackrock	South	83	20

Maintenance Building Use

Three maintenance buildings are provided for the exclusive use of PATC and are located at **Indian Run in the North District**, **South River in the Central District**, and **Ivy Creek in the South District**. These buildings are shelters which are enclosed and locked and serve as bases of operations, bunking facilities and tool storage depots for PATC's ongoing trail maintenance activities. Building use is not available to the general public and visitors must camp at least 100 yards and preferably out of sight of these facilities.

PATC maintenance building overseers and trail overseers/crew leaders are permitted vehicle access to maintenance buildings per the gate key and administrative road use policy at Appendix D. Larger PATC trail crews exceeding occupancy limit of maintenance buildings are permitted to tent camp in grassy areas in the immediate area of the PATC facility land assignment. Backcountry camping permits are not required for overnight use of maintenance buildings but a log needs to be maintained to report annual “overnight visitor use” figures to SHEN for each facility.

Based on recommendations by the annual work plan for expected routine and cyclic maintenance for the following year, a Project Clearance Form must be processed by SHEN and work to be performed must comply with Section 106 of the National Historic Preservation Act, subsequent regulations, and the Secretary of the Interior’s Standards for Rehabilitation (36CFR67). A detailed, concise description of work to be done must be provided in order for Project Clearance to be initiated. Essentially, modification or repairs potentially impacting original, historic design and construction requires use of in-kind replacement materials and adherence to the historic appearance and integrity of the structure as approved through SHEN Project Clearance.

MAINTENANCE STANDARDS

FACILITY EXTERIOR

- 1. Structure Condition** The exterior of the buildings and other outdoor appurtenances must be in good physical condition, maintained to protect against deterioration and kept clean and in good repair.
- 2. Grounds** *(NOTE: Need to address land assignment boundaries for all structures to determine appropriate treatments. PATC and SHEN will cooperate to determine these boundaries upon the baseline evaluation of structures; grounds assignments will be forthcoming by December 31, 2001.)* Grounds shall be well maintained (mowed), uncluttered, and free of litter. **Trails:** Responsible for maintaining to a good condition certain connecting trails to the structures that are not included in the trails listing at Appendix A, such as trails to water supplies, outdoor toilets, connecting to AT, etc. **Water Supplies:** Water is available nearby at all structures. In coordination with SHEN, PATC will provide any necessary maintenance to each spring and any supporting facilities, whether located within or outside of the land assignment. **Firewood:** Standing trees, whether dead or alive, may not be cut. Dead and down firewood may be gathered and used in SHEN-provided fireplaces or PATC-provided woodstoves only. **Hazard trees** should be reported to the District Ranger or SHEN Communications Center. SHEN is responsible for removal of hazard trees at backcountry structures.
- 3. Public Signs** Public signs for which PATC is responsible must be appropriately located, accurate, attractive, and well maintained. Signs of a permanent nature shall

be prepared in a professional manner, consistent with SHEN standards and appropriate for the purpose they serve, and be approved by the Superintendent prior to installation.

4. Garbage and Trash Trash receptacles are not provided as occupants are required to pack out all trash, garbage and refuse. Burying refuse is not allowed, and no perishable food is to be left in structures. Accumulated ashes must be carried out for disposal or screened for trash and scattered widely and out of sight of the structure.

FACILITY INTERIOR

1. Public Signs Public signs for which PATC is responsible must be appropriately located, accurate, attractive, and well maintained. Signs of a permanent nature shall be prepared in a professional manner, consistent with SHEN standards and appropriate for the purpose they serve, and be approved by the Superintendent prior to installation.

2. Interior, General The interior of structures shall be clean and well maintained. Furniture provided shall be in good repair, commensurate with the size and intended purpose of the facility and adequate in quality and quantity for the users' comfort. Floors must be clean, free of litter, and in good repair. Walls and ceiling are to be free of breaks or leaks. **Food storage:** Users are required to store all food out of reach of bears, rodents and other wildlife. Food may be stored securely in a rodent-proof container inside of enclosed maintenance buildings, stored outside of open structures in accordance with park backcountry camping food storage regulations, or on a bear-proof food storage pole, if provided.

3. Windows Windows must be clean and free from breaks. Window coverings, if provided, must be clean, in good repair, and ensure privacy. Shutters, although they may be secured from the outside for security purposes when the facility is unoccupied, must open from the inside.

4. Bed Condition Bed frames, bunks, and pads, for sleeping bags, when provided, must be in good repair.

5. Illumination Lanterns, oil lamps, etc., if provided, must be in good repair and maintained in a safe condition. Written instructions for use must be posted. (Flammable or volatile liquids must be stored in approved safety containers.)

6. Environment Closed structures are to be well ventilated, odorless, and reasonably free of insects and rodents, or evidence thereof. Doors and windows must be sufficiently tight to preclude entry of rodents and insects. **Pest control** for huts and maintenance buildings must be approved in advance by the Park's Integrated Pest Management Specialist before any control action is attempted. No poisons,

fungicides, insecticides, etc. may be used without prior written approval from the Superintendent.

7. **Security** All doors and windows must have operable locks or locking devices.

OPERATIONAL

1. **Emergency Notice** Procedures for contacting the appropriate authorities in case of emergencies must be prominently posted.

SANITATION

1. **Outdoor Toilets** Outdoor toilets must be adequate and of sound construction. Structures must be insect and rodent tight and doors self-closing and lockable. Facilities must be kept clean and reasonably free of odor and insects – using SHEN approved chemical treatment as necessary. Pits and seats must be vented. Toilet seats and lids must be moveable. Lime treatment must be applied to the pit by overseers on a regular basis. Pit capacity must be maintained below surface grade. Vault toilets are to be pumped out and pit toilets are to be serviced by PATC as needed.

OTHER

1. **First Aid Supplies** Small first aid kits, etc., where provided, shall contain adequate supplies to treat minor injuries.

2. **Fire Protection** Fire extinguishers, if provided, must be in good working condition. Extinguishers must be provided in maintenance buildings furnished with a woodstove. Extinguisher should be visually inspected monthly for defects and strength of charge. All doors and windows shall have the capability of being opened from the inside when the facility is occupied. No flammable or volatile liquids may be stored inside the facility. No storage of firewood inside maintenance buildings unless stored within a metal container to control insects. Fireplace and stove chimneys, flues, caps, and stoppers must be in good repair. Spark arrestors are required. Ash pits and fireplaces are to be cleaned as necessary and maintained in good condition and ashes properly disposed of. All outdoor fires are confined to established fireplaces.

**Shenandoah National Park
Backcountry Huts and Maintenance Buildings**

Periodic Evaluation Report

FACILITY: _____

NOTICE: The element(s) checked (X) below were found deficient and need correction by the date specified below.

Follow-up evaluation will be conducted to determine corrective action taken.

- | | |
|---|---|
| <p>Item #</p> <p>Element</p> <p>A. FACILITY EXTERIOR</p> <p>1. Structure Condition _____</p> <p>2. Grounds _____</p> <p>3. Public Signs _____</p> <p>4. Garbage and Trash _____</p> <p>B. FACILITY INTERIOR</p> <p>5. Public Signs _____</p> <p>6. Interior, General _____</p> <p>7. Windows _____</p> <p>8. Bed Condition _____</p> <p>9. Illumination _____</p> | <p>Item #</p> <p>Element</p> <p>10. Environment _____</p> <p>11. Security _____</p> <p>C. OPERATIONAL</p> <p>12. Emergency Notice _____</p> <p>D. SANITATION</p> <p>13. Outdoor Toilets _____</p> <p>E. OTHER</p> <p>14. First Aid Supplies _____</p> <p>15. Fire Protection _____</p> |
|---|---|

ITEM #	EVALUATION OBSERVATIONS	CORRECT BY (date)	DATE CORRECTED
EVALUATION	DATE	NPS EVALUATOR	PATC OVERSEER
INITIAL			
FOLLOW - UP			

APPENDIX D (revised 11/01/03)

**Administrative Road and Closed Skyline Drive Access
by PATC Volunteers**

General Policy Prohibited vehicle access to administrative roads and the closed Skyline Drive applies to PATC trails and facilities overseers and other volunteer workers as it does the general public (reference: 36 CFR 1.5). PATC volunteers are expected to comply with all other laws and Park regulations.

To provide PATC overseers, volunteer workers, and officers with access to certain roads and facilities to accomplish **specifically authorized activities** beneficial to the park, the following conditional **privileged exception** is authorized:

PATC overseers and officers have permitted vehicle access to cabins, huts and maintenance buildings only for transporting building materials or supplies for scheduled trail crews. PATC vehicle travel must be kept to an absolute minimum on administrative roads. A PATC overseer sign (placard) should be clearly displayed on the dash of the vehicle so that the identity of ownership of the vehicle is immediately apparent to visitors and park employees. Guests will not be given permission to use any access roads.

Justification

- When closed to the public, access to the Skyline Drive is not permitted for safety reasons and for administration of closed areas (ie. seasonal nighttime closures to discourage hunting).
- Vehicle use of administrative roads must be minimized to reduce degradation of road conditions (especially in wet weather) and maintenance requirements, to minimize impacts of vehicle traffic to visitors hiking administrative roads, and for the safety of visitors on foot and on horseback.
- Administrative roads are used by Ranger personnel for patrol and emergency access and by other park employees and researchers for access to backcountry work sites among other official uses. Frequent and excessive use of administrative roads is potentially high and shall be kept to a minimum.

Gate Keys

SHEN has issued gate keys (#SSM1A) to PATC for distribution to overseers and officers by the PATC key officer.

- Keys will not be loaned out by park officials, PATC overseers, or District Managers but may be available for loan to overseers at PATC headquarters by authorization of the PATC key officer or District Manager for specific work projects.
- The gate key may not be duplicated.
- Gates must be closed and locked each and every time they are opened.

- The loss of a key may result in the individual remitting \$10 to SHEN for its replacement.

Other Operational Information

- **Inappropriate or unauthorized access** of the closed Skyline Drive or of an administrative road by PATC personnel may result in an administrative action against the individual by the PATC; an enforcement action (warning or citation) by SHEN; and potentially the revocation of the gate key and individual privileges.

Permission to access the closed Drive may be granted on a case by case basis by the District Ranger. PATC overseers/volunteers must obey all traffic devices (36 CFR 4.12): without exception, PATC personnel must comply with any barricades and signs. If an “outbound” gate is left open by park officials for egress by park visitor vehicles from the park, access around the “road closed” gate to enter the park is prohibited. *Unauthorized use of the Skyline Drive when it is closed can harm Park operations and possibly result in safety hazards to others.*

Vehicle access on administrative roads is not permitted for personal “**inspection trips**” which do not include transport of building materials or supplies for scheduled work crews to accomplish work.

Transportation of trail overseers or crews over administrative roads to perform trailwork is permitted on an as needed basis to transport special trail maintenance tools and equipment. **District Rangers or the SHEN Communications Center must always be informed of such use in advance.** Rangers must be informed of any accidents or incidents associated with such use as soon as possible after the fact.

District	District Ranger	Phone #	Location
North	Dixon Freeland	(540)999-3101	Panorama
Central (except Greene & Rockingham counties)	Lora Peppers	(540)999-3211	Big Meadows
South (includes all of Greene & Rockingham counties)	Bobby Fleming	(434)985-7293	Simmons Gap
Com Center	(Dispatcher)	(540)999-3422	Headquarters

- **Parking:** One vehicle only may be kept overnight at a hut or maintenance building if the vehicle access meets the above stated conditions. **District Rangers or the SHEN Communications Center must always be informed of such use in advance.** A vehicle should never be parked, even temporarily, so as to block use of the road. Vehicles should be parked in designated parking areas intended for visitor use.

- A **backcountry camping permit is required** for tent camping or the use of an AT hut as it is with the general public. A permit is not required for overnight use of a maintenance building or cabin, but the group leader must register with PATC. PATC is responsible for registering cabin and maintenance building users. PATC workers who wish to use a hut should be sensitive to long-distance hiker needs at peak use times so as to not displace those users. Workers are also encouraged to have the camping permit issuer note “PATC work trip” on the permit.

APPENDIX E

**VOLUNTEER IN THE PARKS
PROGRAM AGREEMENT**

APPENDIX F

COOPERATIVE AGREEMENT

PATC SHENANDOAH CREW