



CONSERVATION

ATV Sustainability Assessment

Flint River Council
Boy Scouts of America

26 FEBRUARY 2014

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EXECUTIVE SUMMARY.

The Conservation Committee of the Flint River Council conducted an outdoor recreation sustainability assessment between September 2013 to February 2014 to evaluate the environmental impacts and concerns associated with adding an all-terrain vehicle (ATV) program on the Gerald I. Lawhorn Scouting Base. Following a successful 3-year pilot project, ATV riding as an official program for local Boy Scout councils began with the 2012 camping season. The Flint River Council has been selected to participate in the ATV program starting in 2014, with a maximum of fourteen ATV's on loan for an initial three year period. Only Council leased or owned or National B.S.A. program lent ATV's may be used for this youth program.



Figure 1. National Jamboree 2013 ATV RiderCourse.

This Sustainability Assessment is published to document compliance with the requirements identified in the formal 2013 All-Terrain Vehicle (ATV) Program Application by the Flint River Council, B.S.A. to the Outdoor Adventures Group, Boy Scouts of America.

ACKNOWLEDGEMENTS

This assessment was accomplished through the contributions of the Conservation Committee volunteers and professional staff of the Flint River Council, along with input from members of the Outdoor Ethics Task Force, National Camping Committee, B.S.A.. Comments were also provided by the ATV Safety Institute and Tread Lightly! This report is the summation of our Committee evaluation of implementing this program, and does not necessarily reflect the official position of the National Council, B.S.A. or of any government agency, business or other organization.



**Flint River Council, Boy Scouts of America
P.O. Box 173
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ALL-TERRAIN VEHICLE SUSTAINABILITY ASSESSMENT

SCOPE OF ASSESSMENT.

Conditions of Acceptance. Councils are responsible for purchasing required safety equipment including Personal Protective Equipment (PPE) and for destination charges for the ATVs. Regular maintenance is required to keep the machines in safe working condition. Adult staff (at least two recommended) leading the ATV program will need to complete formal instructor training from the ATV Safety Institute (ASI). In addition:

- The program must adhere to all local, state, and federal guidelines, including vehicle registration and age restrictions, licensing and/or certification courses, equipment standards, number of riders, and any other standards recommended by the original equipment manufacturer or other governing body.
- The program must follow the council's conservation plan to minimize the environmental impact and concerns.
- The council must hold a meeting with key volunteers to discuss conservation, trails, and potential concerns of the Scouting community.
- The council must fully comply with the Sweet Sixteen of BSA Safety.
- The council has an active council risk management committee.

FEDERAL GUIDELINES.

The Consumer Product Safety Improvement Act of 2008 ("CPSIA") directed the Consumer Products Safety Commission to "publish in the Federal Register as a mandatory consumer product safety standard the American National Standard for Four Wheel All-Terrain Vehicles Equipment Configuration, and Performance Requirements developed by the Specialty Vehicle Institute of America (American National Standard ANSI/SVIA 1-2007)." 15 U.S. CODE § 2089 - ALL-TERRAIN VEHICLES. This standard was revised in 2010 as ANSI/SVIA 1-2010. Under the standard an all-terrain vehicle is defined as a motorized off-highway vehicle designed to travel on four low-pressure tires, having a seat designed to be straddled by the operator and handlebars for steering control. Type I designated ATVs are for use by a single operator and no passenger.

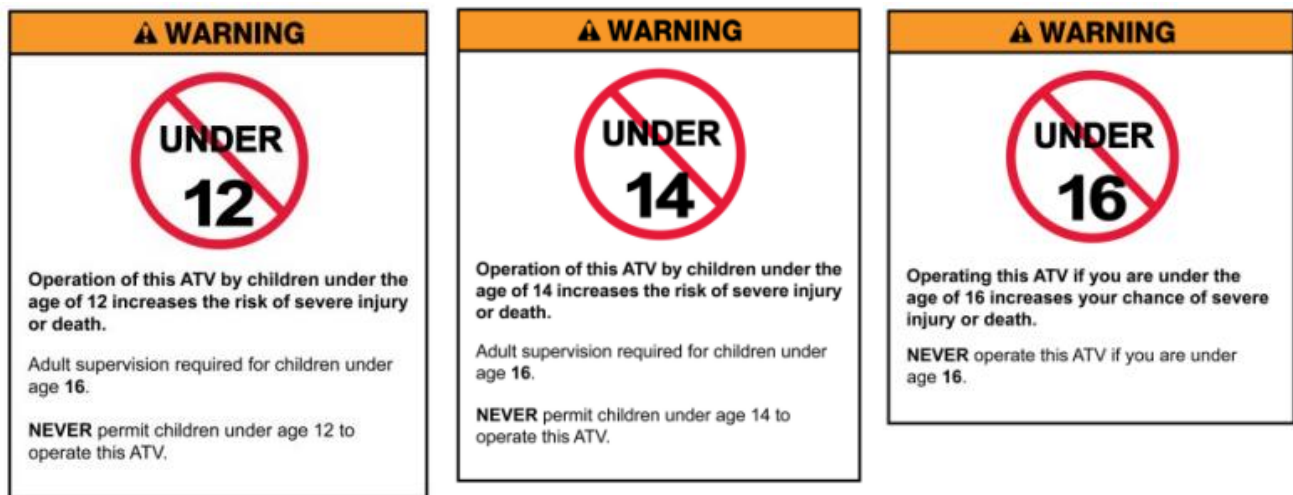


Figure 2: Required Manufacturers labels on the ATVs indicate the rider's minimum age.

This standard improves the matching of the ATVs available to the physical size, capabilities, and expectations of younger riders. The new youth models categories and the Transition model category are based in part on two types of investigations: (1) analysis of norms for speeds of products as they related to child age or development and (2) analysis of various aspects of child development. The youth rider under the age of 16 must be matched to a suitable ATV following these categories, and must not ride an adult-sized ATV. The mandatory standard defines youth-sized ATVs by their maximum speeds, rather than strictly by engine size. The maximum limited speed capability with a speed limiting device is 15 mph for Y-12+, and 20-30 mph for Transition size Y-14+. Without a speed limiting device, the maximum speed capability increases to 30 mph for Y-12+, and 38 mph for Transition sized Y-14+.

GEORGIA STATE LAW.

ATV's are classified as off-road vehicles by the Off-Road Vehicle Act of 1975, Georgia Title 40 Motor Vehicles and Traffic, Chapter 7 Off-Road Vehicles. ATV's may not be operated on any private property without the express written permission of the owner of the property or his or her agent. ATVs may not be used without operative brakes or without mufflers or other silencing equipment. ATVs may not be operated within any perennial stream, except when directly crossing such stream. No vehicle registration, age restrictions, driver license or training courses are mandated.

LOCAL CODES AND ORDINANCES.

No Upson County codes have been identified that will impact the operation of ATVs on Gerald I. Lawhorn Scouting Base.

CONFORMANCE WITH CAMP CONSERVATION PLAN AND OTHER PLANS.

This outdoor program is in conformance with the Camp Conservation Plan 2012 and the Pine Mountain Backcountry Plan 2011. Although ATV use is not specifically identified in these plans, it is clearly consistent with all goals and objectives, which include:

- Provide for continued sustainable recreation development within existing front country and backcountry program areas and recognize existing high impact land uses.
- Provide for a recreational trail system from the Frontcountry camps through the Pine Mountain Backcountry that is accessible to all.

This program also conforms to the Vision 2020 mission in the Long Range Camp Plan.

- Lawhorn Scouting Base is recognized as a premiere Southern Region Scout camp; delivering the promise of high adventure and personal development learning experiences in exceptional outdoor settings for the youth, leaders and community the Flint River Council will serve in 2020 and beyond.

The Camp Ranger, adult staff and volunteers currently operate council and privately owned ATV for program support. The Hunting Lease program permits lease holders the right to utilize one (1) "4-wheeler"/privately owned ATV for hunting purposes only, during hunting season only. This lease does not give Lessee or his Club Members the right or authorization to use motorized vehicles of any sort, during or outside of hunting season, for recreational purposes. These ATV will not be

used for the youth ATV program and should not have any impact on youth ATV trail rides in the Pine Mountain Backcountry trail system.

THE ATV RIDERCOURSESM.

Boy Scouts and Ventures age 14 and older attending Summer Camp and weekend units by reservation may participate in the ATV *RiderCourse* and guided ATV trail rides. The ATV Safety Institute training is adaptable to the various terrains found throughout the country and on Lawhorn Scouting Base. Criteria for choosing a range site location for a course include:

- An off-road level area about 150-feet by 200-feet. Minimum - 100' x 200' (30m x 60m).
- A surface that is not pavement or ice and that is free of obstacles, ruts, mounds, fences, mud, water, and guide wires. The learning area may have a loose or hard dirt surface. A grassy surface is also acceptable. It should not have two different surfaces. Under no circumstances should the surface be concrete or asphalt.
- Land that is easily accessible by car and truck hauling an ATV.
- A location that takes environmental concerns into consideration including noise distraction, dust, vegetation, and wildlife.

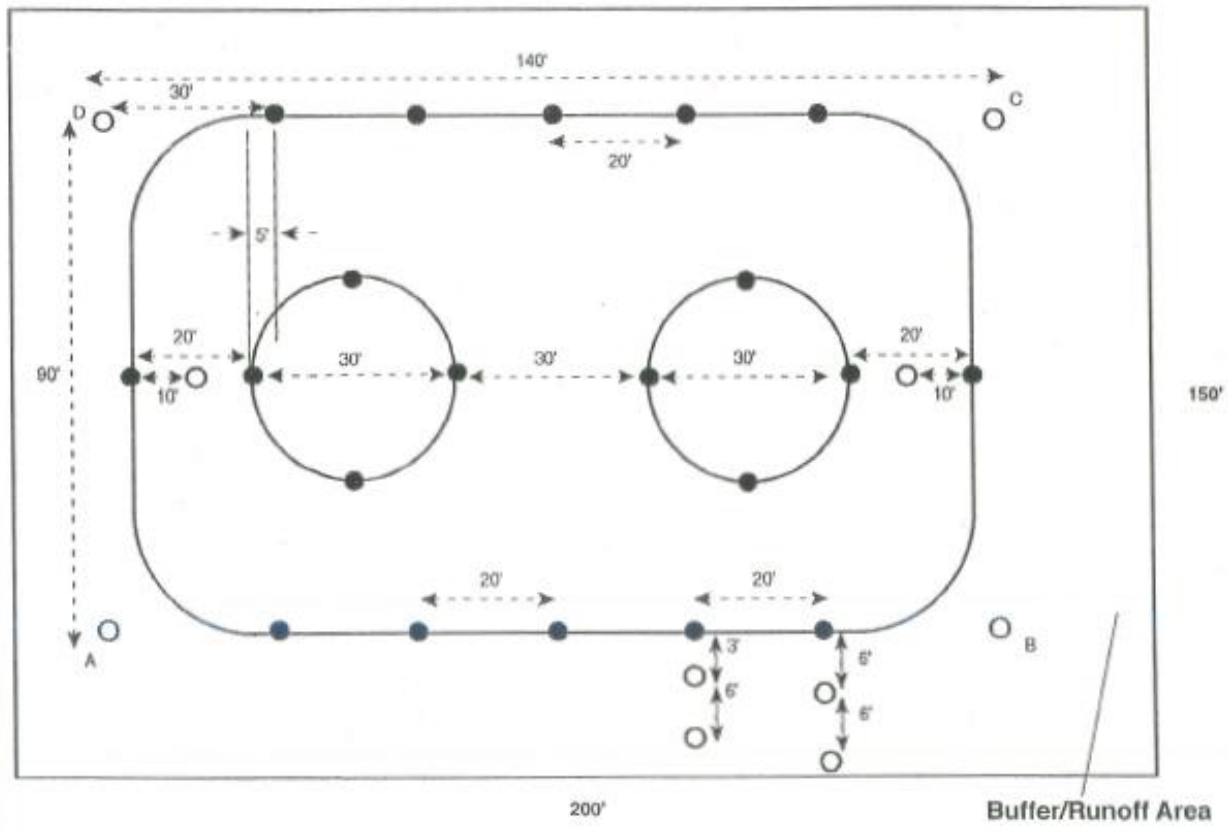


Figure 3. Standard Range Design for an ATV *RiderCourse*.

The ATV *RiderCourse* lasts a minimum of four hours and includes 90% of the time riding on the small range area, an adjacent Easy rated trail with features to train specific skills, and a final trail

ride as available. The course primary emphasis is on developing safe riding habits by youth-age riders. Included is an introduction to Tread Lightly!^(R) principles that encourage responsible use of the environment. The maximum size of any course is 8 Scouts and one ATV adult instructor.



Figure 4. Boy Scout Council Level ATV Riders Safety Course.

ATV RIDE PROGRAMS FOR UNITS.

Boy Scout and Venture units may also participate in the Council ATV program. All youth must be at least 14 years old. All riders must complete the four hour *ATV RiderCourse* before beginning their guided trail ride. The maximum size of any guided trail ride is 12 Scouts and adult leaders and one ATV adult instructor. Only ATVs owned or leased by the Camp may be used.

POTENTIAL CONSERVATION ISSUES.

The Council Conservation Committee has discussed the proposed program and potential issues associated with an ATV program by onsite inspection, meetings, phone calls, email correspondence and consultation with National experts. Significant issues identified for mitigation included:

- Noise, exhaust, and petroleum leaks (fuel and oil).
- De-confliction of land use with existing programs: ranges, hiking, biking and hunting.
- Concentrating impacts to the backcountry trail system and neglected trail maintenance.
- Potential impacts to soils, rock faces and vegetation in identified sensitive areas.
- Potential impacts to sensitive animal species, wetlands, and cultural resources.

Additional management issues identified relating to the program included:

- Active Council Risk Management Committee review of this program in operation.
- Physical and medical screening of participants. In order for a person to ride an ATV safely and effectively, they must be able to use their body weight to help make the quad turn. No matter how skilled a child is, if the ATV is too heavy, or if they cannot use both arms and legs due to an injury or disability, they will not be able to control it safely.
- Controlling spectators and participants, communicate improper ATV use is not allowed.
- Integration into program, health & safety and first aid response plans.
- Managing vehicle traffic and designated parking in the staging area.
- Placing all ATV training courses, obstacles and support operations on previously used heavy impact areas and existing suitable trails to minimize potential new impacts.
- Installation of acceptable ATV trail markings and signs.

RECOMMENDED ENVIRONMENTAL PROTECTION MEASURES.

The Council Conservation Committee recognizes that ATVs have been in low volume use on the property for numerous years by the Camp Ranger, camp staff, and hunters. Trail damage and erosion from lack of maintenance is already present in the Elkins Creek area and on several of the forest roads in the Pine Mountain Backcountry. We recommend implementing at a minimum the following tasks and mitigation measures by the Trail Committee, Council Property Committee, Camp Staff, Council Conservation Committee, a future ATV Committee, and the Council Risk Management Committee to bring all permitted uses into compliance with BSA's guidelines. These actions together will substantially mitigate the significant increased traffic impact of a formal youth ATV program on both Frontcountry camp areas and the Pine Mountain Backcountry trail system.

Trail System – Pine Mountain Backcountry Committee.

- Complete trail survey and preliminary clearing of Timber Trace, Venture, and Valley Vortex connecting trails.
- Post special markers on designated ATV routes at trail start points and intersections.
- Install wooden bridges for ATV passage on the Venture trail crossing intermediate streams.
- Update all Pine Mountain Backcountry Trail Kiosk to include ATV material.



Figure 5. Potential ATV Program Pavilion Site. Figure 6. ATV Backcountry Trail Route.



Figure 7. Example ATV *RiderCourse* Range Sites.

Infrastructure – Camp Property Committee.

- Prepare to host the ATV program at the Camp Thunder Maintenance Compound in order to provide adequate security, storage and maintenance capacity for the ATVs.
- Prepare an adjacent suitable flat area 150-feet by 200-feet with durable gravel surface as the permanent designated range for hosting the *ATV RiderCourse*.
- Provide access to a toilet at the Compound.
- Provide overhead shade and seating for 12.
- Develop ATV refueling and maintenance procedures, to include hazardous material cleanup and disposal. Procure spill kits and two Class AB fire extinguishers at the fuel point.
- Employ identified Best Management Practices (BMPs) for proper forest road maintenance and ATV trail design. BMP are designed to minimize erosion and potential sedimentation into streams and lakes during forestry activities. BMPs are required in certain sensitive areas identified by the Georgia Department of Natural Resources, such as Protected River Corridors, mountaintops, water supply watersheds, and all stream or wetland crossings. Necessary tasks include correcting existing and potential erosion issues by installation of water bars and drainage dips. Periodic grading of forest roads should be anticipated to reduce some of the expected ATV surface impacts and ensure safe operating conditions.
- Conduct routine scheduled ATV trail assessments and prioritize resources for forest road maintenance following BMP that supports emergency access and safe ATV trail rides.



Figure 8. Example shaded area with seating for the *ATV RiderCourse*.

Program, Health and Safety – Camp Staff.

- Ensure ATV Instructors and all participants (Youth, Adults/Staff, Hunters) sign an ATV Operations Agreement and the camp Hold Harmless Agreement.
- Ensure ATV Youth riders and staff have physical and medical clearance to operate an ATV.
- Ensure adult camp staff and volunteers operating ATVs will complete either the ATV Instructors Course, the *ATV RiderCourse* or the online ATV Safety E-Course.
- Consider leasing or purchase of two ATV for the adult instructors to maximize the number of available ATV for 8 youth participants in the *ATV RiderCourse*.

- Ensure two deep adult camp staff leadership at the ATV driving range and on trail rides.
- Restrict ATV Youth Program trail routes to these single track trails and dual track roads to minimize impacts to sensitive biospheres and soil conditions: Venture (.5mile), Timber Trace (1.0 mile), Valley Vortex (.8 mile), and Muddy Slash (2.6 miles).
- Evaluate weather and trail conditions daily during ATV program. Close trails that are too wet to support ATV trail rides until they are sufficiently dry for safe operation.
- Update the camp Emergency Plan to include recovery of a disabled ATV or accident with injury in the Backcountry. Include emergency vehicle access requirements.
- Equip a camp vehicle and train staff to recover a disabled ATV in the backcountry.
- Provide a first aid kit on the training site, along with emergency procedures.
- Ensure ATV Instructors have current First Aid and CPR certifications, and have completed Hazardous Weather and the ATV Safety Institute Instructor course.
- Obtain council-approval for the ATV activity patch including outdoor ethics.
- Supply drinking water at ATV course with portable water tanks.
- Ensure participants have access to a toilet and are provided adequate shade.
- Procure for the ATV Instructor/Guides the following at a minimum to be carried on their ATV: first-aid kit*, Class AB fire extinguisher, radio and cellphone*, 25 feet of sturdy rope*, 5 feet of rolled duct tape*, field sanitation kit, sun screen, spare water, and a copy of the emergency procedures. *Mandated by National BSA.
- Procure ATV safety equipment including helmets, gloves, pads and goggles. Develop sanitation and cleaning protocols for these items.
- Safety flags mounted on the rear of the vehicle are not required for the ATV *RiderCourse*, and are not appropriate for use on wooded trails. Flags are used on open dune areas.
- Procured safety cones and markers for the training range and skill trail.



Figure 9. Example Tread Lightly! (R) ATV Handouts, and Hang Tag.

Outdoor Ethics Education and Promotion – Council Conservation Committee.

- Provide the Tread Lightly! (R) 101 Awareness Course to ATV Instructors and camp staff.

- Develop an outline for ATV Instructors in coordination with Tread Lightly! to support enhanced presentation of outdoor ethics guidelines to all *ATV RiderCourse* participants, and during all ATV activity orientations before beginning riding.
- Obtain Tread Lightly! materials for distribution to ATV program participants.
- Include outdoor ethics in an ATV Activity Guide for the Pine Mountain Backcountry.
- Update all Pine Mountain Backcountry Trail Kiosk to include ATV material.

Hunting Lease Program - Council Conservation Committee.

The hunting lease agreement should be updated to include requiring a Hold Harmless Agreement, and an ATV Operators Agreement with specific citation of Federal guidelines, State laws for ATV use, along with camp ATV rules and Tread Lightly! outdoor ethics guidelines.



Figure 10. Example Tread Lightly! ATV Posters.

ATV Program - ATV Committee.

The Camping Committee should form an ATV Committee to support this program with an active trained cadre of staff and volunteers to serve as instructors and assistants. The ATV Safety Institute offers the 4 day ATV Instructor Course monthly at a nearby driver training facility in Alpharetta, Georgia. National BSA will verify and approve no cost attendance of all council participants. Adult volunteers recruited to serve on a new ATV Program Committee should also attend this course, or the *ATV RiderCourse* and the free online ATV Safety Institute e-Course. The Instructor must complete an application for an ATV Instructors License with the ATV Safety Institute, to include identifying if their license to operate a motor vehicle was revoked or suspended for any reason, of if they had plead guilty or ‘no contest’ to, or been convicted of, a misdemeanor or felony. All ATV Instructors should also complete the Tread Lightly! 101 Awareness course at a minimum, and consider becoming a Tread Lightly! Trainer or Master Tread Trainer.

ATV Program Inspection – Risk Management Committee.

The Council Risk Management Committee should conduct periodic inspections of the program to ensure all identified control measures have been correctly implemented, adequate resources and trained staff are available to maintain the program, and to identify and advise new controls as appropriate. The Council staff must close down ATV trail rides and the *ATV RiderCourse* if safe trail conditions or ATV are not maintained or qualified ATV instructors are not available.

APPENDIX A: ATV TRAIL DESIGN AND DESIGNATION.

Standard recreational trail design guidelines are generally written to accommodate a specific type of user, such as for hiking, mountain biking, or skiing and as a best practice employ nationally recognized difficulty rating criteria. The needs of all potential user groups should be considered when planning a trail system. In practice, most trails are used by more than one type of user and should be considered shared-use paths. Only trails with features and strict enforcement practices that effectively exclude other users are single-user or specifically designated uses paths. This is the methodology employed for managing the Pine Mountain Backcountry (PMBC) Trail System.

A review of all available literature, federal agency publications, and the National Off-Highway Vehicle Conservation Council (NOHVCC) library website established there are no standard national trail rating criteria for ATV. A number of agencies and off-road rider clubs have established local ratings using either generalized difficulty levels, narratives describing trail difficulties, or a numeric rating system equated to ride experience. The best aspects of these narrative ratings have been compiled into guidelines for designating trails for the ATV program, and the symbols and rating terms normalized with recognized standard trail rating signs.



ATV Designated and Prohibited Route Signs.



ATV Trail Condition Advisory Signs.

As a benchmark, sustainable trail designers employ Best Management Practices (BMP) to comply with Federal or state water quality acts. Trail designs should include avoiding “fall-line” alignments and steep grades, soil stability, tread drainage features, trail intersections, curves and switchbacks, wetland areas and stream crossings, vegetation and clearing. Other considerations include developing access to desirable features, provide access to support facilities, novice areas and warm-up loops. Connect riding areas when possible by including loop opportunities, and avoid one-way trails. Environmental concerns caused by specific uses, location in or near wetlands or trail maintenance issues must be adequately addressed by restricting use, reroute or closure.

TABLE 1. ATV Trail Designation Criteria.

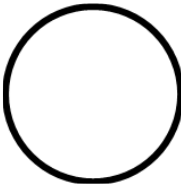


	<p>EASIEST. This is a generally flat area or wide trail with few obstacles intended to be suitable for novice riders, new rider instruction and those who don't have the skill or desire to ride more difficult trails. To be classed as easiest, a trail must present a low level of exposure to the rider expressed as a question; "What is the probable consequence if a rider should fall or lose control?" PMBC Trails: ATV Range</p>
	<p>EASY. These routes are appropriate for novice through advanced users. Easy trails are often used as mainline or "trunk" trails that provide the principal access to a large trail system. These trails have a low level of risk for the user and consequently offer less variety than those of greater difficulty. They generally follow obvious, well-marked trails and roads. Grades are gentle, and few obstacles will be encountered. Tread is smooth, level, and wide, with generous clearing of trees, limbs, and other vegetation above and to each side of the trail to permit easy passage. PMBC Trails: Venture, Muddy Slash, Timber Trace</p>
	<p>MODERATE. Trails in this rating category are designed to meet the expectations of the majority of trail users. These routes are appropriate for intermediate through advanced users. Terrain may be steeper, trails narrower, and some obstacles may be encountered. This requires a minimal skill level and provides a minimal physical challenge. Tread surface contains roots and embedded rocks. Clearing of trees, limbs, and other vegetation above and to each side of the trail should avoid contact by the users. PMBC Trail: Valley Vortex</p>

TABLE 2. ATV Trail Design Standard Characteristics and Specifications.

Standard	Specifications
Configuration	Trail system with loops of varying difficulty, easy trails provide access to difficult trails; 2-way trails; occasional obstacles.
Length	5-20 miles
Tread Surface	Mineral soil, bedrock, gravel and loose rocks less than 6 inches in diameter
Tread Width	5-7 feet light use or 1-way, 8-12 feet heavy use or 2-way.
Clearing Width	6-10 feet.
Clearing Height	8 feet.
Contour	Avoid fall lines. Aligned with the contour line or up to 45 degrees from it.
Grade	0 to less than 12 percent preferred to avoid roll-over hazard.
Turn Radius	10 feet minimum, 25 feet maximum.
Sight Distance	50 feet minimum, 100 feet is preferred.
Water Crossing	Direct crossings only of perennial streams. Harden with culvert with hand rails, or boardwalk with curbs; orient deck boards 45°-90° to direction of travel; width 4-8 feet for light use or 1-way, 10 feet for heavy use or 2-way.
Other Uses	Mountain bike, Motor vehicles.
Unique Facilities	Parking with trailer space, warm-up loop; periodic rest stops or shelters.

APPENDIX C. ATV OPERATOR’S AGREEMENTS.



**OPERATOR’S AGREEMENT
All-Terrain Vehicle Youth Riders**

NAME: _____

I agree that all policies and procedures of the Boy Scouts of America, Flint River Council BSA, Gerald I. Lawhorn Scouting Base will be followed, to include all Federal guidelines, state (*) and local laws as they pertain to the operation, maintenance and required safety equipment of an ATV.

BEFORE OPERATION:

- Personal-owned ATVs may not be operated by any youth on Lawhorn Scouting Base.
- All ATV youth riders must be a minimum age of 14 and have on file a parent or legal guardian signed “Hold-Harmless Agreement.”
- I may not have any health or medical conditions identified in my “Annual Health and Medical Record” that would preclude me from participating.
- I will complete the four hour ATV Safety Institute *ATV RiderCourse* before any backcountry trail ride as part of my participation in this camp program. <http://www.atvsafety.org/>
- I agree to follow the Tread Lightly! outdoor ethics guidelines for ATV use. <http://treadlightly.org/>
- I am prepared to ride with a Helmet (DOT Approved), goggles, gloves, long pants, over ankle boots, long sleeve shirt.
- I will inspect the *ATV* tires and Wheels, Controls and Cables, Lights and Electrics, Oil and Fuel, Chain/Driveshaft and Chassis, following the ATV Safety Institute “T-CLOC Pre-Ride Inspection Checklist.”

DURING OPERATION:

- I will wear the required safety equipment at all times while operating the ATV.
- I will stay on designated ATV trails in the Pine Mountain Backcountry and on the ATV Driving Range. I will never drive cross-country or on the single track hiking/biking trails.
- ATVs may not be operated within any perennial stream, except when directly crossing. (*)
- I will operate my ATV at a slow speed. No passing at any time, racing, speeding, jumping, or reckless operation will be tolerated, including wheelies, donuts or zaggs, dragging or scratching, drifting or ramming. Youth riders will be immediately removed from riding and the incident reported to the Camp Director.
- ATVs may not be used to tow another vehicle.
- ATVs are never to be ridden on blacktop surfaces or public roads.

AFTER OPERATION:

- I understand that if I am involved, all incidents, close calls, and accidents will be documented and properly reported to the Camp Director and the ATV Safety Institute.

I have read and understand the above rules. If at any time I violate these rules, I understand that I may be removed from the ATV program, and if removed, at least six months suspension before future consideration of participating in the ATV program at Lawhorn Scouting Base.

ATV YOUTH OPERATOR

DATE

CAMP DIRECTOR



OPERATOR'S AGREEMENT

All-Terrain Vehicle Adult Riders

NAME: _____

I agree that all policies and procedures of the Boy Scouts of America, Flint River Council BSA, Gerald I. Lawhorn Scouting Base will be followed, to include all Federal guidelines, state (*) and local laws as they pertain to the operation, maintenance and required safety equipment of an ATV.

BEFORE OPERATION:

- Personal-owned ATVs may not be operated on Lawhorn Scouting Base without the express written permission of the Flint River Council, BSA (*).
- Personal ATVs are only permitted in the Frontcountry camp areas and Backcountry trails to support specific camp programs or service activities approved in advance by the Camp Director.
- All ATV adult riders must be a minimum age of 18 and have on file a signed "Hold-Harmless Agreement."
- I confirm that I do not have any health or medical conditions identified in my "Annual Health and Medical Record" that would preclude me from safely operating an ATV.
- I will complete the free ATV Safety Institute e-Course for adults. <http://www.atvsafety.org/>
- I agree to follow the Tread Lightly! outdoor ethics guidelines for ATV use. <http://treadlightly.org/>
- I am prepared to ride with a Helmet (DOT Approved), goggles, gloves, long pants, over ankle boots, long sleeve shirt.
- I understand that my personal ATV may not be used in conjunction with the ATV Youth Program.
- I will check the weather and trail conditions with the camp staff before beginning any ATV operation. Trails that are too wet will be closed until such time as they dry sufficiently.
- ATVs may not be used without operative brakes or without mufflers or silencing equipment. (*)
- I will conduct a Pre-Ride Inspection.

DURING OPERATION:

- I will wear the required safety equipment at all times while operating the ATV.
- My personal ATV is only ridden by me or another accepted adult for the approved purpose.
- I will stay on designated ATV trails in the Pine Mountain Backcountry and on the ATV Driving Range. I will never drive cross-country or on the single track hiking/biking trails.
- ATVs may not be operated within any perennial stream, except when directly crossing. (*)
- I will operate my ATV at a slow speed. No passing at any time, racing, speeding, jumping, or reckless operation will be tolerated, including wheelies, donuts or zaggs, dragging or scratching, drifting or ramming. Adults will be immediately removed from riding and the incident reported to the Camp Director.
- ATVs may not be used to tow another vehicle.
- ATVs are never to be ridden on blacktop surfaces or public roads.

AFTER OPERATION:

- I understand that if I am involved, all incidents, close calls, and accidents will be documented and properly reported to the Camp Director and the ATV Safety Institute.

I have read and understand the above rules. If at any time I violate these rules, I understand that I may be removed from the ATV program, and any future consideration of participating in the ATV program at Lawhorn Scouting Base.

ATV ADULT OPERATOR

DATE

CAMP DIRECTOR



INSTRUCTOR'S AGREEMENT

All-Terrain Vehicle Program

NAME: _____

I agree that all policies and procedures of the Boy Scouts of America, Flint River Council BSA, Gerald I. Lawhorn Scouting Base, and the ATV Safety Institute will be followed, to include all Federal guidelines, state (*) and local laws as they pertain to the operation, maintenance and required safety equipment of an ATV.

BEFORE OPERATION:

- I will ensure all participants must be a minimum age of 14 and have on file the "All-Terrain Vehicle (ATV) Program Participation and Hold-Harmless Agreement" signed by a parent or legal guardian.
- I will confirm that all riders do not have any health or medical conditions identified in their "Annual Health and Medical Record" that would preclude him or her from participating.
- I will ensure all riders are prepared to ride each session with a Helmet (DOT Approved), goggles, gloves, long pants, over ankle boots, long sleeve shirt. I will inspect all personal riding gear.
- All the required safety and emergency gear will be on the Instructor's ATV.
- No personal-owned ATVs will be used in conjunction with the ATV Youth Program.
- Oil must be checked daily prior to use and logged into the ATV maintenance log book.
- ATVs may not be used without operative brakes or without mufflers or silencing equipment. (*)
- I will check the weather and trail conditions daily with the camp staff before beginning any ATV operation. Trails that are too wet will be closed until such time as they dry sufficiently.
- Riders receive a daily safety and Outdoor Ethics orientation before beginning any ATV operation.
- Ensure all riders before each class begins completes the "T-CLOC Pre-Ride Inspection Checklist."

DURING OPERATION:

- Youth program ATVs are only ridden under my supervision, must stay on designated ATV trails and on the Driving Range, and are never permitted in the Frontcountry camp areas. I will never drive cross-country or on the single track hiking/biking trails.
- No deviation from the ATV Safety Institute ATV *RiderCourse* is permitted.
- ATVs may not be operated within any perennial stream, except when directly crossing. (*)
- I will operate all ATV at a slow speed. No passing at any time, racing, speeding, jumping, or reckless operation will be tolerated, including wheelies, donuts or zaggs, dragging or scratching, drifting or ramming. Youth will be immediately removed from the program and the incident reported to the Camp Director.
- Safety equipment must be worn at all times while operating an ATV.
- ATVs may not be used to tow another vehicle.
- ATVs are never to be ridden on blacktop surfaces.

AFTER OPERATION:

- All incidents, close calls, and accidents will be documented and properly reported to the Camp Director and the ATV Safety Institute.

I have read and understand the above rules. If at any time I violate these rules, I understand that I may be removed from the ATV program, and any future consideration of participating in the ATV program at Lawhorn Scouting Base.

ATV INSTRUCTOR

DATE

CAMP DIRECTOR



OPERATOR'S AGREEMENT

All-Terrain Vehicle - Hunters

NAME: _____

I agree that all policies and procedures of the Boy Scouts of America, Flint River Council BSA, Gerald I. Lawhorn Scouting Base will be followed, to include all Federal guidelines, state (*) and local laws as they pertain to the operation, maintenance and required safety equipment of an ATV.

BEFORE OPERATION:

- Personal-owned ATVs may not be operated on Lawhorn Scouting Base without the express written permission of the Flint River Council, BSA (*).
- The Hunting Lease program permits lease holders the right to utilize one (1) "4-wheeler"/ATV for hunting purposes only, during hunting season only. This lease does not give the right or authorization to use motorized vehicles of any sort, during or outside of hunting season, for recreational purposes.
- All ATV riders in the hunting lease must be a minimum age of 18 and have on file a signed "Hold-Harmless Agreement."
- I confirm that I do not have any health or medical conditions identified by my health care provider that would preclude me from safely operating an ATV.
- I will complete the free ATV Safety Institute e-Course for adults. <http://www.atvsafety.org/>
- I agree to follow the Tread Lightly! outdoor ethics guidelines for ATV use. <http://treadlightly.org/>
- I am prepared to ride with a Helmet (DOT Approved), goggles, gloves, long pants, over ankle boots, long sleeve shirt.
- I will check the weather and trail conditions with the camp staff before beginning any ATV operation. Trails that are too wet will be closed until such time as they dry sufficiently.
- ATVs may not be used without operative brakes or without mufflers or silencing equipment. (*)

DURING OPERATION:

- I will wear the required safety equipment at all times while operating the ATV.
- My personal ATV is only ridden by me or another accepted adult for the approved purpose.
- I will stay on designated ATV trails, or dual track roads leading directly to my lease area in the Pine Mountain Backcountry and on the ATV Driving Range. I will never drive cross-country or on the single track hiking/biking trails.
- ATVs may not be operated within any perennial stream, except when directly crossing. (*)
- I will operate my ATV at a slow speed. No passing at any time, racing, speeding, jumping, or reckless operation will be tolerated, including wheelies, donuts or zaggs, dragging or scratching, drifting or ramming. Adults will be immediately removed from riding and the incident reported to the Camp Director.
- ATVs may not be used to tow another vehicle.
- ATVs are never to be ridden on blacktop surfaces or public roads.

AFTER OPERATION:

- I understand that if I am involved, all incidents, close calls, and accidents will be documented and properly reported to the Camp Director and the ATV Safety Institute.





I have read and understand the above rules. If at any time I violate these rules, I understand that I may be removed from the ATV program, and any future consideration of participating in the ATV program at Lawhorn Scouting Base.

ATV HUNTER OPERATOR

DATE

CAMP DIRECTOR

APPENDIX D. ATV PROGRAMS NATIONAL CAMP STANDARDS.

PS-205	<h2 style="margin: 0;">ALL-TERRAIN VEHICLE PROGRAMS</h2> <p style="margin: 0;">(Revised January 1, 2013)</p>	
<p>STANDARD: If offered, the camp provides a safe introductory program into all-terrain vehicle use and operation following the safety training program of the All-Terrain Vehicle Safety Institute.</p>		<p>Applies to:</p> <div style="text-align: center;">  <p>Resident camp</p> </div>
<p>Specific Requirements of the Standard:</p> <ol style="list-style-type: none"> A. Only four-wheel, all-terrain vehicles (ATVs) may be used for program, and they must be owned or leased by the council. Personal ATVs are not authorized. B. The program must comply with local and state laws and adhere to manufacturers' instructions at all times. C. The use of ATVs for program must be approved in writing in advance by the National Council Outdoor Programs using the All-Terrain Vehicle (ATV) Program Application, No. 430-044, and a copy must be available for the camp assessment team. D. The course or program must follow the All-Terrain Vehicle Safety Institute (ASI) safety training program in its entirety. No deviation is permitted from the course outline. <p>VERIFICATION:</p> <ul style="list-style-type: none"> • Approval for the program presented on the All-Terrain Vehicle (ATV) Program Application, No. 430-044 • Review of the ASI safety training program and course outline, with staff discussion of how the program follows the outline 		<div style="display: flex; flex-direction: column; gap: 10px;"> <div style="text-align: center;">  <p>Trek camp</p> </div> <div style="text-align: center;">  <p>Specialty-adventure camp</p> </div> <div style="text-align: center;">  <p>High-adventure camp</p> </div> </div> <p style="text-align: right; margin-top: 20px;">PS-205-1</p>

APPENDIX E. ATV PROGRAM RECOGNITION PROPOSAL.



All-Terrain Vehicle BSA Recognition Proposal

All requirements must be completed at a Council operated ATV Program.

1. Successfully complete the *ATV RiderCourse*SM following the ATV Safety Institute course of instruction.
2. Do the following:
 - a. Describe the various types of off-road vehicles and how they differ in design, performance, and purpose.
 - b. Demonstrate how to choose an appropriately sized ATV.
 - c. Name the parts of the ATV you are using.
 - d. Demonstrate how to properly conduct a pre-ride inspection following the “T-CLOCK Checklist.”
 - e. Explain the importance of safety equipment, including an approved helmet, goggles, gloves, over-the-ankle boots, long-sleeve shirts, and long pants. Show yourself properly prepared to ride.
3. Review the BSA guidelines for the ATV Youth Program and explain how each of the Sweet 16 Safety Points from the Guide to Safe Scouting apply to operating an ATV in your location.

1. Qualified Supervision	9. Weather Check.
2. Physical Fitness.	10. Planning.
3. Buddy System.	11. Communications.
4. Safe Area or Course.	12. Permits and Notices.
5. Equipment Selection and Maintenance.	13. First-Aid Resources.
6. Personal Safety Equipment.	14. Applicable Laws.
7. Safety Procedures and Policies.	15. CPR Resource.
8. Skill Level Limits.	16. Discipline.
4. Review the Tread Lightly!^(R) principles and the Outdoor Code and explain what they mean as they apply to ATV riders and sustainable outdoor recreation. Write a personal and group plan for implementing these principles to minimize the impact of your next ATV outing.
5. While participating at a Council operated ATV Youth Program, plan and complete a 5 mile trail ride under supervision from your ATV instructor.

APPENDIX F. ATV USE ON SIMILAR TERRAIN COMPARISON.

This is a photographic comparison of ATV damage done to trails at other locations to similar Lawhorn camp areas assessed as unsuitable for sustained ATV use based on soils and terrain.



Damage to forest roads similar to Water Tower and Moss Falls Trails



Erosion damage to Single Tracks



Similar to existing Elkins Creek conditions

APPENDIX G. ALL-TERRAIN VEHICLE SUSTAINABILITY ASSESSMENTS: CONSIDERATIONS FOR B.S.A. COUNCILS

Jeff Marion, Ph.D.

ABSTRACT: *BSA Councils that are considering ATV programs should recognize that research has shown ATV's to be one of the most environmentally impacting forms of recreational activity. The sustainable management of ATV use is an expensive proposition requiring careful design, construction, and maintenance of ATV trails. Tight regulation of ATV use, including the amount, locations, season, and riding behaviors is also critical. Most federal and state land management agencies have discovered that they lack the expertise, staffing, and funding to sustainably manage ATV opportunities. The BSA is likely less prepared to accommodate ATV riding without high levels of environmental degradation.*

ATV's have a high potential to impact vegetation, soils, wildlife, water and the outdoor experiences of other visitors compared to other forms of recreational activity. ATV's combine a very powerful and loud engine with aggressive knobby tires on a vehicle that can easily go "off-trail." More significantly, adolescent male riders attracted to their power and ability to go anywhere often seek to test them on steep hills, mud and water, and in off-trail areas. Experience has shown that many youth lack the judgment and experience needed to use them safely or in a manner that protects natural and cultural resources. Addressing these challenges needs to be a core sustained focus of any BSA ATV riding program.

Research substantiates the greater impact potential of ATVs when comparing the soil loss on trails used by horses, hikers, bikes, and ATVs (Olive and Marion 2009). In this study hikers substantially outnumber ATV users yet ATV trails had thirteen times more soil loss. As noted in this research, these data are "... not presented to apportion blame to specific use types, rather to emphasize that managers seeking to accommodate horse and ATV uses should acknowledge their higher potential for eroding soil and incorporate improved trail design, construction, maintenance and visitor use management practices to ensure that the impacts of such uses are minimal and acceptable."

This research further provides insights applicable to the BSA ATV Youth Program: "Given the greater speed and range of these vehicles, and their substantial potential for eroding soil due to engine torque and knobby tires, managers of protected natural areas should be cautious in allowing their use until sustainable trail alignments are identified, developed and hardened, and adequate maintenance, monitoring, and visitor management programs are implemented to ensure unacceptable resource impacts do not occur." A single ATV rider does substantially greater environmental damage than a hiker or mountain biker, and they travel substantially further during a given recreational outing (i.e., they impact many more miles of trail due to their greater speed).

Designing Sustainable ATV Trails

At its simplest, trail design can be reduced to perhaps five factors:

Trail Grade – erosion potential increases exponentially w/increasing trail grade. Keep ATV trails in gently sloping terrain. ATV use in flat terrain will become muddy while those on trail grades exceeding 10-12% will have a high potential for soil loss. Purchase a clinometer to measure trail grade and conduct a survey of your trails. Close trail segments to ATV use with grades in excess of 12%, or be prepared to apply a considerable amount of rock to the treads and monitor them closely for soil loss.

Trail Slope Alignment Angle – the alignment of a trail to the prevailing landform grade or aspect. Sustainable trails are aligned with the contour line or up to 45 degrees from it. Trails aligned with the landform grade or aspect (those that run straight up and down hill, or anywhere close to that) are nearly impossible to keep from eroding regardless of their grade. Avoid trail alignments within about 30 degrees of the fall-line at all costs. These are called “fall-aligned” trails – a bucket of water dumped on a slope will run straight down the “fall-line,” - tread drainage features simply don’t work because trail-sides are higher than incised treads.

Substrate Rockiness – High-impact trail uses like ATV’s require substantial amounts of rock in tread substrates. If rock is not naturally-occurring then land managers need to put it there during trail construction or maintenance. Large angular aggregate (crushed stone, not rounded), like 2 to 3 inch rock and larger, will interlock and form a sustainable base, particularly when combined with clay or loam soils (not sandy or organic soils).

Soil Moisture – ATV trails should stay clear of all wet or seasonally wet soils, which are easily churned to mud and displaced or eroded by ATV tires. All permanent and seasonal creeks and streams must be bridged. ATV use should be prohibited whenever trail soils are wet, particularly in the spring and immediately following rainfall.

Tread Drainage – Traditional tread drainage features like water bars and drainage dips can’t be sustained on ATV trails because their tires tear them up or loosen soil and fill them in quickly. ATV trails should be side-hill constructed with out-sloped treads and frequent *grade reversals* to shed water. A grade reversal is where the entire trail reverses grade for a short distance before continuing its ascent/descent. The density of grade reversals should match trail grade, with numbers of grade reversals increasing as needed on steeper trails so that water run-off is quickly diverted off-trail.

Note that most existing trails lack grade reversals and strongly out-sloped treads so your likelihood of sustainably using “existing” trails or woods roads is extremely unlikely – you will generally need to hire a trails professional to carefully design and construct sustainable ATV trails. Putting ATV use on well-graveled roads with grades <12% that can be periodically graded could be an exception.

Managing Sustainable ATV Use

Sustainable ATV use management requires certain well-enforced regulations and low-impact practices:

1. ATV users must always stay on designated trails that have been designed and managed to sustain their traffic. Driving on trails designed for other users (hikers, mountain bikes, horses), creating new trails, and riding cross-country should be prohibited.
2. ATV users should be taught Tread Lightly! and Leave No Trace practices to avoid or minimize the environmental impacts of their activity and to protect the experiences of other visitors.
3. ATV trails must be frequently maintained to halt any visible soil loss, tread widening, and tread muddiness. This requires constant vigilance to address these problems quickly when they first appear. A small mud-hole can become very deep and wide in less than a week, soil loss can grow from inches to feet in less than a month.
4. Trail condition assessments, combined with comparison to standards of quality (e.g., tread depth <1 one foot, tread width <6 feet, ruts in mud and water in mud-holes <6 inches) can help ensure the sustained maintenance of ATV trails and used to reduce overuse or shut down riding when standards are exceeded. Ignoring substandard conditions and allowing them to worsen over time should not be permitted.

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Note: though written for the design and management of mountain bike trails, the two IMBA references are excellent sources of information on sustainable trail design.

Biography

Dr. Marion is a federal scientist with the U.S. Geological Survey who conducts research on recreation impacts in National Parks, National Forests, and other protected natural areas. He routinely consults with land managers on the design and management of sustainable trails and recreation facilities, visitor regulations, and educational low impact practices designed to avoid or minimize the impacts of recreation visitation. He is a former Scoutmaster and current Venture Crew Advisor, serves on his Council's Conservation Committee, and is the recipient of the Hornaday Gold Badge and Medal for his work in the Leave No Trace program. For additional publications on these topics see https://profile.usgs.gov/jeff_marion or contact him at jmarion@vt.edu

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