

Rock County Chapter Safety Manual

Table of Contents

Emergency Contacts

National Park Service Volunteer Safety Handbook

Rock County Chapter Safety Handbook

Professionalism in the Volunteer Workforce

Volunteer Job Descriptions

Job Hazard Analysis

Tailgate Safety Series

Chainsaw SOP and Safety Handouts

Material Safety Data Sheets

Risk Assessment Worksheet

Emergency Contacts

Each chapter should fill in Emergency and Non-Emergency contact numbers for their local area, to notify authorities of planned work dates, locations, and other info prior to work projects.

If emergencies arise = **Dial 9-1-1**

- Ambulance/EMS - 911
- Janesville Fire Department - 911 / (608) 755-3050
- Janesville Police - 911 / (608) 755-3100
- Evansville Police - 911 / (608) 882-2299
- Milton Police - 911 / (608) 868-6910
- Rock County Sheriff - 911 / (608) 757-8000 / <http://www.co.rock.wi.us/sheriff>
- Hospital/Clinic Telephone & Address
 - Mercy Hospital; 1000 Mineral Point Ave.; Janesville, WI
(608) 756-6000,
 - SSM Health St. Mary's Hospital; 3400 E. Racine St.; Janesville, WI
(608) 373-8000
- Land Managers
 - Rock County Parks – (608) 757-5451/608.295.2623
 - John Traynor, Director, john.traynor@co.rock.wi.us
 - Janesville Parks Division - (608) 755-3025
 - Cullen Slapak, Parks Director, slapakc@ci.janesville.wi.us
 - Jason Schlimgen, Operations Supervisor, schlimgenj@ci.janesville.wi.us
 - Wisconsin Department of Natural Resources
Jason Cotter; Senior Wildlife Biologist; (262) 894-3241;
jason.cotter@wisconsin.gov
- IATA Chapter Leader(s)
 - Dennis James (608) 302-1885, djames84@outlook.com
 - Dean and Jayne Paynter (608) 289-5672, djpaynter@charter.net
 - Ed Madere (503) 717-2250, emadere@hotmail.com
 - Rita Fox (715) 623-7277, rjantigo@yahoo.com
- IATA Staff (Cross Plains Office), (608) 798-4453
- IATA Director of Trail Operations, Chad DuChateau Email: Chad@iceagetrail.org
- National Park Service; Dan Watson; Volunteer Coordinator; Cell: 715-441-7717;
iatr_vip_ice_age_trail@nps.gov

Ice Age National Scenic Trail Volunteer Safety Handbook

Last revised: September 2023

BACKGROUND, PURPOSE, and AUTHORITIES

The National Park Service (NPS) has a continuing concern about the occupational safety and health of our employees and others who work in the parks as volunteers, contractors, concession employees, or in any other capacity. Controlling hazard exposures that affect employees can also positively affect the visitor experience and enhance the accomplishment of the NPS mission. In recognizing this, the NPS is committed to reducing workplace accidents, injuries and illnesses, and the associated pain, suffering, and losses associated with these incidents.

The NPS sets forth various policies and procedures for specific program areas through a series of Director's Orders, and their corresponding Reference Manuals.

The NPS Volunteers-In-Parks Program is managed through Director's Order #7, and the corresponding Reference Manual #7. Volunteer programs are also subject to the policies and procedures found in other Director's Orders and Reference Manuals.

Director's Order #50B: Occupational Safety and Health, is to provide NPS managers, supervisors, and employees (including volunteers) with direction for the implementation of a comprehensive risk management program throughout the NPS.

Reference Manual #50B provides information, guidance, and direction for carrying out the policy and program objectives found in Director's Order #50B: Occupational Safety and Health Program.

This Ice Age NST Volunteer Safety Handbook follows specific guidance as required by DO-7 & RM-7 and DO-50B & RM-50B.

Safety Resources Locations

NPS Ice Age NST website: www.nps.gov/iatr/getinvolved/supportyourpark/iatr_vip_program.htm

Ice Age Trail Alliance website: www.iceagetrail.org/get-involved/volunteer/volunteer-resource-center/

Volunteer Agreement Renewals

The OF-301a Individual Volunteer Agreement is a contract between a volunteer and the National Park Service. The agreement requires volunteers to follow NPS safety procedures-- including specific training certification for certain job activities—be familiar with all Job Hazard Analysis assessments for specific

job activities, immediately report all injuries and “near miss” accidents to the NPS, and to initiate renewal of their volunteer agreement every 12 months with the NPS.

The agreement requires the NPS to provide all Safety, Health, and Wellness protections to the volunteer as it does to government employees—including specialized training and required Personal Protective Equipment (PPE) for certain job activities-- represent injured volunteers to the US Department of Labor seeking reimbursement of medical expenses for injuries sustained in performance of **approved volunteer work activities for which they qualify**, and extend legal protections to volunteers involved in Tort Claim incidents.

Volunteers who do not maintain a current OF-301a Volunteer Agreement every 12 months with the NPS-Ice Age NST cannot be considered part of the NPS Volunteers-In-Parks Program and cannot receive any assistance, protections, or benefits offered through the program. Additionally, volunteers who have received certain certification training (such as chainsaw operations) lose that certification whenever their volunteer agreements are expired.

Job Descriptions

NPS safety policies require that each volunteer have a site-and-task-specific job description, complete with any appropriate JHAs (see below), as part of each volunteer agreement. Because Ice Age National Scenic Trail (IATR) works with multi-thousands of volunteers across 1,200 miles of trail route, and those volunteers perform a vast array of job functions in many different geographic locations, IATR cannot customize each volunteers’ job description as other “traditional” parks can usually accomplish.

IATR’s website lists 40 jobs available to IATR volunteers in a generic format, with specific job functions categorized under the four main headings of: Trail Construction and/or Repair, Trail Maintenance, Vegetation Management, and Support Services.

Specific job functions within these main categories (i.e., “pruning and brushing” under Trail Maintenance) have a numeric cross reference to the appropriate JHA(s) for that specific job function.

As stated in the template language of each volunteer service job description at IATR, the volunteer is responsible for reviewing job description and JHA resources on IATR’s website.

Chapter leaders, crew leaders, and any chapter-level volunteer engaged in assigning and/or supervising work of other volunteers—particularly new volunteers—must be familiar with these safety resources and ensure other volunteers are as well.

Job Hazard Analysis (JHA)

A JHA is a simple safety resource which identifies all steps within a specific job task, identifies the common hazards associated with each task step, and identifies the safe “best practice” way of completing each task step. IATR’s JHA electronic library is numerically cross referenced to volunteer job descriptions for ease of matching appropriate safety messaging to different volunteer work activities.

All IATR volunteers are responsible for reviewing and following the appropriate JHA(s) as they perform their work.

Chapter leaders, crew leaders, and any chapter-level volunteer engaged in assigning and/or supervising work of other volunteers—particularly new volunteers—should read and review appropriate JHAs with the volunteers on site at all work activities.

Tailgate Safety Series

The IATR Tailgate Safety Series is located on IATR's website. It complements the JHA electronic library by covering additional topics. A JHA is a step-by-step process for safely performing a specific task or safely working with a specific tool. A Tailgate Safety Series topic discusses situational awareness and best practices in the event of extreme weather conditions, encounters with wildlife, and other such topics.

Chapter leaders, crew leaders, and any chapter-level volunteer engaged in assigning and/or supervising work of other volunteers are encouraged to use the Tailgate Safety Series as part of any work briefing. In example, if a volunteer event will be conducted on a day when rain is forecasted, the appropriate Tailgate Safety Topic to review with others during the safety briefing would be "Thunderstorm Safety."

Safety Briefings

- * Conduct a safety briefing at the start of each workday, and periodically throughout the day as necessitated by changing circumstances.
- * No job is too small or easy, nor any staff or volunteer too skilled, to "skip" the briefing.
- * Briefings should be conducted in two orchestrated parts-- by the Team Leader who provides the overview of the project, and by the Crew Leader who then briefs the smaller assigned group.
- * Briefing topics should include such things as: introductions if not everyone knows one another; verification of training certification (such as use of chainsaws); weather outlook; review of the task(s) at hand; discussion of any known risks and how they will be handled (mitigated or avoided); brief review of any appropriate JHA; PPE check; Questions & Answers.
- * Ensure everyone knows the location of first aid kits, AEDs, and communications systems used at that work site in case of emergency.
- * Remember.... Briefings are meant to be brief, while still covering the essential information to provide for a safe and enjoyable work event.

Sample Safety Briefing

"Good morning! My name is Mary Smith and I'll be leading the work project today out on the trail. I see we have a new person to welcome with us today, so let's all introduce ourselves and where we're from (introductions). It looks like we'll have pretty good weather today, but the temperature and humidity are expected to rise in the afternoon, so be sure you have several quarts of water with you and take frequent breaks in the shade. Let's also watch out for each other as far as heat illnesses. Right now, let's review the Tailgate Safety Card entitled "Heat Disorders" just so we're all familiar with the signs of heat stress (review card). Our job today is to walk about two miles up the trail and then back here to the parking lot, brushing and pruning the trail as we go. Mike and I will be in the lead with our bow saw, Jane and Frank can take the right side of the path with their pruners, and Sally and Joe can do the same

on the left side. Let's all stay within sight of one another. Just so everyone knows, there is a hornet nest up the trail about half a mile from here. I have it flagged, so we'll know when we're getting close. Does anyone have any severe allergy to bees or wasps? Oh, you do Mike? Do you have an epi-pen with you, and can we assist you if needed (discussion)? OK, that sounds good. I see we all have our gloves, and Mike and I have our hard hats and safety glasses in case we need to saw any overhead limbs. I have the First Aid Kit in my daypack, and the Injury Reporting form, too. Do we have any nurses, EMT's or medical professionals in the group today? Now before we get started, let's quickly review the JHA for safe carrying and use of our tools (review JHA). That's about it. There is 9-1-1 service in this area in case we need to call for help. Does everyone have their cell phone with them? Does anyone have any question or anything else to add?"

Trail Safe! Videos

Trail Safe! is a series of eight self-study videos that provide volunteers the same core learning objectives as the 16-hour facilitated NPS Operational Leadership training course. NPS Operational Leadership, and *Trail Safe!*, explores the "human factor" of safety.

An addendum in RM-50B approves *Trail Safe!* as an acceptable substitute to NPS Operational Leadership for volunteers of the National Trails System in meeting the pre-requisites for National Chainsaw Certification training.

IATR requires its volunteer sawyers and swampers to watch the *Trail Safe!* videos and report completion to NPS-IATR. All other volunteers are welcomed and encouraged to watch the *Trail Safe!* videos. Time spent watching *Trail Safe!* should be reported as volunteer hours under the Training category.

The videos are located at: www.nps.gov/iatr/trail-safe.htm.

Certification and Training for Specific Volunteer Jobs

Sawyer

Only staff or volunteers possessing a current National Saw Card may operate chainsaws. National Saw Cards are issued by the US Forest Service, through NPS-IATR, to sawyers who have attained specific certification levels of saw operation (i.e., A-Bucker & Limber, B-Faller, etc.). No substitute coursework or training programs are accepted. All chainsaw operations on Ice Age NST are subject to the standards outlined in the IATR Chainsaw SOP.

The IATR Chainsaw SOP, and all other information on how to qualify and apply for chainsaw certification training at Ice Age NST can be found on the Alliance's website at:

www.iceagetrail.org/get-involved/volunteer/nps-chainsaw-training.

Swamper (Sawyer's Assistant)

Swampers are those volunteers who directly assist certified sawyers with chainsaw operations. Their primary role is to keep the work zone safe during cutting operations. Swampers must meet

certain criteria outlined in the IATR Chainsaw SOP mentioned above and receive a logger's hardhat from NPS-IATR before assisting certified sawyers. Full details are found at:

www.iceagetrail.org/get-involved/volunteer/nps-chainsaw-training

First Aid and CPR

All volunteers are encouraged to maintain certification in Adult First Aid and CPR. Sawyers and Swampers must maintain currency in Adult First Aid and CPR to perform those tasks. Training may be provided free of charge through an Alliance-sponsored course. Volunteers obtaining First Aid and CPR certification in support of Sawyer or Swamper status, who pay for a local course not offered by the Alliance staff, may seek reimbursement of expenses from the Alliance. Please contact the Alliance for updated information and direction before paying any course fees.

Heavy Equipment Operation

The use of certain heavy equipment machinery is becoming more common in trail building operations at Ice Age NST. Volunteers may qualify to operate certain pieces of heavy equipment only after they have completed specific safety training and receive sign-off by qualified operators. Please contact the Alliance for specifics on how to become a documented heavy equipment operator.

Obligation to Report Injuries and Near Miss Incidents

Because volunteers are considered federal employees regarding all safety standards and protocols, volunteers are obligated to report accidents, injuries, and "near miss" incidents the same as any NPS employee.

Near Miss

A "near miss" accident is an incident where something unexpected happened and a negative or unintended outcome was possible but did not occur. An example is a tree nearly falling on someone during chainsaw operations. Reporting these sorts of incidents helps to keep others safe in the future by correcting previously unidentified hazards or unsafe work practices. Documented near miss accidents are used to create Lessons Learned as described below.

Injury

An injury is any harm that comes to a volunteer while performing their assigned volunteer work and can be pinpointed to a specific date and time. An injury may only require first aid, or it may require treatment from a physician. Examples may include cuts, bruises, broken bones, etc.

Incremental harm that comes to a volunteer over a prolonged timeframe (not pinpointed to a specific date and time) is considered an "occupational illness" and should also be reported to the National Park Service. Such an example could be a respiratory illness from prolonged and repeated exposure to dust or fumes.

Lessons Learned

Lessons Learned is a proven method of sharing important safety messages. Based upon real-life incidents on the Ice Age Trail, Lessons Learned examines root causes of why an accident or injury happened and identifies corrective actions or mitigation to reduce the chance of future accidents. Lessons Learned does not identify people by name, nor is it finger-pointing or a way to place blame. It is an honest assessment of a chain of events that helps us find proactive ways to keep us all safer. Lessons Learned is another useful tool for volunteer work leaders to share during safety briefings.

The e-library of NPS Lessons Learned documents for Ice Age NST is found on the Alliance's website at:

www.iceagetrail.org/get-involved/volunteer/volunteer-resource-center

Report Form

Particular information is required by the NPS to enter injury and near miss reports into the SMIS system (see below). Volunteers needing to report an injury or near miss accident may download the "Near Miss and Injury Report Form" from the Alliance's website at:

www.iceagetrail.org/get-involved/volunteer/volunteer-resource-center

Safety Reporting -vs- Medical Expense Claim

Volunteers are sometimes confused by the difference between reporting injuries and/or near misses (as described above), and the separate process of seeking reimbursement for medical expenses due to a volunteer on-the-job injury. Often, volunteers fail to report injuries or near misses because they do not intend to seek any medical expense reimbursement. Regardless of the medical expense question, volunteers are obligated to report their injuries and near misses.

Safety (SMIS)

The Safety Management Information System (SMIS) tracks both NPS employee and volunteer safety data as required by OSHA. Volunteers are required to report to the NPS any injury (both first aid only, and injuries requiring physician treatment), or near miss accident, so that the NPS can enter that data into the SMIS system, regardless of whether the volunteer may be seeking medical expense reimbursement.

Medical Expense (ECOMP)

Volunteers are entitled to the same consideration for reimbursement of medical expenses for work related injuries through the US Department of Labor-Office of Worker's Compensation Programs (DOL-OWCP) as provided to regular federal employees. Volunteers are not required to seek reimbursement of medical expenses, but they have that option as guaranteed through DO-7 and RM-7.

The medical expense claim process for both federal employees and volunteers is called the ECOMP system. If a volunteer is injured and wants to file an ECOMP claim for medical expenses, please contact the NPS-IATR for further instructions.

Rock County Chapter Safety Manual

Safety During Trail Events

Hiker Safety

- Tell someone where you plan to hike.
- Wear bright colors when hiking.
- Stay on the trail and set a 'turn back time.'
- Bring water.
- Bring a First Aid Kit
- Wear sun protection
- Take heat stroke and dehydration precautions.
- Wear supportive shoes.
- Wear proper clothing.
- Use common sense.
- Have a contingency plan for if you get lost.
- Know your limitations.
- Pack a snack.

Trail Stewardship Events

Chapter Safety Policy and Philosophy

- The Rock County Chapter has an excellent safety record. We will comply with all National Park Service and Ice Age Trail Alliance safety standards and protocols.
- All volunteers will have a current 301a Agreement Form on file with Dan Watson, NPS Volunteer Coordinator.
- CPR and First Aid Certification: Sawyers and Swampers will be certified every two years.
- Sawyers will be certified every three years.
- We will encourage all volunteers to take Chapter led CPR and First Aid classes, as well as complete the NPS Trail Safe series.

Risk Analysis

Prior to beginning each trail stewardship event or chainsaw operation/task, a risk analysis using the Trail Safe! GAR and/or SPE analysis, or similar model, to determine a task rating of:

- a. Low risk
- b. Moderate risk
- c. High risk

Chainsaw Operation

Sawyers must be certified and operate within their skill level and certification limitations.

Risk Analysis is performed to identify and mitigate hazards.

Operators are responsible for:

1. Maintaining the correct tools and accessories in good repair before starting any chainsaw operation
2. Protecting equipment and tools from damage during transport or use
3. Operating chainsaws within their qualification rating
4. Conducting Risk Analysis and following JHA procedures before and during chainsaw operations
5. Always enlisting the assistance of a qualified swamper during chainsaw operations
6. Notifying their crew leader of any chainsaw operation they are not comfortable performing or that is above their ability to perform.
7. Notifying the crew leader of all chainsaw safety related incidents including injury, property damage, and “near miss” incidents
8. Chainsaw operators must be at least 18 years of age.

Swampers

Swampers are responsible for:

1. Wearing all PPE required of swampers (logger’s hard hat with eye and hearing protection, gloves, and sturdy leather boots)
2. Following all instructions from the sawyer
3. Assisting the sawyer to maintain control of the operation site and surrounding area.

Personal Protective Equipment:

The intent of PPE is to protect an individual from injury or illness when a hazard cannot be controlled through engineering controls or other more suitable methods. It is the last line of defense. Safety equipment for trail stewardship is in the Chapter’s trailer and must be worn when needed.

Sawyers and Swampers will provide their own boots and gloves. The Park Service, Alliance, and the Chapter will provide all other equipment.

Chapter Training Events

In the Winter months we’ll have training sessions to be conducted for general workday volunteers as well as hikers. In no particular order, this will include:

- General first aid
- Proper clothing
- Eye and hearing protection
- hydration
- Safe and proper use of tools
- Safe work sites
- Harmful insects
- Poisonous plants

- Harmful animals
- Weather
- Communication

Helpful references for some of the above:

- Outdoor Hazards in Wisconsin – UW Extension booklet
- Trail Safe
- Volunteer Safety Handbook – December 2017 (I could not find an update)
- Chainsaw SOP 2021

First Aid Training

Sawyers and Swampers are required to recertify their first aid/CPR every two years. American Heart Association, American Red Cross, and Wilderness First Aid are recognized providers. We are strongly encouraging all active Trail Stewards to stay current in providing first aid.

The Chapter plans to provide first aid classes each winter to increase the number of certified volunteers.

CPR and AED

- Hands-Only CPR and AED for Teens and Adults
- Adult CPR with Breaths
- Choking in Adults
- Child CPR and AED
- Choking in Children

First Aid

- Bleeding and bandaging
- Stroke
- Heart attack
- Fainting
- Diabetes
- Seizures
- Opioid overdose

First Aid Kits

The Chapter maintains several first aid kits in the tool trailer. These are inventoried and refreshed annually. Volunteers are encouraged to carry and maintain a small, personal first aid kit as well.

During activities requiring a Sawyer, the following list sets forth the minimally acceptable number and type of first aid supplies for first aid kits required for logging operations. The contents of the first aid kit listed should be adequate for small work sites, consisting of approximately two to three individuals. When larger operations or multiple operations are being conducted at the same location, additional first aid kits should be provided at the work site or additional quantities of supplies should be included in the first aid kits:

- Gauze pads (at least 4 x 4 inches).
- Two large gauze pads (at least 8 x 10 inches).
- Box adhesive bandages (Band-Aids).
- One package gauze roller bandage at least 2 inches wide.
- Two triangular bandages.
- Wound cleaning agent such as sealed moistened towelettes or bottles of sterile water.
- Scissors.
- At least one blanket.
- Tweezers.
- Adhesive tape.
- Latex gloves.
- Resuscitation equipment such as resuscitation bag, airway, or pocket mask.
- Two elastic wraps.
- Splint.
- Directions for requesting emergency assistance.

Additionally, each Sawyer should have an individual trauma kit on their person that must be kept in a properly labeled container that is organized and kept in a clean and neat condition.

In addition to the supplies listed above, each trauma kit must have a Safety Plan that is filled out.

Basic Safety Rules and Proper Attitude

- Work in advance with IATA staff and local land managers to discuss, obtain approvals for, and notify them of your plans on the trail. Ensure emergency responders know how to find you in the event of an emergency. When seconds count, time spent directing emergency responders to your remote location is time you don't have.
- Ensure that all volunteers have the appropriate PPE (Personal Protective Equipment), know how to use it, and actually do use it. Consult the Job Hazard Analysis (JHA's) and appropriate IATA and partner policies (i.e.: power equipment operator, pesticide applicator, etc.) for recommended vs. required PPE.
- *PLAN* your WORK & *WORK* your PLAN.
- Avoid working on the trail alone if at all possible. If you must go alone, tell someone your location, what you plan to do including equipment you're using, and your expected time of return. Some tasks require a companion worker, such as chainsaw operations.
- Check the weather forecast. Dress appropriately and in layers. Have plenty of water, energy snacks, a first aid kit, and cell phone on hand.
- Everyone is responsible for their own safety, as well as the safety of others. Speak up if you have questions, concerns, or see something that is unsafe. Stop the work, resolve the problem, and either continue safely or put the work on hold until issues are resolved.
- Don't exceed your personal physical or skill limitations. Work at your own pace.
- *There is no single inch of the trail that merits even one drop of blood from anyone.*

Daily Checklist

Volunteers should equip themselves with basic necessities for a successful day afield. Items to include will change with the season and weather, but the following is a suggested list of gear and supplies that will fit well into any day pack:

- | | |
|---------------------------------|----------------------------|
| ✓ First Aid Kit | ✓ Insect repellent |
| ✓ Energy Snacks | ✓ Water |
| ✓ Rain Gear | ✓ Leather Gloves |
| ✓ Notebook and Pencil | ✓ Eye/ear protection |
| ✓ Orange vest/ Other PPE | ✓ Compass & Trail Map |
| ✓ Space Blanket | ✓ Cell Phone |
| ✓ Sturdy Leather Work Boots | ✓ NPS Injury Reporting Kit |
| ✓ JHAs / Tailgate Safety Topics | ✓ Wide Brim Hat |

Tool & Equipment Use/ Inspection

1. Always work at a comfortable pace, rest when tired, and keep your mind on your work.
2. To provide each person with relief from the particular motion and effort required in using one tool, and to enable volunteers to learn new skills, swap tools occasionally and rotate tasks. Fatigue and wandering attention can result in an accident.
3. Inspect all tools before use for defects and missing parts, and at the end of the day. A tool that breaks in use can be extremely dangerous.
4. Keep cutting tools sharp. Dull blades can bounce or glance uncontrollably and make work tiresome, increasing the likelihood of accidents caused by fatigue.
5. Before beginning work, clear away brush or limbs that might catch a swinging tool unexpectedly, causing a wild uncontrolled swing.
6. While working with a tool, always stand in a balanced position. Adjust your stance and tool grip continually to prevent slipping footholds and glancing blows. If the woods are wet, be especially careful. Stop work during rain showers.
7. While working with a tool, anticipate the consequences of every move. Avoid cutting toward any part of your body or another worker.
8. When carrying, loading, or storing a cutting tool, cover the blade with a sheath to protect the edge from being dulled and you and fellow maintainers from accidental cuts.
9. When transporting tools in a vehicle, secure them to prevent bouncing, sliding, or shifting.
10. When passing a tool to another, always pass it handle first, release it only when the recipient has a firm grip.

11. When working in groups, maintain at least 10 feet between workers, so wild swings, flying chips, and tools slipping out of your hands do not injure others.
12. Carry tools at your side on the downhill side. Grasp the handle at about the balance point with the sharpened blade forward and down. Never carry tools over your shoulder or slung around your neck.
13. When leaving tools at a work site (flat areas), lay them against a stump or downed log with the blades directed away from passing workers. If on a slope, lay tools on the uphill side of the trail with heads uphill. Never sink double-bit axes, Pulaski's, mattocks, or similar double-edged tools into the ground or in stumps where they become dangerous obstacles.
14. Always follow manufacturer's guidelines for inspection and safety features on any power tool or mower.

Professionalism in the Workforce

Respective Commitments to an Exemplary Volunteers-In-Parks Program on the Ice Age National Scenic Trail

Background

“When a VIP agrees to share his talents, skills and interests with the National Park Service, he is paying us one of the highest compliments possible by offering a most valued possession – his time.”

George B. Hartzog, Jr. made this statement on November 17, 1970 in a letter to all regional directors announcing the new Volunteers-In-Parks program. Director Hartzog led the National Park Service from 1964 to 1972. During his tenure, 70 sites were added to the National Park System and he championed historic preservation, urban recreation, interpretation and environmental education. Director Hartzog recognized the need to make it easier for citizens to donate, without compensation, their time and talents to the NPS and pushed through legislation creating the Volunteers-In-Parks Program.

Director’s Order #7 addresses the Volunteers-In-Parks Program on a service-wide level of the NPS. It professionalizes the volunteer workforce, and provides volunteers access to some of the same benefits enjoyed by regular government employees—specifically injury and tort protection.

NPS managers have a commitment to volunteers to provide orientation, training, and other support in volunteer’s efforts to help accomplish the NPS Mission. Volunteers have a commitment to NPS managers to follow established policies and procedures while engaged in these activities.

The Ice Age NST’s Volunteers-In-Parks Program is unique in its composition and execution when compared to other national parks. Because the trail is so widespread, volunteer numbers so large, and direct interaction between NPS staff and volunteers so limited, the Ice Age NST places an extremely high level of trust in all volunteers to work and act autonomously while meeting the professional standards of the NPS. When volunteers are on the Trail and in the surrounding communities, they represent not only themselves, their trail chapter or The Alliance—they represent the NPS as well. The Ice Age NST and the volunteers must forever strive to support and assist one another to maintain professional standards in all that we collectively do.

Policy Statement

The Ice Age National Scenic Trail respects and values all volunteers as equal partners in accomplishing the mission of the Trail. Accordingly, opportunities as well as responsibilities exist for employees and volunteers alike. The Ice Age NST's commitment to volunteers is to maximize the quantity and quality of training opportunities, make all efforts to provide for a safe and productive work environment, and to maintain standards of conduct for the benefit of everyone. The volunteer's commitment to the Ice Age NST is to demonstrate good faith effort in adhering to NPS policies and procedures, and conduct themselves in manners befitting the NPS Volunteers-In-Parks Program. This includes not only to general conduct and/or safety related issues, but behaviors related to maintaining a harassment-free work environment as outlined in Directors Order #16E: NPS Anti-Harassment Policy, and the corresponding Reference Manual #16E, found at:

(https://www.nps.gov/policy/DOrders/RM-16E_Signed_2018_04_Combined_508_040218.pdf)

Procedures

Although infrequent, there exists the potential for volunteers to act outside of established policies—either innocently or deliberately.

It is the responsibility of all volunteers to assist one another in communicating and fostering a positive work environment in keeping with established policies, which creates an exemplary Volunteers-In-Parks Program for all involved. Ultimately, it is the responsibility of the Superintendent to ensure application and adherence to policies, in order to maintain a safe, professional and productive work environment.

NPS Operational Leadership, and the related *Trail Safe!* program, define behavioral “errors” in language that is recognized and accepted throughout the National Park Service, demonstrates the causal relationship between errors and accidents, and outlines the responsibilities of management in addressing various errors. Volunteers are encouraged to review video Lesson 3 of *Trail Safe!*, “Error & Accident Causation,” found online at: <https://www.nps.gov/iatr/trail-safe.htm>

Accordingly, the NPS-Ice Age NST, in concert with the Ice Age Trail Alliance, will rely upon the following general guidelines in addressing volunteer workforce issues.

In cases of simple “Human Error” (i.e.: unintentional mistakes, failure to recognize risks, unfamiliar with approved practices or standards, etc.), upon discovery:

1. The activity shall be immediately stopped to ensure safety
2. All “near miss” accidents shall be reported to the NPS Volunteer Coordinator for documentation in the NPS’ Safety Management Information System (SMIS). Near miss accidents are also explained in Lesson 3 of *Trail Safe!*
3. Reports of such issues are not a form of punishment. They will help identify potential trends where further orientation or training may benefit all volunteers through an anonymous “Lessons Learned” format
4. Corrective action in the form of on-the-spot counseling, further training, or review of policy should be sufficient in correcting the problem. On site crew leaders (including volunteer leaders) shall initiate these actions whenever they are present, with support and assistance from IATA staff and/or NPS Volunteer Coordinator as needed

In cases of “Reckless Conduct” (i.e.: the conscience disregard of a visible, significant risk) or “Intentional Rule Violation” (i.e.: anti-authority behavior), upon discovery:

1. The activity shall be immediately stopped to ensure safety
2. Anyone with knowledge of the problem shall report it to the IATA and/or NPS, and those organizations will share such reports with each other. The IATA Executive Director and NPS Superintendent shall consult on the appropriate course of action
3. Disciplinary action is appropriate in cases where known, significant risks are disregarded, or rules are intentionally violated
4. The degree of response to such violations is at the Superintendent’s discretion. Corrective actions may include verbal warnings, written warnings, or removal from NPS Volunteer-In-Parks status

In cases of harassing conduct, volunteers shall immediately report the allegations to the National Park Service at 608-798-8690. The National Park Service will follow Director’s Order #16E and the corresponding Reference Manual #16E in responding to any report of harassing conduct.

Volunteer Job Descriptions

Support Services

Volunteer work in this discipline will involve one or more of the following: administrative duties, web master, photographer, tool cache “quartermaster,” food services, trail adopter/coordinator, work planning, public hike/social leader, land acquisition, landowner relations liaison, membership outreach events, and shuttle driver. It is understood that some of these job descriptions may overlap or be applicable in more than one situation at a time. Please select the best/closest fit to the anticipated job. Work supervisor or VIP coordinator check all that apply:

- **Administrative Duties:** any activity that is office-based in nature, including records-keeping and documentation tasks; entering or updating membership data, writing minutes of meetings, articles for newsletters, or other journaling tasks; ordering, purchasing, inventorying, or sorting office supplies or other such materials; computer-related tasks (other than website creation/maintenance); general correspondence and mailings; attendance at various conferences and meetings, etc. (JHA #9)
 - **Web Master:** creation of trail/chapter websites, or updates to existing websites as an assigned “Web Master” task (member-created article submissions to trail journals or websites should be tracked under Administrative Duties). (JHA #9)
 - **GPS/Mapping:** any activity in the field or office setting which involves GPS and/or mapping of the Trail. (JHA #9)
 - **Photography:** any photography, digital or otherwise, that is specifically undertaken in support of trail business (i.e.: promotional displays, photos to support websites or news articles, etc.). Time spent by volunteers taking photos strictly for personal enjoyment should not be recorded as volunteer hours under this category. (No JHA Applies)
 - **Tool Cache Quartermaster:** any volunteer time dedicated to the care, maintenance, storage, distribution, transportation, cleaning, repair or inventory of tools. (JHA #2)
 - **Food Service:** any volunteer time related to the purchase, preparation, serving, or clean-up of meals/food associated with trail meetings, work days, or promotional events. (JHA #7)
 - **Trail Adopter/Coordinator:** any volunteer time associated with oversight of a particular trail section, including patrol/inspection of trail conditions, coordination with chapter leaders to plan for and work toward desired future conditions, research into possible problem-solving actions for specific trail segments, etc. (No JHA Applies)
 - **Work Planning:** volunteer time related to general planning efforts and pre-workday logistics for trail construction, repair, or maintenance for non-Trail Adopter segments or issues. (No JHA Applies)
 - **Public Hike/Social Leader:** any volunteer time focused on leading public hikes, providing interpretive or “guide” messages about the surrounding area to guest hikers,
-

planning or coordinating social events or gatherings for chapter members, etc. (No JHA Applies)

- **Land Acquisition:** any volunteer time focusing on the research of available, desirable land for acquisition along possible trail routes, or the actual work of pursuing property through purchase, donation, granting of easements, etc. (No JHA Applies)
- **Landowner Relations Liaison:** any volunteer work which establishes, promotes, or otherwise maintains and fosters good relationships between private landowners and the Ice Age National Scenic Trail and its associated chapters. (No JHA Applies)
- **Outreach Events/Membership Drives:** any volunteer time spent promoting the trail, recruiting membership to trail chapters, and other such general outreach efforts (i.e.: staffing a booth at a local event in order to promote the trail, recruit volunteers for chapter work & membership, etc). (No JHA Applies)
- **Shuttle Driver:** operating a vehicle to transport volunteers or tools/supplies/equipment in support of trail work, membership events, etc. (JHA #8)

Cumulative list of JHA's for Support Services: #2, 7, 8, and 9.

Tools commonly used in Support Services may include: motor vehicles, cooking implements, GPS equipment, cameras, telephones, FAX machines, computers, keyboards, and common office supplies such as staplers, scissors, and writing implements.

Physical Demands involved with Support Services range from light exertion to arduous exertion depending upon the task. Volunteers and the work they perform will be appropriately matched regarding their personal interests and abilities. In general, trail maintenance often involves frequent stooping, lifting, reaching, bending, carrying, and repetitive motion. Distances walked may frequently exceed several miles per day, often while carrying tools or other equipment. Objects weighing more than 50 pounds may need to be lifted or otherwise moved.

Working conditions involved with Support Services most frequently occurs indoors, although some tasks may encompass all types of weather, from hot and humid to wet and cold. Outdoor work may occur across uneven terrain, including hills, slopes, grades, and wetlands in both forested and open areas, which may present numerous slipping and tripping hazards such as rocks and tree roots, mossy stones or logs, mud and water, or loose gravel. Exposure to long periods of standing, sitting, sunlight, wind, dust/dirt, insects, motor noise, or exhaust is possible.

Personal Protective Equipment (PPE) for Support Services may include: first aid kit, sturdy work gloves, and sturdy leather work boots for any outdoor task or when working with tools; ergonomic work stations and wrist supports for office settings; hair coverings, sanitary plastic gloves, and oven mitts/hot pads for food preparation or handling.

Job Hazard Analysis (JHAs) will be made available by the Work Leader or VIP Coordinator to each volunteer for the specific work being performed (whenever appropriate and identified above), and will be covered during "tailgate" safety briefings. Additionally, safety considerations

such as proper hydration, heat disorders, hypothermia, insect/animal bites & stings, and Lyme disease awareness should be discussed as appropriate given the local work environment, season, and geographic location. Refer to “Tailgate Safety Series” materials for talking points on these subjects.

Trail Construction and/or Repair

Volunteer work performed in this discipline will involve one or more of the following: flagging proposed trail routes, constructing trail tread, bridge construction, boardwalk construction, culvert placement, puncheon construction, causeway/turnpike construction, Coweeta dip construction, retaining wall construction, stiles construction, water bar construction, the construction of various support structures such as shelters/lean-to’s, parking areas, trail head facilities, information kiosks, installation of trail signs, and posting of trail blazes and boundary markers. All work will be done to standards as defined in the Ice Age Trail Handbook for Trail Design, Construction and Maintenance. Daily work may involve any or all of these specific tasks at various dates and times:

- **Flag Route:** (No JHA Identified).
- **Trail Tread/Causeway/Turnpike:** (JHA # 1, 2).
- **Coweeta Dips:** (JHA # 2).
- **Culverts:** Comply with permit restrictions if applicable. (JHA #1, 2).
- **Puncheons:** Note: local trail construction traditions/preferences may favor boardwalks vs. puncheons, or vice versa. (JHA # 1, 2, 6).
- **Boardwalks:** Comply with permit restrictions if applicable. (JHA # 1, 2, 6).
- **Bridges:** Comply with permit restrictions if applicable. (JHA #1, 2, 6).
- **Retaining Wall:** (JHA # 1, 2).
- **Stiles:** Choose either Step Stile, Turnstile, or Dodgeway construction/repair to best suit local conditions and landowner preferences/requirements. (JHA #2).
- **Water Bars:** (JHA #2).
- **Support Structures (Shelters, Kiosks, etc.):** (JHA # 1, 2).
- **Parking Areas/Trailheads:** (JHA # 2, 3, 6).
- **Signs/Markers:** (JHA # 2, 4).
- **Blazes:** both paint and nail-on type blazes must conform to specifications as defined in the Ice Age Trail Handbook for Trail Design, Construction and Maintenance (Chapter 7 in either Handbook). (JHA # 4).
- **Cumulative list of JHA’s:** #1, 2, 3, 4, and 6.

Tools commonly used in Trail Construction or Repair may include one or more of the following, depending upon complexity of the task and training/certification of the volunteer: clinometer, DR Field Mower® or Trimmer, side-discharge lawn mower, chainsaw, brushsaw, Pulaski, McLeod, Council Rake, pick mattock, cutter mattock, Hazel Hoe, Suwanee Sling, shovel, lopper, pruning saw, bow saw, crosscut saw, pole pruner/saw, axe, weed whip, crow bar, wheel barrow, sledge hammer, various hand tools (both manual and power, i.e.: screwdrivers, circular saws, claw hammers, drills, etc.), jack, adze, spud, measuring wheel, post hole digger,

log carrier, Peavy or Cant Hook, cable winch, and rigging.

Physical Demands involved with Trail Construction or Repair range from light exertion to arduous exertion depending upon the task. Volunteers and the work they perform will be appropriately matched regarding their personal interests and abilities. In general, trail construction or repair often involves frequent stooping, lifting, reaching, bending, carrying, and repetitive motion. Distances walked may frequently exceed several miles per day, often while carrying tools or other equipment. Objects weighing more than 50 pounds may need to be lifted or otherwise moved.

Working conditions involved with Trail Construction or Repair may encompass all types of weather, from hot and humid to wet and cold. Work will occur across uneven terrain, including hills, slopes, grades, and wetlands in both forested and open areas, which may present numerous slipping and tripping hazards such as rocks and tree roots, mossy stones or logs, mud and water, or loose gravel. Exposure to long periods of sunlight, wind, dust/dirt, insects, motor noise, exhaust, gas/paint fumes is possible.

Personal Protective Equipment (PPE) for Trail Construction or Repair includes: first aid kit, sturdy work gloves, and sturdy leather work boots. Use of any gasoline-operated power tool/equipment will also require the proper use of eye protection and hearing protection. Additionally, in the case of chainsaw operation, a hard hat and saw chaps are also required for the faller (boots, gloves, hard hat, eye protection, and hearing protection required for “swampers”). Individual volunteers and work crews are strongly encouraged to carry cellular phones, radios, or other communication devices whenever and wherever possible/practical in case of emergencies.

Job Hazard Analysis (JHAs) will be made available by the Work Leader or VIP Coordinator to each volunteer for the specific work being performed, and will be covered during “tailgate” safety briefings. Additionally, safety considerations such as proper hydration, heat disorders, hypothermia, insect/animal bites & stings, and Lyme disease awareness should be discussed as appropriate given the local work environment, season, and geographic location. Refer to “Tailgate Safety Series” materials for talking points on these subjects.

Trail Maintenance

Volunteer work performed in this discipline will involve one or more of the following: mowing, brushing, pruning, sawing, re-painting tree blazes, clearing culverts of debris, water bar rehabilitation, and litter pickup. All work is to be done to standards in the Ice Age Trail Handbook for Trail Design, Construction and Maintenance. Daily work may involve any or all of these specific tasks at various dates and times:

- **Prune/Brush:** (JHA #2).
 - **Mowing:** May be accomplished by either side-discharge lawn mower, motorized weed-eater, or non-motorized weed whips, dependent upon size/complexity of job, and skill level/certification of operator. (JHA #3).
-

- **Sawing:** clear trail of downed trees, large branches, or hazardous leaning trees. May be accomplished by either chainsaw or non-motorized saw, dependent upon size/complexity of job, and skill level/certification of saw operator. Chainsaw operators must have current certification through an approved course/instructor, as well as current certification in First Aid and CPR. (JHA #2, 6).
- **Blazes:** repaint/replace tree blazes that are faded or missing. (JHA #4).
- **Culverts:** clear culverts of all debris so that proper water flow/drainage is restored. (JHA #1, 2).
- **Water Bars:** (JHA #2).
- **Litter:** Remove debris from old dump sites located along the trail, and/or pick up current trash found along trail segments. (JHA # 5).

Cumulative list of JHA's: #1, 2, 3, 4, 5 and 6.

Tools commonly used in Trail Maintenance may include one or more of the following, depending upon complexity of the task and training/certification of the volunteer: DR Field Mower® or Trimmer, side-discharge lawn mower, chainsaw, brushsaw, Pulaski, McLeod, Council Rake, pick mattock, cutter mattock, Hazel Hoe, Suwanee Sling, shovel, lopper, hand pruner, pruning saw, bow saw, crosscut saw, pole pruner/saw, axe, weed whip, crow bar, wheel barrow, and paint brush.

Physical Demands involved with Trail Maintenance range from light exertion to arduous exertion depending upon the task. Volunteers and the work they perform will be appropriately matched regarding their personal interests and abilities. In general, trail maintenance often involves frequent stooping, lifting, reaching, bending, carrying, and repetitive motion. Distances walked may frequently exceed several miles per day, often while carrying tools or other equipment. Objects weighing more than 50 pounds may need to be lifted or otherwise moved.

Working conditions involved with Trail Maintenance may encompass all types of weather, from hot and humid to wet and cold. Work will occur across uneven terrain, including hills, slopes, grades, and wetlands in both forested and open areas, which may present numerous slipping and tripping hazards such as rocks and tree roots, mossy stones or logs, mud and water, or loose gravel. Exposure to long periods of sunlight, wind, dust/dirt, insects, motor noise, exhaust, or gas/paint fumes is possible.

Personal Protective Equipment (PPE) for Trail Maintenance tasks includes: first aid kit, sturdy work gloves, and sturdy leather work boots. Use of any gasoline-operated power tool/equipment will also require the proper use of eye protection and hearing protection. Additionally, in the case of chainsaw operation, a hard hat and saw chaps are also required for the faller (boots, gloves, hard hat, eye protection, and hearing protection required for "swampers"). Individual volunteers and work crews are strongly encouraged to carry cellular phones, radios, or other communication devices whenever and wherever possible/practical in case of emergencies.

Job Hazard Analysis (JHAs) will be made available by the Work Leader or VIP Coordinator to each volunteer for the specific work being performed, and will be covered during "tailgate" safety briefings. Additionally, safety considerations such as proper hydration, heat disorders,

hypothermia, insect/animal bites & stings, and Lyme disease awareness should be discussed as appropriate given the local work environment, season, and geographic location. Refer to “Tailgate Safety Series” materials for talking points on these subjects.

Vegetation Management

Volunteer work performed in this discipline will involve one or more of the following: plant species identification, marking individual plants or plant colonies, cutting seed heads, seed collection, plant removal by hand/mechanical techniques, and application of non-restricted herbicides. The use of burning or prescribed fire is not authorized for volunteer activities performed under the National Park Service’s Volunteers-In-Parks Program at Ice Age National Scenic Trail. Daily work may involve any or all of these specific tasks at various dates and times:

- **Identification:** survey/inspect area to identify exotic and/or invasive plant species, document all findings by method(s) appropriate to the circumstance (record observations in notebook, plot areas/species on maps, plot sites by GPS unit, etc.). (No JHA Identified).
 - **Marking:** if control/eradication efforts must occur at later date, mark the individual plant, or plant colony, by method appropriate to the circumstance (ribbon/flagging, paint blazes, GPS, etc.). (JHA #4).
 - **Clip Seed Heads:** using hand-held tools, collect seed heads in a bucket or sealed container to remove from site. (JHA #2).
 - **Cut Plants:** remove plants, shrubs, or trees, either partially or by cutting at ground level, using either power tools (mowers or weed eaters, chainsaws, etc.) or manual tools (weed whips, hand clippers, etc.). Chainsaw operators must have current certification through an approved course/instructor, as well as current certification in First Aid and CPR. (JHA #2, 3, 6).
 - **Dig Up Plants:** remove plants, including root wads to ensure the plant will not regrow, using shovels and other hand tools. If plants have seed heads, be sure to clip and contain them or other wise ensure seeds do not spread prior to digging up plant. Ground disturbing work requires Cultural Resources clearance to the same extent as trail construction requirements. (JHA #2).
 - **Herbicide Application:** apply chemicals to control or eradicate undesired vegetation. This work will only be performed by staff and volunteers who have the proper trainings and certifications. It will be conducted in accordance with all applicable laws, permits and regulations, and following label requirements, including use of personal protective equipment. All persons working with herbicides should receive a briefing on information provided on Material Safety Data Sheets (MSDS), and MSDS’s should be available for their review. (JHA #10).
 - **Native Seed Collection:** using hands or hand-held tools, collect seed heads in a bucket or sealed container for drying and subsequent restoration efforts. Care must be taken to collect native seed only. (JHA #2).
-

Cumulative list of JHA's: #2, 3, 4, 6 and 10.

Tools commonly used in Vegetation Management may include one or more of the following, depending upon complexity of the task and training/certification of the volunteer: power mower or trimmer, chainsaw, brushsaw, weed wrench, Pulaski, Hazel Hoe, shovel, lopper, hand pruner, bow saw, crosscut saw, paint brush, and herbicide applicator/spray tank.

Physical Demands involved with Vegetation Management range from light exertion to arduous exertion, depending upon the task, but most commonly involves light to moderate physical effort. Volunteers and the work they perform will be appropriately matched regarding their personal interests and abilities. In general, invasive/exotic plant management often involves frequent stooping, lifting, reaching, bending, carrying, and repetitive motion. Distances walked may frequently exceed several miles per day, often while carrying tools or other equipment.

Working conditions involved with Vegetation Management may encompass all types of weather, from hot and humid to wet and cold. Work will occur across uneven terrain, including hills, slopes, grades, and wetlands in both forested and open areas, which may present numerous slipping and tripping hazards such as rocks and tree roots, mossy stones or logs, mud and water, or loose gravel. Exposure to long periods of sunlight, wind, dust/dirt, insects, motor noise, exhaust, gas/paint/chemical fumes is possible.

Personal Protective Equipment (PPE) and Safety Equipment

General Field Work: Work gloves and sturdy work boots are required. A first aid kit must be immediately available. Individual volunteers and work crews are strongly encouraged to wear the following as appropriate; eye protection when working around tall brush or low hanging branches, and long sleeve shirts and wide brimmed hats or hardhats for sun protection. They are also strongly encouraged to carry cellular phones, radios, or other communication devices whenever and wherever possible/practical in case of emergencies.

Power Tools/Equipment: In addition to the PPE listed for general field work volunteers operating or working in the immediate vicinity of power tools and/or equipment also requires the proper use of eye protection and hearing protection.

Chain Saws: Operators (“fallers”) will wear sturdy boots, gloves, hard hat, eye and ear protection, and saw chaps. Those assisting operators (“swampers”) will wear the same PPE, but saw chaps are not required. A first aid kit appropriate to chainsaw operations must be immediately available.

Herbicide Application: Any volunteer working with herbicides must use the following PPE; chemical resistant gloves, long pants, long sleeved shirt, eye protection, and sturdy leather work boots. They must also have a first aid kit and chemical spill kit immediately available. Other PPE must be used if required by label or applicable local, state, or federal regulations. A head covering is recommended (hat or cap, bandana, etc.). Rinse water and clean up facilities must be available in case of a spill.

Job Hazard Analysis (JHAs) will be made available by the Work Leader or VIP Coordinator to each volunteer for the specific work being performed, and will be covered during “tailgate” safety briefings. Additionally, safety considerations such as proper hydration, heat disorders, hypothermia, insect/animal bites & stings, and Lyme disease awareness should be discussed as appropriate given the local work environment, season, and geographic location. Refer to “Tailgate Safety Series” materials for talking points on these subjects.

Cumulative List of Job Descriptions

The following is a compilation of all Job Descriptions associated with volunteer work on the Ice Age National Scenic Trail. Volunteers working under a “group” Volunteer Services Agreement (Form 301A) at the Chapter or MSC level may perform any or all of these tasks at various times.

Major Job Description categories (i.e.: Support Services, Trail Maintenance, etc.) are also individually available on the NPS website (www.nps.gov/iatr) as well as the IATA partner website (www.iceagetrail.org) for use with 301A Volunteer Agreement Forms for instances where onetime or “episodic” volunteers are being recruited to perform specific, limited tasks which do not necessitate the use of this cumulative Job Description list.

Trail Construction and/or Repair Volunteer

Work performed in this discipline will involve one or more of the following: flagging proposed trail routes, constructing trail tread, bridge construction, boardwalk construction, culvert placement, puncheon construction, causeway/turnpike construction, Coweeta dip construction, retaining wall construction, stiles construction, water bar construction, the construction of various support structures such as shelters/lean-to’s, parking areas, trail head facilities, information kiosks, installation of trail signs, and posting of trail blazes and boundary markers. All work will be done to standards as defined in the Ice Age Trail Handbook for Trail Design, Construction and Maintenance. Daily work may involve any or all of these specific tasks at various dates and times:

- **Flag Route:** (No JHA Identified).
 - **Trail Tread/Causeway/Turnpike:** (JHA # 1, 2).
 - **Coweeta Dips:** (JHA # 2).
 - **Culverts:** Comply with permit restrictions if applicable. (JHA #1, 2). 1 of 8
 - **Puncheons:** Note: local trail construction traditions/preferences may favor boardwalks vs. puncheons, or vice versa. (JHA # 1, 2, 6).
 - **Boardwalks:** Comply with permit restrictions if applicable. (JHA # 1, 2, 6).
 - **Bridges:** Comply with permit restrictions if applicable. (JHA #1, 2, 6).
 - **Retaining Wall:** (JHA # 1, 2).
 - **Stiles:** Choose either Step Stile, Turnstile, or Dodgeway construction/repair to best suit local conditions and landowner preferences/requirements. (JHA #2).
 - **Water Bars:** (JHA #2).
 - **Support Structures (Shelters, Kiosks, etc.):** (JHA # 1, 2).
 - **Parking Areas/Trailheads:** (JHA # 2, 3, 6).
-

- **Signs/Markers:** (JHA # 2, 4).
- **Blazes:** both paint and nail-on type blazes must conform to specifications as defined in the Ice Age Trail Handbook for Trail Design, Construction and Maintenance (Chapter 7). (JHA # 4).

Cumulative list of JHA's for Trail Construction/Repair: #1, 2, 3, 4, and 6

Tools commonly used in Trail Construction or Repair may include one or more of the following, depending upon complexity of the task and training/certification of the volunteer: clinometer, DR Field Mower® or Trimmer, side-discharge lawn mower, chainsaw, brushsaw, Pulaski, McLeod, Council Rake, pick mattock, cutter mattock, Hazel Hoe, Suwanee Sling, shovel, lopper, pruning saw, bow saw, crosscut saw, pole pruner/saw, axe, weed whip, crow bar, wheel barrow, sledge hammer, various hand tools (both manual and power, i.e.: screwdrivers, circular saws, claw hammers, drills, etc.), jack, adze, spud, measuring wheel, post hole digger, log carrier, Peavy or Cant Hook, cable winch, and rigging.

Personal Protective Equipment (PPE) for Trail Construction or Repair includes: first aid kit, sturdy work gloves, and sturdy leather work boots. Use of any gasoline-operated power tool/equipment will also require the proper use of eye protection and hearing protection. Additionally, in the case of chainsaw operation, a hard hat and saw chaps are also required for the faller (boots, gloves, hard hat, eye protection, and hearing protection required for “swampers”). Individual volunteers and work crews are strongly encouraged to carry cellular phones, radios, or other communication devices whenever and wherever possible/practical in case of emergencies.

Trail Maintenance

Volunteer work performed in this discipline will involve one or more of the following: mowing, brushing, pruning, sawing, re-painting tree blazes, clearing culverts of debris, water bar rehabilitation, and litter pickup. All work is to be done to standards in the Ice Age Trail Handbook for Trail Design, Construction and Maintenance. Daily work may involve any or all of these specific tasks at various dates and times:

- **Prune/Brush:** (JHA #2).
 - **Mowing:** May be accomplished by either side-discharge lawn mower, motorized weed-eater, or non-motorized weed whips, dependent upon size/complexity of job, and skill level/certification of operator. (JHA #3).
 - **Sawing:** clear trail of downed trees, large branches, or hazardous leaning trees. May be accomplished by either chainsaw or non-motorized saw, dependent upon size/complexity of job, and skill level/certification of saw operator. Chainsaw operators must have current certification through an approved course/instructor, as well as current certification in First Aid and CPR. (JHA #2, 6).
 - **Blazes:** repaint/replace tree blazes that are faded or missing. (JHA #4)
 - **Culverts:** clear culverts of all debris so that proper water flow/drainage is restored. (JHA #1, 2).
 - **Water Bars:** (JHA #2).
-

- **Litter:** Remove debris from old dump sites located along the trail, and/or pick up current trash found along trail segments. (JHA # 5).

Cumulative list of JHA's for Trail Maintenance: #1, 2, 3, 4, 5 and 6.

Tools commonly used in Trail Maintenance may include one or more of the following, depending upon complexity of the task and training/certification of the volunteer: DR Field Mower® or Trimmer, sidedischarge lawn mower, chainsaw, brushsaw, Pulaski, McLeod, Council Rake, pick mattock, cutter mattock, Hazel Hoe, Suwanee Sling, shovel, lopper, hand pruner, pruning saw, bow saw, crosscut saw, pole pruner/saw, axe, weed whip, crow bar, wheel barrow, and paint brush.

Personal Protective Equipment (PPE) for Trail Maintenance tasks includes: first aid kit, sturdy work gloves, and sturdy leather work boots. Use of any gasoline-operated power tool/equipment will also require the proper use of eye protection and hearing protection. Additionally, in the case of chainsaw operation, a hard hat and saw chaps are also required for the faller (boots, gloves, hard hat, eye protection, and hearing protection required for “swampers”). Individual volunteers and work crews are strongly encouraged to carry cellular phones, radios, or other communication devices whenever and wherever possible/practical in case of emergencies.

Support Services

Volunteer work in this discipline will involve one or more of the following: administrative duties, Web Master, photographer, tool cache “Quartermaster,” food services, Trail Adopter/Coordinator, work planning, public hike/social leader, land acquisition, landowner relations liaison, membership outreach events, and shuttle driver. It is understood that some of these job descriptions may overlap or be applicable in more than one situation at a time. Please select the best/closest fit to the anticipated job. Work Supervisor or VIP Coordinator check all that apply:

- **Administrative Duties:** any activity that is office-based in nature, including records-keeping and documentation tasks; entering or updating membership data, writing minutes of meetings, articles for newsletters, or other journaling tasks; ordering, purchasing, inventorying, or sorting office supplies or other such materials; computer-related tasks (other than website creation/maintenance); general correspondence and mailings; attendance at various conferences and meetings, etc. (JHA #9)
 - **Web Master:** creation of trail/chapter websites, or updates to existing websites as an assigned “Web Master” task (member-created article submissions to trail journals or websites should be tracked under Administrative Duties). (JHA #9)
 - **GPS/Mapping:** any activity in the field or office setting which involves GPS and/or mapping of the Trail. (JHA #9)
 - **Photography:** any photography, digital or otherwise, that is specifically undertaken in support of trail business (i.e.: promotional displays, photos to support websites or news articles, etc.). Time spent by volunteers taking photos strictly for personal enjoyment should not be recorded as volunteer hours under this category. (No JHA Applies)
-

- **Tool Cache Quartermaster:** any volunteer time dedicated to the care, maintenance, storage, distribution, transportation, cleaning, repair or inventory of tools. (JHA #2)
- **Food Service:** any volunteer time related to the purchase, preparation, serving, or clean-up of meals/food associated with trail meetings, work days, or promotional events. (JHA #7)
- **Trail Adopter/Coordinator:** any volunteer time associated with oversight of a particular trail section, including patrol/inspection of trail conditions, coordination with chapter leaders to plan for and work toward desired future conditions, research into possible problem-solving actions for specific trail segments, etc. (No JHA Applies)
- **Work Planning:** volunteer time related to general planning efforts and pre-work day logistics for trail construction, repair, or maintenance for non-Trail Adopter segments or issues. (No JHA Applies)
- **Public Hike/Social Leader:** any volunteer time focused on leading public hikes, providing interpretive or “guide” messages about the surrounding area to guest hikers, planning or coordinating social events or gatherings for chapter members, etc. (No JHA Applies)
- **Land Acquisition:** any volunteer time focusing on the research of available, desirable land for acquisition along possible trail routes, or the actual work of pursuing property through purchase, donation, granting of easements, etc. (No JHA Applies)
- **Landowner Relations Liaison:** any volunteer work which establishes, promotes, or otherwise maintains and fosters good relationships between private landowners and the Ice Age National Scenic Trail and its associated chapters. (No JHA Applies)
- **Outreach Events/Membership Drives:** any volunteer time spent promoting the trail, recruiting membership to trail chapters, and other such general outreach efforts (i.e.: staffing a booth at a local event in order to promote the trail, recruit volunteers for chapter work & membership, etc). (No JHA Applies)
- **Shuttle Driver:** operating a vehicle to transport volunteers or tools/supplies/equipment in support of trail work, membership events, etc. (JHA #8)

Cumulative list of JHA’s for Support Services: #2, 7, 8, and 9.

Tools commonly used in Support Services may include: motor vehicles, cooking implements, GPS equipment, cameras, telephones, FAX machines, computers, keyboards, and common office supplies such as staplers, scissors, and writing implements.

Personal Protective Equipment (PPE) for Support Services may include: first aid kit, sturdy work gloves, and sturdy leather work boots for any outdoor task or when working with tools; ergonomic work stations and wrist supports for office settings; hair coverings, sanitary plastic gloves, and oven mitts/hot pads for food preparation or handling.

Vegetation Management

Volunteer work performed in this discipline will involve one or more of the following: plant species identification, marking individual plants or plant colonies, cutting seed heads, seed collection, plant removal by hand/mechanical techniques, and application of non-restricted herbicides. The use of burning or prescribed fire is not authorized for volunteer activities

performed under the National Park Service's Volunteers-In-Parks Program at Ice Age National Scenic Trail. Daily work may involve any or all of these specific tasks at various dates and times:

- **Identification:** survey/inspect area to identify exotic and/or invasive plant species, document all findings by method(s) appropriate to the circumstance (record observations in notebook, plot areas/species on maps, plot sites by GPS unit, etc.). (No JHA Identified).
- **Marking:** if control/eradication efforts must occur at later date, mark the individual plant, or plant colony, by method appropriate to the circumstance (ribbon/flagging, paint blazes, GPS, etc.). (JHA #4).
- **Clip Seed Heads:** using hand-held tools, collect seed heads in a bucket or sealed container to remove from site. (JHA #2).
- **Cut Plants:** remove plants, shrubs, or trees, either partially or by cutting at ground level, using either power tools (mowers or weed eaters, chainsaws, etc.) or manual tools (weed whips, hand clippers, etc.). *Chainsaw operators must have current certification through an approved course/instructor, as well as current certification in First Aid and CPR.* (JHA #2, 3, 6).
- **Dig Up Plants:** remove plants, including root wads to ensure the plant will not re-grow, using shovels and other hand tools. If plants have seed heads, be sure to clip and contain them or other wise ensure seeds do not spread prior to digging up plant. Ground disturbing work requires Cultural Resources clearance to the same extent as trail construction requirements. (JHA #2).
- **Herbicide Application:** apply chemicals to control or eradicate undesired vegetation. This work will only be performed by staff and volunteers who have the proper trainings and certifications. It will be conducted in accordance with all applicable laws, permits and regulations, and following label requirements, including use of personal protective equipment. All persons working with herbicides should receive a briefing on information provided on Material Safety Data Sheets (MSDS), and MSDS's should be available for their review. (JHA #10).
- **Native Seed Collection:** using hands or hand-held tools, collect seed heads in a bucket or sealed container for drying and subsequent restoration efforts. Care must be taken to collect native seed only. (JHA #2).

Cumulative list of JHA's for Vegetation Management: #2, 3, 4, 6 and 10.

Tools commonly used in Vegetation Management may include one or more of the following, depending upon complexity of the task and training/certification of the volunteer: power mower or trimmer, chainsaw, brushsaw, weed wrench, Pulaski, Hazel Hoe, shovel, lopper, hand pruner, bow saw, crosscut saw, paint brush, and herbicide applicator/spray tank.

Personal Protective Equipment (PPE) and Safety Equipment for Vegetation Management
General Field Work: Work gloves and sturdy work boots are required A first aid kit must be immediately available. Individual volunteers and work crews are strongly encouraged to wear the following as appropriate; eye protection when working around tall brush or low hanging branches, and long sleeve shirts and wide brimmed hats or hardhats for sun protection. They are also strongly encouraged to carry cellular phones, radios, or other communication devices

whenever and wherever possible/practical in case of emergencies.

Power Tools/Equipment: In addition to the PPE listed for general field work volunteers operating or working in the immediate vicinity of power tools and/or equipment also requires the proper use of eye protection and hearing protection.

Chain Saws: Operators (“fallers”) will wear sturdy boots, gloves, hard hat, eye and ear protection, and saw chaps. Those assisting operators (“swampers”) will wear the same PPE, but saw chaps are not required. A first aid kit appropriate to chainsaw operations must be immediately available.

Herbicide Application: Any volunteer working with herbicides must use the following PPE; chemical resistant gloves, long pants, long sleeved shirt, eye protection, and sturdy leather work boots. They must also have a first aid kit and chemical spill kit immediately available. Other PPE must be used if required by label or applicable local, state, or federal regulations. A head covering is recommended (hat or cap, bandana, etc.). Rinse water and clean up facilities must be available in case of a spill.

For All Job Descriptions:

Physical Demands range from light exertion to arduous exertion depending upon the task. Volunteers and the work they perform will be appropriately matched regarding their personal interests and abilities. In general, trail work often involves frequent stooping, lifting, reaching, bending, carrying, and repetitive motion. Distances walked may frequently exceed several miles per day, often while carrying tools or other equipment. Objects weighing more than 50 pounds may need to be lifted or otherwise moved.

Working conditions may encompass all types of weather, from hot and humid to wet and cold. Trail work will occur across uneven terrain, including hills, slopes, grades, and wetlands in both forested and open areas, which may present numerous slipping and tripping hazards such as rocks and tree roots, mossy stones or logs, mud and water, or loose gravel. Exposure to long periods of sunlight, wind, dust/dirt, insects, motor noise, exhaust, gas/paint fumes is possible. Administrative duties may be performed either indoors or outdoors, and may require long periods of sitting, bending, reaching, repetitive motion, and some amount of lifting.

Job Hazard Analysis’ (JHAs) are available from the Work Leader or VIP Coordinator. They are also available on the NPS and IATA partner websites listed at the beginning of this document. Volunteers are encouraged to review JHAs before starting any task to inform themselves of recommended safe work practices. Additionally, safety considerations such as proper hydration, heat disorders, hypothermia, insect/animal bites & stings, and Lyme disease awareness should be discussed by Work Leaders as appropriate considering the local work environment, season, and geographic location. Refer to “Tailgate Safety Series” materials for talking points on these subjects, also available on the NPS and IATA partner websites.

COVID-19 JOB HAZARD ANALYSIS (JHA)

Ice Age National Scenic Trail

Analysis By: Daniel W. Watson, VIP Coordinator

Approved By: Eric Gabriel, Superintendent (signature on file)

The following Risk Mitigation Actions are to be implemented by all Ice Age Trail volunteers in addition to already existing JHA guidance for specific work activities:

- Social Distancing. Volunteers are required to observe and practice all current social distancing guidance per Governor's Orders or other official source such as the CDC—currently to maintain a distance of six feet apart from others, and wearing of a cloth face covering as appropriate
- Wash hands vigorously with warm water and soap for at least 20 seconds as frequently as possible, but at a minimum just prior to—and immediately after—any volunteer work
- Leather gloves are still required for any volunteer job that has always necessitated that type of Personal Protective Equipment (i.e.: chainsaw work, brush removal, etc.)
- If you are working with leather gloves, store them away from other clothing or belongings between uses (inside a sealable bag or small plastic tote). To the extent possible, and based upon local availability, clean or disinfect leather gloves with household over-the-counter products (disinfectant sprays)
- If you have access to disposable gloves be sure to safely discard them after use. Cloth work gloves may be machine washed and dried for reuse. It is recommended that these items be washed separately from other household laundry
- Volunteers should wear a face covering when their activities place them in potential exposure circumstances (passing others on the Trail, working where the public may inadvertently violate social distancing guidelines, etc.).

(continued)

- Limit your exposure to, and contact with, Trail structures that have been touched by other users—Information Kiosks, Wayside Exhibits, Brochure Boxes, Handrails, etc.
- Chainsaw operators and swampers should remove face coverings while actively sizing up and performing cutting operations within a protected perimeter of operations to effectively communicate
- Avoid sharing or exchanging hand tools
- Dependent upon local availability, it is recommended to clean or disinfect tool handles, mower handlebars, and other similar surfaces before and after use with household, over-the-counter products
- Whenever possible, drive to work sites individually, or with immediate household members only in a shared vehicle.
- Use litter grab-bar tools to pick up trash whenever possible, or a gloved hand if necessary
- Securely tie up trash bags and dispose in a safe way (avoid transport inside enclosed vehicles, don't deposit trash bags in receptacles within your residence, etc.)
- To the extent possible, minimize your exposure to other hikers and Trail users. Conducting volunteer Trail work on weekdays and off-peak user times results in less exposure than on weekends, holidays, or other busy Trail use times
- If you encounter situations or circumstances that create concerns about your ability to safely protect yourself, do not proceed
- If you are ill, or exhibit any flu-like symptoms, do not participate in volunteer activities. Seek medical attention as appropriate, and return to volunteer activities only after being medically cleared to do so

JOB HAZARD ANALYSIS (JHA): Ice Age National Scenic Trail

Lifting Heavy Objects: IATR-01

Analysis By: Daniel W. Watson, VIP Coordinator

Approved By: Eric Gabriel, Superintendent (signature on file)

Required Personal Protective Equipment (PPE): Leather Gloves, Sturdy Footwear

Sequence of Job Steps	Potential Hazards/ Injury Sources	Safe Action or Procedure
Initial Lifting	Overexertion or strained muscles in arms or back	Use proper lifting technique, bend at knees, keep back straight, lift with legs, keep load close to body.
	Fingers pinched or caught between objects	Wear PPE, enlist help of others.
Walking with Object	Drop heavy object on foot or other body part	Wear PPE, enlist help of others.
	Trip or fall	Ensure firm footing, clear path before walking.
	Overexertion	Enlist help of others, take breaks as needed.
Putting Object Down	Overexertion or strained muscles in arms or back	Use proper lifting technique, bend at knees-keep back straight-lift with legs-keep load close to body.
	Fingers pinched or caught between objects	Wear PPE, enlist help of others.

JOB HAZARD ANALYSIS (JHA): Ice Age National Scenic Trail

Long-Handled Tools & Saws: IATR-02

Analysis By: Daniel W. Watson, VIP Coordinator

Approved By: Eric Gabriel, Superintendent (signature on file)

Required Personal Protective Equipment (PPE): Leather Gloves, Sturdy Footwear (Hard Hat and/or Eye Protection may be required when working with certain tools or performing certain tasks, i.e.: eye protection for breaking stone with sledge hammer, hard hat for climbing trees with pruner pole, etc.)

Tools and Equipment: Pulaski, Mattock, McLeod, Council Rake, Shovel, Weed Whip (manual), Adze, Spud, Post Hole Digger, Sledge Hammer, Lopper, Pruning Saw, Bow Saw, Pole Pruner/Saw, etc.

Required Standards and General Notes: General Trail Construction/Maintenance/Repair

Sequence of Job Steps	Potential Hazards/ Injury Sources	Safe Action or Procedure
Walking to or from Job Site	Trip or Fall	Wear PPE, be attentive to footing and trip hazards.
	Struck by tools while walking	Maintain safe distance/spacing while walking; use tool guards if available; carry tool at your side, parallel to the ground, gripped at balance point behind tool head, with head forward and with sharp edge down & on down-slope side
Working with Tools	Overexertion	Enlist help of others, take breaks as needed.
	Cuts from tools	Use proper tool for job, maintain safe working space, and wear PPE.

JOB HAZARD ANALYSIS (JHA): Ice Age National Scenic Trail

Power Mowing: IATR-03

Analysis By: Daniel W. Watson, VIP Coordinator

Approved By: Eric Gabriel, Superintendent (signature on file)

Required Personal Protective Equipment (PPE): Sturdy footwear, eye protection, hearing protection, leather gloves, dust mask (optional)

Tools and Equipment: DR Field Mower®, side-discharge lawn mower, motorized weed eater

Required Standards and General Notes: Mow trail segments to “Minimum Clearing Width” defined in *Handbook for Trail Design, Construction and Maintenance*

Sequence of Job Steps	Potential Hazards/ Injury Sources	Safe Action or Procedure
Fueling equipment	Exposure to gasoline	Use funnels or attached gas can spouts when filling fuel tanks on equipment; work on level surfaces; replace fuel caps immediately. Follow all manufacturer’s safety directions.
Operating equipment	Exposure to exhaust fumes, dust, noise, vibration, flying debris	Wear all applicable PPE, consider wearing dust mask, take periodic breaks.
	Objects discharged from mower	Stop operation to allow hikers to pass.
	Cuts to feet	Wear PPE, use rotary blade equipment only if slope & footing are safe. Follow all manufacturer’s safety directions.
Clearing/working on equipment	Hands cut/caught in moving parts/blades	Wear PPE; turn off equipment before clearing discharge chutes, blade areas, etc. Follow all manufacturer’s safety directions.

JOB HAZARD ANALYSIS (JHA): Ice Age National Scenic Trail

Painting: IATR-04

Analysis By: Daniel W. Watson, VIP Coordinator

Approved By: Eric Gabriel, Superintendent (signature on file)

Required Personal Protective Equipment (PPE): Gloves, eye protection, dust mask (optional if working outdoors; recommended if working indoors or personally sensitive to paint fumes)

Tools and Equipment: Paint, paint thinners & cleaning solvents, paint brush/roller, can opener/screwdriver, stir stick, hand axe, wire brush, paint scrapers

Sequence of Job Steps	Potential Hazards/ Injury Sources	Safe Action or Procedure
Open Paint Can	Punctures or cuts from screwdriver or can opener	Wear gloves; work with pointed/sharp tool edges pointed away from yourself.
	Exposure to paint fumes	Work in well ventilated areas; consider wearing dust mask.
Stir/mix/pour paint	Paint splashes in eyes/on skin	Wear eye protection, gloves; work on level surfaces.
Painting	Splashes in eyes/on skin	Wear eye protection, gloves; paint slowly to reduce splash.
	Exposure to paint fumes	Work in well ventilated areas; consider wearing dust mask.
	Muscle strain from repetitive motion, reaching awkward positions	Take rest breaks as needed; position body to minimize awkward movements.
	Cuts from sharp tools (hand axe, paint scraper)	Wear gloves, keep blade preparation tool under control at all times, cut away from yourself.
Cleaning brushes/rollers	Exposure to paint fumes, chemicals, etc.	Work in well ventilated areas; thoroughly wash hands and exposed skin immediately after work is completed; consider wearing dust mask.

JOB HAZARD ANALYSIS (JHA): Ice Age National Scenic Trail

Litter Clean Up: IATR-05

Analysis By: Daniel W. Watson, VIP Coordinator

Approved By: Eric Gabriel, Superintendent (signature on file)

Required Personal Protective Equipment (PPE): Leather gloves, sturdy footwear, sun screen, insect repellent

Tools and Equipment: Trash bags, wheel barrow, rake, shovel

Sequence of Job Steps	Potential Hazards/ Injury Sources	Safe Action or Procedure
Walking to/from Job Site	Trip or fall	Wear PPE, be attentive to footing and trip hazards.
	Struck by tools while walking	Maintain safe distance/spacing while walking; use tool guards if available; carry tool at your side, parallel to ground, gripped at balance point behind tool head, with head forward and with sharp edge down & on down-slope side.
Picking up Trash	Overexertion/repetitive motion	Take breaks as necessary; use proper lifting techniques for heavy objects (lift with legs, back straight); transport heavy loads with wheel barrow; enlist help of others as needed.
	Cuts from sharp objects	Wear gloves.
Working around Dump Sites	Feet or legs wedged between debris in dump pile	Work from outside of dump site toward the center; keep feet on solid ground; wear PPE.
	Encounters with rusty objects, venomous snake bites, and other toxins	Use long-handled tools to move objects; don't place hands or feet where you cannot see; wear PPE.
Special Hazards	Exposure to hazards associated with marijuana plantations, active or abandoned meth labs, etc.	Be observant for things that are suspicious or out of place (trip wire strung across path, irrigation hose lays, evidence of fertilizer activity/trash, strong chemical odors, dump sites that include items such as propane tanks, acetone, shredded lithium batteries, lye/drain cleaner, coffee filters, cold medicine packages, etc. Immediately leave the area and call police/911.

JOB HAZARD ANALYSIS (JHA): Ice Age National Scenic Trail

Chainsaw Operations: IATR-06

Analysis By: Daniel W. Watson, VIP Coordinator

Approved By: Eric Gabriel, Superintendent (signature on file)

Required Personal Protective Equipment (PPE): Hard Hat (ANSI Z89.1 compliant), Sturdy leather (cut-resistant) Boots, leather or other sturdy Work Gloves, Eye Protection/Face Shield (ANSI Z87.1 compliant), Hearing Protection (ear muffs, plugs, or a combination), Saw Chaps (meets or exceeds USFS 6170-4F), Weather-Appropriate Shirt & Long Pants

* Swampers also required to wear identified PPE, minus chaps

Recommended Additional PPE: Blood Stopper Belt Trauma Kit, Safety Whistle

Tools and Equipment: Chainsaw, Saw Kit, Fuel & Bar Oil, Logger’s First Aid Kit (meets 29 CFR 1910.266), Cellular Phone or Two-Way Radio

Required Standards and General Notes: Chainsaw Operators must possess a valid National Sawyer Certification Card. Chainsaw operations always involve at least two people for safety enhancement. Sawyers and Swampers maintain currency in First Aid/CPR, *Trail Safe!* videos, and an approved OF-301A Volunteer Services Agreement

Sequence of Job Steps	Potential Hazards/ Injury Sources	Safe Action or Procedure
Certification/Training	Various potential injuries due to operating saw outside of skill/training level	Complete approved chainsaw operator training (NRSTP); operate chainsaw within certification parameters
Risk Management Analysis	Site-Specific Hazards	Identify site-specific hazards associated with each saw operation, mitigate hazards or stop work until safety concerns are addressed. Utilize <i>Trail Safe!</i> risk analysis tools (SPE/GAR) to determine Low, Moderate, or High Risk
Fueling	Fire from gas spilled on muffler or other ignition source; fuel geysering; damage to equipment from improperly labeled fuel containers	<p>Let saw cool before refueling.</p> <p>Fuel on bare ground, use funnels.</p> <p>No smoking during refueling, or during chainsaw operations (includes vaping and e-cigarettes)</p> <p>Move at least 10 feet away from fueling site before starting saw.</p>

		<p>Replace excessively gas/oil-soaked gloves.</p> <p>Mix fuel in well ventilated area.</p> <p>Clean up spills promptly.</p> <p>Gasoline will be stored in approved containers or Department of Transportation (DOT) approved containers in quantities of 5 gallons or less. "Approved" containers are tested and certified by a nationally recognized testing laboratory (NRTL) such as Underwriters Laboratory (UL) or Factory Mutual Engineering Corp (FM). Approved containers will be marked or labeled with the UL or FM label. A safety can is a common type of approved container with a flash arresting screen, spring-closing lid and spout cover, and so designed that it will safely relieve internal pressure when subjected to fire exposure.</p> <p>Clearly mark fuel containers that have gas/oil mix ratio.</p>
Saw Maintenance	Fatigue/injury from improper saw maintenance	<p>Keep saw sharpened.</p> <p>Keep idle adjusted properly.</p> <p>Inspect for bar wear/proper chain tension.</p> <p>Take frequent rest breaks.</p>
Sharpening Chain	Cuts to hands	<p>Wear gloves when sharpening chain.</p> <p>Use vise if available.</p> <p>Never file chain while saw is running.</p>
Transporting Saw	Injury due to falls while carrying saw	<p>Always employ chain guard (scabbard) whenever saw is not in operation.</p>

<p>All Sawing Maneuvers</p>	<p>Cuts to body, various reasons</p>	<p>Wear all PPE (chaps, gloves, boots, etc.).</p> <p>Drop-starting a chainsaw is prohibited. A chainsaw must be started with the chain brake engaged and the operator holding the saw firmly in a manner that minimizes movement of the saw when pulling the starter handle.</p> <p>Chainsaws may not be operated unless the manufacturer's safety devices are in proper working order. Chainsaw safety devices may not be removed or modified.</p> <p>The chain brake must be engaged or the engine shut off if it is carried more than two steps.</p> <p>In manual tree felling operations, notches (face cuts) must be used on all trees and trunks greater than 5 inches in DBH.</p> <p>Check chain tension periodically to avoid "throwing" chain.</p> <p>When more than one individual is limbing or bucking a tree, each is positioned and their duties organized so the actions of one individual will not create a hazard for the other individual.</p> <p>Chainsaw engines must be started and operated at a 10-foot minimum distance from other individuals.</p>
<p>Felling *Securing Felling Area</p>	<p>Others being struck by trees/limbs/debris</p>	<p>The sawyer has the responsibility and authority to identify, secure, and manage the felling area. A MINIMUM OF 2.5 TIMES THE HEIGHT OF MATERIAL BEING FELLED IN ALL DIRECTIONS</p>

	<p>MUST BE SECURED. <i>Note: This requirement does not apply in the presence of site restrictions, such as waterways or cliffs. Other individuals must be beyond a tree's striking range and at a distance as close to twice the tree's height as practical</i></p> <p>No one is allowed inside secured felling area without authorization of the sawyer.</p> <p>Additionally, the entire downhill side will be included in the secure area on hillsides with steep slopes where material can roll for long, unpredictable distances.</p> <p>Establish a safe zone outside secured area where everyone remains until felling is completed and the sawyer signals "all clear."</p> <p>Position lookouts on all trails and roads entering the secured felling area.</p> <p>Before leaving the secured felling area, the sawyer must ensure that no hazards remain such as hang ups, unstable logs, or other dangers.</p> <p>It is the responsibility of the work leader and other volunteer workers to understand and follow these established standards, and to follow the direction of the sawyer.</p> <p>At times when Risk Assessments are elevated due to more complex operations, especially when chainsaw operations are part of a larger overall event with multiple workers moving throughout an area, the sawyer should enlist the help of another qualified sawyer (person of appropriate skills and knowledge) to serve as an overall</p>
--	--

		<p>lookout to maintain control of the secured area, allowing the active sawyer and swamper team to more fully focus on their immediate tasks, thus mitigating the chance of unapproved others entering the secured area.</p>
<p>Saw Certification & Working within the Felling Area</p>	<p>Other crew members observing felling procedures</p>	<p>Make sure all trainees are aware of which tree is to be felled and what direction it is planned to fall.</p> <p>Point out identified hazards from size up.</p> <p>It is the sawyer’s discretion to allow trainees within the 2.5-tree lengths to observe felling, but regardless, maintain safe distance and established escape route.</p> <p>All observers must remain quiet during felling.</p>
<p>Medical Emergencies</p>	<p>Personal injury or illness</p>	<p>All sawyers & swampers will maintain current First Aid/CPR training, and all saw work will be performed by sawyer/swamper buddy-system teams.</p> <p>Each operation must include a “safety station” within 100 feet of the work zone that contains a logger’s first aid kit meeting paragraph (d)(2) of the logging standard 29 CFR 1910.266(e)(1) and (e)(2), Logging Operations.</p> <p>The safety station shall include “Site Safety Plan” information available to all people on site denoting the location of the work site (physical address, Lat/Long, GPS coordinates, or other appropriate locator info) and the name, address, and phone number of the nearest medical facility. IATA “Safety Net” documentation is sufficient for</p>

		<p>this purpose at larger sponsored work events. It is recommended that the Site Safety Plan be kept inside the logger's first aid kit within the safety station.</p> <p>Each logger's first aid kit comes with an "<i>Emergency Assistance Instructions</i>" card that should be filled out to satisfy this requirement.</p> <p>Communications to request advanced emergency medical treatment must be provided for (cellular phones/radios, etc.).</p>
--	--	---

JOB HAZARD ANALYSIS (JHA): Ice Age National Scenic Trail

Food Handling: IATR-07

Analysis By: Daniel W. Watson, VIP Coordinator

Approved By: Eric Gabriel, Superintendent (signature on file)

Required Personal Protective Equipment (PPE): Recommend use of Apron, Oven Mitts, Disposable Gloves, Hair Net or other appropriate cover

Sequence of Job Steps	Potential Hazards/ Injury Sources	Safe Action or Procedure
Preparation Before Food Handling	Exposure to/Transfer of Germs	<p>Stay home and do not volunteer if you have a cold, nausea, fever, diarrhea, open sores/infected cuts on hands, or other infectious medical conditions.</p> <p>Wash hands prior to handling food. Wear disposable gloves when appropriate.</p>
	Contact with Food Items	<p>Wear clean clothing and cover it with clean apron. Remove apron when leaving food prep/serving area.</p>
Precautions While Handling Food	Exposure to/Transfer of Germs	<p>Rewash hands frequently, and always after using restroom facilities. Change gloves whenever changing food handling tasks.</p> <p>Restrain hair by using hairnets or other appropriate covers.</p> <p>No tasting, eating, drinking or smoking in the food preparation/serving area. Use tested recipes to avoid need for tasting.</p> <p>Do not participate in other tasks (handling paperwork, unloading supplies, etc.) while working with food.</p>
	Contact with Food Items	<p>Avoid wearing jewelry: rings, watches, and bracelets can trap dirt and bacteria; earrings and other jewelry can fall into food.</p> <p>Keep fingernails clean, unpolished, and trimmed short. Nail polish can chip; long or artificial nails can break into food.</p> <p>Minimize bare hand contact by using tongs, ladles, and other utensils, and use single service disposable gloves whenever possible.</p>
	Contacted By Hot Dishes, Surfaces, etc	<p>Wear oven mitts and aprons when handling hot dishes, working with hot surfaces, preparing or dispensing hot liquids/sauces, etc.</p>

JOB HAZARD ANALYSIS (JHA): Ice Age National Scenic Trail

Motor Vehicle Operation: IATR-08

Analysis By: Daniel W. Watson, VIP Coordinator

Approved By: Eric Gabriel, Superintendent (signature on file)

Required Personal Protective Equipment (PPE): Seat Belt with Shoulder Harness

Tools and Equipment: Various makes and models of passenger motor vehicles

Required Standards and General Notes: Must possess a valid state driver’s license

Sequence of Job Steps	Potential Hazards/ Injury Sources	Safe Action or Procedure
Safety steps before driving	Exposure to possible vehicle deficiencies, or vehicle not in proper working order	Conduct safety walk-around of vehicle to inspect tire inflation, discover fluid leaks, ensure proper gas and oil levels, adjust mirrors, familiarize yourself with vehicle controls if you have not operated that vehicle before, etc.
	Bodily reaction to alcohol, drugs, lack of sleep	Never operate a vehicle while under the influence of alcohol or drugs (follow warnings on prescription medicine labels regarding ability to drive). Do not attempt to drive if improperly rested.
Defensive driving procedures	Struck by other vehicles or objects	Always wear seat belt and shoulder harness. Always signal turns and lane changes. Maintain proper spacing and following distances from other vehicles. Stop for rest breaks as necessary. Secure loose objects inside the vehicle which may strike/injure you or passengers during emergency stopping or maneuvering. Be alert to wildlife crossing roadway, particularly at dawn, dusk, after nightfall, and during periods of increased animal movements at any time of day (i.e.: hunting seasons, mating seasons, etc.). Report all accidents to your Work Leader.

JOB HAZARD ANALYSIS (JHA): Ice Age National Scenic Trail

Carpal Tunnel Syndrome: IATR-09

Analysis By: Daniel W. Watson, VIP Coordinator

Approved By: Eric Gabriel, Superintendent (signature on file)

Required Personal Protective Equipment (PPE): Ergonomic wrist cushions, etc.

Tools and Equipment: Typewriters, computer keyboards, computer mouse

Sequence of Job Steps	Potential Hazards/ Injury Sources	Safe Action or Procedure
<p>Typing, keyboarding, use of computer mouse</p>	<p>Repetitive Motion</p>	<p>Avoid activities requiring excessive up-and-down or side-to-side movements of the wrist.</p> <p>Position hands properly while working. The arm, wrist and hand should remain in a straight line; bending may cause friction against nerves leading to inflammation.</p> <p>Take frequent, short breaks from the activity Avoid direct pressure on the heel of the hand, such as pressing hard on a seat surface to rise from a chair.</p> <p>Avoid wearing restrictive watchbands, jewelry, or clothes with tight elastic sleeves.</p> <p>Learn to use the computer mouse sensibly:</p> <ul style="list-style-type: none"> • Choose a mouse that allows you to work with an open, relaxed hand posture • Don't squeeze or grip the mouse between your thumb and little finger • Don't twist the mouse side-to-side; move the mouse with the entire arm • Don't use a wrist rest; this doubles the pressure inside the carpal tunnel • Keep the mouse close to the keyboard; don't stretch out to the side of the desk

JOB HAZARD ANALYSIS (JHA): Ice Age National Scenic Trail

Herbicide Safety: IATR-10

Analysis By: Daniel W. Watson, VIP Coordinator

Approved By: Eric Gabriel, Superintendent (signature on file)

Required Personal Protective Equipment (PPE): Long-sleeved shirt, long pants, water- and chemical-resistant boots, eye protection, neoprene or rubber gloves, breathing protection if recommended by product safety label.

Tools and Equipment: Various applicator tanks, nozzles, and containers; water supply; spill kit and shovel; first aid kit.

Required Standards and General Notes: People working with herbicides must have successfully passed herbicide applicator training (level to be determined by IATR) and be documented as an approved herbicide applicator.

Sequence of Job Steps	Potential Hazards/ Injury Sources	Safe Action or Procedure
Transport of Herbicides	Exposure to chemicals	<p>Check to ensure containers are not damaged before loading.</p> <p>Transport only the amount of herbicide needed for the days' job.</p> <p>Do not transport herbicides inside the passenger section of vehicles, inside vehicle trunks, or in trucks with wooden beds. Use trailers as needed.</p> <p>Secure containers with straps before transporting.</p>
Mixing & Handling Herbicides	Exposure to chemicals	<p>Read and follow safety label instructions for each herbicide.</p> <p>Wear PPE while working with herbicides. Properly bandage or protect open cuts or abrasions before handling herbicides.</p>

Sequence of Job Steps	Potential Hazards/ Injury Sources	Safe Action or Procedure
		<p>Mix herbicides in a well-ventilated area.</p> <p>Always check equipment and fittings for leaks and calibrate with water before using herbicides.</p>
Application of Herbicides	Exposure to chemicals	<p>Wear PPE while applying herbicides.</p> <p>Stay upwind of the applicator nozzle.</p>
	Spills or direct contact with chemicals	<p>Wash herbicide off immediately if it contacts your skin.</p> <p>Take a supply of water to the work site for washing purposes.</p> <p>Keep a spare set of clothes at the work site if clothing becomes contaminated.</p>
Storage of Herbicides	Equipment becomes contaminated	<p>Thoroughly clean and rinse equipment after each use prior to storage.</p> <p>Wear PPE while cleaning equipment.</p>
	Exposure to sunlight/heat	<p>While at the work site, keep herbicide containers in the shade to avoid pressure build-up.</p>
	Security of stored herbicides	<p>Designate a location where only herbicides are stored; a cool, dry, well-ventilated area is best.</p> <p>Lock the area to prevent unauthorized access and post the area with signage “Warning-Pesticides-Keep Out.”</p> <p>Ensure all containers are clearly labeled, especially those herbicides which have been mixed and transferred to a new container.</p>
Spill Procedures	Herbicide spills, comes in contact with ground	<p>Provide first aid as needed.</p>

Sequence of Job Steps	Potential Hazards/ Injury Sources	Safe Action or Procedure
		<p>Utilize spill kit to contain the spill and absorb excess or pooling herbicide (spill kits may be self-made by using absorptive clay, pet litter, saw dust, etc.).</p> <p>If the spill starts to spread, or threatens nearby water sources, dig a dike around the area with a shovel.</p> <p>Double bag all contaminated soils and absorptive materials for proper disposal in a sanitary landfill.</p>

JOB HAZARD ANALYSIS (JHA): Ice Age National Scenic Trail

Heavy Equipment: IATR-11

Analysis By: Daniel W. Watson, VIP Coordinator

Approved By: Eric Gabriel, Superintendent

Required Personal Protective Equipment (PPE): ANSI-Approved Eye, Hearing Protection, Hard Hat; Gloves; Safety Boots; Long Pants

Sequence of Job Steps.	Potential Hazards/ Injury Sources.	Safe Action or Procedure.
<p style="text-align: center;">Training/Certification</p>	<p style="text-align: center;">Unauthorized Use</p>	<p>All operators must have an initial competency training to include review of owner’s manual, orientation to the machinery and safe operating procedures, and hands-on instruction. Training must be performed by Experienced Operators. The operator must have documented refresher training every three years for each type of heavy equipment being used.</p> <p>Operators sign documentation that they have read owner’s manual and JHA, and have received instruction from an Experienced Operator. Documentation record is saved per park procedures (Teams files).</p> <p>Operate by trained/certified personnel only.</p>

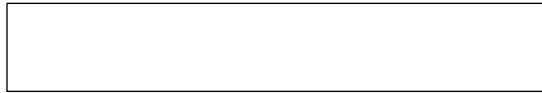
Sequence of Job Steps.	Potential Hazards/ Injury Sources.	Safe Action or Procedure.
PPE and Appropriate Clothing	<p>Lacerations, pinches, burns to hands.</p> <p>Eye injuries.</p> <p>Hearing loss.</p> <p>Crushing injuries or loss of control of machine.</p>	<p>Wear gloves.</p> <p>Wear eye protection.</p> <p>Wear hearing protection.</p> <p>Do not wear loose clothing that can catch in controls or in moving parts.</p>
Equipment Check & Safety Inspection	Personal Injury or Property Damage	<p>Review and follow manufacturer's Operating Steps & Safety Practices.</p> <p>Complete walk-around to inspect for leaks, broken welds, cracked or loose hoses, missing bolts, tire wear, belt condition, hydraulic and other fluid levels.</p>
Work Area Preparations	<p>Contact with other people.</p> <p>Contact with hazardous obstacles.</p>	<p>Mark off work area. Enlist help from others in Hi-Viz clothing to maintain control of work area.</p> <p>Mark stumps, holes, other obstacles.</p> <p>Locate and mark underground obstacles (power cables, plumbing, etc.).</p> <p>Maintain 20-foot clearance with overheads powerlines.</p>

Sequence of Job Steps.	Potential Hazards/ Injury Sources.	Safe Action or Procedure.
Entering & Exiting Equipment	Slips, trips, falls	<p>Clean foot and/or handholds of dirt, mud, etc.</p> <p>Maintain 3 points of contact for mounting/dismounting.</p> <p>No riders or passengers.</p>
Performing Tasks	<p>Personal Injury or Property Damage.</p> <p>Tip over due to uneven terrain, potholes, loaded bucket, unbalanced load, or traveling on slopes.</p>	<p>Be aware of stumps or other debris protruding from the ground. Do not make abrupt changes to travel speed or direction; use slow, deliberate motion in controls to ensure stable maneuvers.</p> <p>Travel up and down slopes, not across slopes. Keep loaded bucket low during travel. Ensure load is balanced properly.</p> <p>When traveling on steep grades or severe slopes, position loads with the heavy-end uphill.</p>
Conversing with co-workers or site visitors	Personal Injury or Property Damage	<p>Bring machine to complete stop.</p> <p>Lower load or attachments to ground.</p> <p>Apply parking brake, shut engine OFF.</p> <p>Dismount if needed to avoid others touching or climbing on machine.</p>

Sequence of Job Steps.	Potential Hazards/ Injury Sources.	Safe Action or Procedure.
Equipment Maintenance	Personal Injury or Property Damage	Routine maintenance shall be performed per manufacturer's owners/operator's manual. Move loader to safe maintenance location. Shut engine OFF, remove key and allow engine to adequately cool down.

JOB HAZARD ANALYSIS (JHA): Ice Age National Scenic Trail

Non-Motorized Vessels: IATR-12



Analysis By: Daniel W. Watson, VIP Coordinator

Approved By: Eric Gabriel, Superintendent

Required Personal Protective Equipment (PPE): US Coast Guard Approved Personal Floatation Device (PFD) for each person

Sequence of Job Steps.	Potential Hazards/ Injury Sources.	Safe Action or Procedure.
Non-motorized vessels only (canoes, kayaks, rowboats, etc.)	Operation of motorized vessels (including electric trolling motors) requires MOCC training/certification through the NPS.	Use only non-motorized vessels for volunteer activities to transport personnel/supplies/equipment across waterbodies.
Wear PPE	Accidental drowning	Each operator/passenger must wear a serviceable, US Coast Guard Approved PFD.
Entering/exiting non-motorized vessel	Injury from slips, trips, falls. Property damage from capsizing.	Bring vessel parallel to shoreline to keep hull supported by water (partially beached vessels overturn easily). Keep center of gravity low while moving.
Vessel operation	Injury or property damage from capsizing.	Avoid standing in the vessel. When operating open canoes, kneeling in the bottom greatly increases stability vs. sitting in seats.
Supply & equipment loads	Pinning or crushing injuries. Property loss or damage from capsizing.	Use straps/tie-downs to secure loose supplies from shifting and striking operators/passengers.

Sequence of Job Steps.	Potential Hazards/ Injury Sources.	Safe Action or Procedure.
		Do not overload vessel. Keep weight distribution low inside vessel. Maintain adequate “free-board” above water level. Make multiple trips vs. overloading supplies/ equipment/ passengers.
Accessory items	Stranding due to lost or broken paddles/oars. Loss of personal items, electronics, vehicle keys, etc.	Carry spare paddle/oar. Do not transport phones, wallets, car keys, etc. in vessels unless necessary. Secure in a dry-bag floatation device when necessary.

Ice Age National Scenic Trail “TAILGATE SAFETY SERIES”



POTENTIALLY VIOLENT PERSONAL ENCOUNTERS

Although it is unlikely to happen, trail workers and users should be vigilant to the possibility of encountering a potentially violent person while in the field. Irrate or aggressive recreationists, people under the influence of alcohol or drugs, people suffering from mental or emotional challenges, or even people engaged in criminal activity (i.e.: illegal dumping on public lands, clandestine drug labs, marijuana cultivation, etc.) may all potentially react to your presence with violent behavior.

- Use the “buddy system” whenever possible. Working or hiking in groups of two or more is a smart safety practice in any situation
- Ensure that someone knows where you will be working/hiking before you hit the trail, and what time you are expected to return
- Act in a polite and non-threatening manner as you encounter unknown individuals
- Do not try to reason with people who seem overly distraught, angry, or irrational in their speech or body language
- Leave the area as soon as possible
- Report the encounter to your supervisor and/or local law enforcement authorities

References:

Safety and Health for Field Operations Manual, BLM—1112-2

www.wildfirelessons.net/6minutesforsafety

Ice Age National Scenic Trail “TAILGATE SAFETY SERIES”



THUNDERSTORM SAFETY

Thunderstorms cause significant hazards for hikers and trail crews, including lightning strikes and wind downbursts which can topple trees. Trail workers and users should keep appraised of weather forecasts throughout the day, and become familiar with signs of a developing storm. Large buildups of Cumulonimbus clouds (“cotton ball” clouds, especially those with dark coloration, and flattened or “anvil” shaped tops) are signs of a potential thunderstorm. A sudden reversal in wind direction, a noticeable rise in wind speed, and a sharp drop in temperature may note the mature stage of a storm. Heavy rain, hail and lightning can occur in the mature stage of a thunderstorm. During a storm, use the following guidelines:

- Do not lie down
 - The best position is sitting on a day-pack (only those without metal frames or components) or crouching with feet close together
 - Avoid sitting directly on the ground, if possible; but, if necessary, keep feet and buttocks close together
 - Avoid grouping together—keep a minimum of 15 feet between people when possible

- Cell phones or hand held radios (with short rubber antennas) are safe to use. Do not use phones or radios with elevated antennas

- Wide, open spaces are better places to shelter than trees or near clumps of trees. Ridge tops or other high places should be avoided

- If you feel the hair on your arms or head “stand up,” there is a high probability of a lightning strike in the vicinity. Crouch or sit on a day-pack (without metal frame)

- Put down all tools, and distance yourself from them if possible
- Take shelter in vehicles whenever possible
-

References:

Incident Response Pocket Guide—PMS 461, NFES 1077, NWCG, [WEB ADDRESS: http://www.nwcg.gov/pms/pubs/pubs.htm](http://www.nwcg.gov/pms/pubs/pubs.htm)

Standards for Fire and Fire Aviation Operations, Interagency, [WEB ADDRESS: www.nifc.gov/references/index.html](http://www.nifc.gov/references/index.html)

www.wildfirelessons.net/6minutesforsafety

Ice Age National Scenic Trail
“TAILGATE SAFETY SERIES”



LYME DISEASE PREVENTION

The best defense against Lyme disease is to invest time and effort to protect yourself from tick bites. While it may be impossible to avoid contact with ticks altogether, these guidelines will decrease your chances of being bitten by a tick.

- Ticks prefer areas with brush and tall grass—avoiding these habitats will reduce your exposure to tick concentrations
- The months of May, June, and July are the most active for ticks that transmit Lyme disease—take extra precautions then
- Stay to the center of the trail whenever possible, minimizing your contact with grass, brush, and leaf litter
- Use insect repellent with 20% - 30% DEET on exposed skin and clothing to prevent tick bites
- Wearing long pants, long sleeves, and long socks will help keep ticks off your skin
- Wear light colored clothing to spot ticks more easily
- Tuck in shirts, and tuck pants legs into socks or boot tops to help keep ticks on outside of clothing
- If you will be in tick-infested habitat for extended periods, you may consider taping shut the area where your pants and socks meet for added protection
- Perform periodic “tick checks,” and inspect yourself thoroughly at the end of your outing
- Remove imbedded ticks with fine-tipped tweezers—monitor yourself for symptoms of Lyme disease (bulls-eye rash, fatigue, fever, soreness, etc.)—consult your physician if you suspect the onset of Lyme disease

References:

Center for Disease Control— [Web ADDRESS: http://www.cdc.gov/ncidod/dvbid/LYME/Prevention/ld_Prevention_Avoid.htm](http://www.cdc.gov/ncidod/dvbid/LYME/Prevention/ld_Prevention_Avoid.htm)

**Ice Age National Scenic Trail
“TAILGATE SAFETY SERIES”**

INSECT, SNAKE, and ANIMAL SAFETY

Hikers and trail workers may encounter a variety of creatures which pose safety hazards ranging from minor inconveniences to potentially life-threatening situations. Common sense and a general awareness of your surroundings are your best defenses.

INSECTS

- Avoid sitting on rotten logs or stumps. Spiders and ants often use them for homes
- Wearing long-sleeved shirts, socks, and long pants will help guard against many stinging insects
- “Bee” aware that not all stinging insects nest in trees. Some bees and other stinging insects nest underground and will become disturbed by earth-moving activities
- Many stinging insects become more aggressive in the Fall
- Insect repellents containing DEET or Picaridin may help protect against biting or stinging insects
- If you know you are allergic to insect bites and stings, take the proper medication with you on the trail, and seek proper medical attention immediately if you are stung or bitten

SNAKES

- Wearing sturdy leather gloves and boots at least 10 inches high are good precautions when hiking or working in snake country
- Do not put your hands or feet into areas you cannot see, such as brush piles or rock crevices
- If you must roll a rock or log, roll it toward you to keep it between you and any potential hazard
- All snake bites, whether venomous or not, should receive immediate medical attention
- Rattlesnakes and Copperheads have “hemotoxin” venom, which attacks red blood cells and tissue of bite victims. Keep the victim as calm and quiet as possible, keep the wound site inactive and positioned below the level of the heart, and transport the victim to a hospital immediately

OTHER ANIMALS

- You may be sharing the trail with black bears. Make noise as you hike to give bears a chance to be forewarned of your approach and move away before a surprise confrontation occurs. If you encounter a bear, back away slowly. Do not turn your back to the bear or run, as this may trigger an aggressive response from the bear. Sows and cubs must be avoided at all times. Commercially available bear repellent (aerosol pepper spray) may be effective as a last resort
- Do not handle or approach wildlife. Young animals that appear to be abandoned should be left where they are. Resist the temptation to “rescue” young animals

- Some wildlife such as foxes, skunks, raccoons, and other mammals commonly contract diseases or illness such as rabies or mange, and may lose their natural fear of humans. Avoid any animal that is encountered, especially those which appear ill, agitated, or disoriented. Report such wildlife sightings to the appropriate local officials, such as Conservation or Wildlife Enforcement Officers

References:

OSHA Quick Card- Rodents, Snakes and Insects, [WEB ADDRESS: http://www.osha.gov/Publications/rodents_snakes_insects.html](http://www.osha.gov/Publications/rodents_snakes_insects.html)

Safety Tips for Hiking the Trails of New Hampshire, [web address: http://www.nhliving.com/hiking/tips.shtml](http://www.nhliving.com/hiking/tips.shtml)

Ice Age National Scenic Trail "TAILGATE SAFETY SERIES"



HYPOTHERMIA

Hypothermia occurs when your core body temperature falls below normal. It can easily happen in cold winds or wetness. Hypothermia can also occur in moderately cool temperatures, particularly if coupled with dehydration. People tend to forget to drink on cool, wet days and can get hypothermic even when the temperature stays well above freezing.

- Symptoms of hypothermia include:
 - Slurred speech
 - Loss of coordination
 - Confusion
 - Apathy
 - Irrational behavior

- Your body automatically begins to shiver to warm itself. As your energy is used up to keep warm, you may reach a point where your body will be unable to warm itself. If left untreated, your body will gradually shut down and death becomes a possibility

- Avoid hypothermia with the following precautions:
 - Guard against dehydration
 - Avoid fatigue
 - Avoid cold winds
 - Take precautions to stay out of wet clothes
 - Be aware of hypothermia symptoms and take action upon their onset

- If you recognize hypothermia, take the following steps:
 - Move the victim to shelter/out of the wind
 - Remove wet clothes and replace them with warm, dry garments
 - If the victim is alert, give them warm liquids to drink

References:

www.wildfirelessons.net/6minutesforsafety

Ice Age National Scenic Trail
“TAILGATE SAFETY SERIES”



HYDRATION

- Maintaining body fluids is essential for sweating—you must hydrate before, during, and after work
- Before beginning trail work you should drink one or two cups of water, juice, or a sport drink. Avoid excess caffeine, it hastens fluid loss in the urine
- When engaged in arduous trail work, or when working in hot environments, drink at least one quart of fluid per hour
- Providing a *portion* of fluid replacement with a carbohydrate/electrolyte sport beverage will help retain fluids and maintain energy and electrolyte levels—however, be sure to alternate sports drinks with plain water
- Continue drinking after work to replace fluid losses—thirst always underestimates fluid needs, so drink more than you think is necessary
- Rehydration is enhanced when fluids contain sodium and potassium, or when foods with these electrolytes are consumed along with the fluid
- Make potassium-rich foods like bananas and citrus fruits a regular part of your diet, and drink lots of lemonade, orange juice, or tomato juice
- Limit the amount of caffeine drinks such as coffee and colas because caffeine increases fluid loss. Avoid alcoholic drinks—they also cause dehydration
- You can assess your hydration by observing the volume, color, and concentration of your urine. Low volumes of dark, concentrated urine, or painful urination, indicate a serious need for rehydration. Other signs of dehydration include rapid heart rate, weakness, excessive fatigue, and dizziness
- Rapid loss of several pounds of body weight is a certain sign of dehydration. Rehydrate before returning to work. Continuing to work in a dehydrated state can lead to serious consequences, including heat stroke, muscle breakdown, and kidney failure

References:

Standards for Fire and Fire Aviation operations, Interagency, [WEB ADDRESS: www.nifc.gov/references/index.html](http://www.nifc.gov/references/index.html)
Fitness and Work Capacity—Second Edition
www.wildfirelessons.net/6minutesforsafety

Ice Age National Scenic Trail
“TAILGATE SAFETY SERIES”



HIKE LEADER

Most trail chapters offer sponsored hikes at various times and locations, and when doing so, it is important to identify a qualified hike leader. The hike leader is responsible for various aspects of the hike—all of which help ensure the safety and enjoyment of the participants.

- Hike leaders, in concert with chapter leadership, should address a number of pre-hike issues and decisions prior to advertising the hike:
 - Which trail segment will be hiked, and what are the current trail conditions? A pre-hike scouting mission may be in order if a particular segment has not been recently assessed for current conditions
 - Does the proposed trail segment offer special challenges (steep terrain, long distances, anticipated time commitment, etc.) which may exclude some participants? Be sure to inform the public of what to expect
 - Where will the meeting place and time be for hike participants?
 - Are vehicle shuttles or carpools required?
- At the start of the hike, hike leaders should introduce themselves, and facilitate introductions among the participating hikers
- Make last minute assessments of the hikers, ensuring that all participants are properly equipped to meet the anticipated conditions of the day (proper footwear, drinking water, rain gear, etc.)
- Utilize the “Tailgate Safety Series” materials to initiate pre-hike safety messages which are appropriate for current conditions (hydration, hypothermia, etc.). Continue to rely on these materials throughout the hike if conditions change (approaching thunderstorms, etc.)
- If the group is large, or the possibility exists for hikers to become spread out along the trail, the hike leader should plan in advance to work with a “sweep” hiker of known experience and ability
- Make it known to the group that this is a group activity requiring cooperation—hikers must stay behind the leader and ahead of the sweep

- The hike leader should set a pace to keep all hikers within a reasonable distance of one another
- Stop at prudent intervals to allow for rest, water stops, snacks, and so on
- The hike leader should stop at appropriate areas and allow hikers and the sweep to rejoin the group, especially at trail intersections, confusing areas, whenever trail hazards are encountered, or at areas of group interest (scenic vistas or places where informational talks are taking place)

Ice Age National Scenic Trail

“TAILGATE SAFETY SERIES”



HEAT DISORDERS

Heat becomes a problem when humidity and air temperature combine with hard work to raise body temperature beyond safe limits. Sweat is the body's main defense against heat disorders. Drinking water often is crucial to staying healthy in such environments.

There are three forms of heat related illness: heat cramps, heat exhaustion, and heat stroke.

Heat Cramps is the mildest of the heat illnesses.

- Heat cramps can progress to heat exhaustion and eventually heat stroke
- Heat cramps are involuntary muscle contractions, typically in the large muscle groups, caused by failure to replace fluids or electrolytes, such as sodium and potassium
- Cramps can be relieved with stretching and by replacing fluids and electrolytes
- Heat cramps can be prevented by maintaining an adequate intake of water, electrolyte replacement drinks, and by eating fresh fruits and vegetables

Heat Exhaustion is more serious than heat cramps.

- Heat exhaustion is characterized by weakness; extreme fatigue; nausea; headaches; and wet, clammy skin
- Heat exhaustion results when the body produces more heat than it can dissipate
- Inadequate fluid intake is a major contributing factor
- Treat heat exhaustion by resting in a cool/shaded environment, by removing clothing so that one's sweat can evaporate, and by replacing fluids and electrolytes

Heat Stroke is a medical emergency—brain damage and death may result if treatment is delayed.

- Heat stroke is a failure of the body's heat controls. Sweating stops and the body temperature rises

- Although classic teaching describes a heat stroke patient as “hot and dry,” recent studies have shown that over 50% of heat stroke patients are sweating heavily. Therefore, the hallmark symptom of heat stroke is altered mental status
- Heat stroke is characterized by hot, often dry skin; body temperature above 105.8 degrees Fahrenheit; mental confusion; loss of consciousness, convulsions, or even coma
- Begin rapid cooling with ice or cold water, fanning the victim to promote evaporation
- For rapid cooling, partially submerge the victim’s body in cool water, and treat for shock if necessary
- Provide oxygen if it is available
- Whereas heat cramps and heat exhaustion may be treated locally, heat stroke patients should be medivaced/transported to a hospital ASAP

You can prevent the serious consequences of heat disorders by improving your level of fitness and becoming acclimated to the heat. Maintaining aerobic fitness is one of the best ways to protect against heat stress. The fit trail worker has a well-developed circulatory system and increased blood volume. Both are important to regulate body temperature. Fit workers start to sweat sooner, so they work with a lower heart rate and body temperature. They adjust to the heat twice as fast as the unfit worker.

References:

Standards for Fire and Fire Aviation operations, Interagency, [WEB ADDRESS: www.nifc.gov/references/index.html](http://www.nifc.gov/references/index.html)

Fitness and Work Capacity—Second Edition

www.wildfirelessons.net/6minutesforsafety

Ice Age National Scenic Trail

“TAILGATE SAFETY SERIES”



HAZARDOUS MATERIALS ENCOUNTERS

Trail workers and users may encounter hazardous materials in the field. Hazmat encounters require special precautions and must be handled by trained professionals. Trail crews and hikers should be aware of their surroundings and able to recognize the signs of a possible hazmat encounter, and act accordingly to report the situation.

- Hazardous materials in the field include, but are not limited to:
 - Clandestine Drug Waste—waste as a result of “meth” labs, etc., which may look like common household trash at first glance. Drug lab waste may be identified by the presence of plastic or glass jugs, 5-gallon buckets, lab equipment (tubes and beakers), lye or drain cleaner containers, coffee filters, cold medicine packages, shredded lithium batteries, etc.
 - Midnight Dumping—may be recognized by the presence of barrels or other containers, discoloration of the land, plants or water, and/or dead vegetation or animals
 - Transportation Accidents—truck, rail, or pipeline accidents may result in spillage or release of hazardous materials which pose serious danger
- In all instances, self-protection is your primary responsibility
- Respond to all encounters by implementing the **Three R’s**:
 - *Recognize*: Watch for tell-tale clues of hazardous waste situations, noting any labels or hazmat symbols that may assist professional responders. Be personally aware that containers may be mislabeled, or that hazardous materials may exist in unlabeled containers

- *Retreat:* Move upwind, upgrade, or upstream as you exit the area. This will minimize your risk of exposure to solid, liquid, or gaseous hazardous materials which may be present
- *Report:* Notify your supervisor, and/or report your observations to 911 or other local emergency response authorities. Warn others in the area of the potential hazard and keep the area safeguarded until professional responders arrive

References:

Incident Response Pocket Guide—PMS 461, NFES 1077, NWCG, [WEB ADDRESS: http://www.nwcg.gov/pms/pubs/pubs.htm](http://www.nwcg.gov/pms/pubs/pubs.htm)

Safety and Health for Field Operations Manual, BLM—1112-2

Hazmat-First Responder Awareness Training Guide, Local Fire Department

www.wildfirelessons.net/6minutesforsafety

Ice Age National Scenic Trail
“TAILGATE SAFETY SERIES”



GENERAL TRAIL HIKING

Trail workers, casual day hikers, and multi-day trippers alike should all take into account these universal safety guidelines before hitting the trail:

- Always let others know where you will be hiking, your anticipated travel route (point-to-point or round trip), and your anticipated return time
- Check the weather forecast prior to your hike, dress/pack appropriately for current and anticipated conditions
- Consider hiking with a companion, especially when longer hikes are planned or when weather conditions may be extreme (hot/cold)
- Carry a cell phone for possible emergency needs
- Stock your day-pack with some essentials, even if your trip plan doesn't anticipate their need—extra water, snacks, dry socks, lightweight wind breaker/rain suit, flashlight, small first aid kit, space blanket, and any prescription medications you may require
- Take rest breaks as needed
- Keep hydrated, even in colder temperatures—remember to drink *before* you feel thirsty
- Be attuned to your own body and heed what it is telling you—become familiar with the early warnings signs of dehydration, hypothermia, and heat disorders
- When appropriate, use insect/tick repellent and check yourself periodically throughout the day for ticks
- Dress in Blaze Orange (hat/vest) whenever using the trail during hunting seasons

References:

Florida National Scenic Trail—Trail Tips and Safety, [WEB ADDRESS: www.dep.state.fl.us/gwt/guide/trailtips.htm](http://www.dep.state.fl.us/gwt/guide/trailtips.htm)

Acadia Hiking Hints & Safety Information, [WEB ADDRESS: www.acdiamagic.com/acadia-hiking-safety.html](http://www.acdiamagic.com/acadia-hiking-safety.html)

Ice Age National Scenic Trail
“TAILGATE SAFETY SERIES”



DRIVING SAFETY

Driving is one of the most hazardous tasks that we perform. Because of the fact that we perform the task so frequently in the course of our daily lives we tend to take it for granted. How tragic would it be to complete a trail work assignment after safely using a variety of tools in an outdoor environment, only to incur a driving-related injury on the way home? Vehicle operators need to keep a “Safety First” frame of mind, even after the day’s project is completed. Strive to develop or improve upon defensive driving techniques.

- A good starting point is attitude. A positive attitude toward improving your defensive driving skills will assist you in developing good defensive driving habits. It is important to remember that a bad habit is as easy to develop as a good habit. Are you training yourself to do the right things the right way, like fastening your seat belt, checking your mirrors, securing tools and equipment properly, and maintaining safe following distances?
- Incorporate driving safety into the work planning process. If trail workers will have a substantial drive home, the final work day of a project (or even a single-day project that has been physically tasking) should allow for early release in order to minimize fatigue and enhance safe driving practices.
- Inattentiveness is a major contributing factor in motor vehicle accidents. Driving is a common component in our lives, but it requires 100% of our attention. There are many forms of inattentive driving; fatigue, daydreaming, eating, drinking, reading, writing, and talking. Here are some techniques for maintaining your attention while driving:
 - Drive only when you are well rested and alert, and take a 10 to 15 minute break after every two hours of driving
 - Practice situational awareness when driving; be aware of what is happening in front, behind, and on both sides of your vehicle
 - Never drive if taking medications that make you drowsy
 - Avoid using cell phones, GPS units, computers or other similar devices while driving—have a passenger operate them, or pull over and park
 - By constantly moving your vision—checking mirrors and distant road conditions—you can avoid highway hypnosis and daydreaming

- Avoid eating or drinking while driving—perform these activities during frequent breaks
 - Do not attempt to read maps or write directions while driving
 - Avoid becoming impatient or agitated while driving, it only magnifies inattentive driving behaviors
- Remember that safe driving starts with a safe vehicle. Something as simple as underinflated tires can have serious consequences. Get in the habit of doing a pre-operation inspection of your vehicle before driving.

References:

www.wildfirelessons.net/6minutesforsafety

Ice Age National Scenic Trail
“TAILGATE SAFETY SERIES”



CHAINSAW SAFETY

Chainsaw safety is every saw operator's job. It is also the job of everyone assisting the sawyer.

- Always wear proper Personal Protective Equipment (PPE) when handling or working around chainsaws—this applies to both the sawyer and those working in the vicinity of the sawyer
 - Eye Protection (approved goggles, safety glasses, or mesh face shields)
 - Chainsaw Chaps (proper size and length) * *Required for sawyer only*
 - Gloves
 - Long Sleeve Shirt (no loose sleeves)
 - Protective Boots (no loose boot laces)
 - Hard Hat
 - Hearing Protection (ear plugs or shooter's muffs)
 - First Aid Kit (on site)
- Take the time to inspect the chainsaw before operating the saw
 - Check the chain and bar (sharpness of chain, bar seated correctly)
 - Check for missing or loose screws and bolts all around the saw
 - Check the casing of the saw for cracked or missing plastic
- Make sure you're aware of your surroundings while operating the saw
 - Look for people working in your area—establish a zone where others may not enter
 - Look for snags or other hazards (power lines, dead tops, etc.) before cutting
 - Always work with a trained swamper or spotter for safety communication
 - Be attentive to your footing—terrain that is slippery, rocky, steep, or cluttered with branches is dangerous
- Always make sure you are comfortable doing the task at hand
 - Proper training for personnel running saws and assisting the sawyer
 - Identify an escape route before falling any tree

- Do not attempt to fall a tree that is beyond your ability or comfort zone—notify your supervisor if you need assistance—mitigate the safety hazard if leaving the tree uncut until later (flag off area, post trailhead notices, etc.)

References:

www.wildfirelessons.net/6minutesforsafety

Ice Age National Scenic Trail
8075 Old Sauk Pass Road
Cross Plains, WI 53528
Phone: 608-798-8700



Ice Age National Scenic Trail

Chainsaw Training, Safety, Maintenance and Operation SOP

Plan Created: 07/30/21

Plan Revised: 11/28/22

Superintendent Signature of Approval:

Definitions:

ANSI	American National Standards Institute
CFR	Code of Federal Regulations
DBH	Diameter Breast Height (width of tree trunk at chest level)
DOI	Department of the Interior
FISTA	Forest Industry Safety & Training Alliance
FSM	Forest Service Manual
GAR	“Green-Amber-Red” risk assessment model from <i>Trail Safe!</i>
IATA	Ice Age Trail Alliance
IATR	NPS-Ice Age National Scenic Trail
JHA	Job Hazard Analysis
Lesson Learned	Teaching aid shared with others to avoid repeated mistakes from past injuries or Near Miss
MOA	Memorandum of Agreement
NCSP	National Chainsaw Safety Plan (the chainsaw policy of the NPS)
Near Miss	Reportable incident when someone is nearly injured
NPS	National Park Service
NRSTC	Nationally Recognized Sawyer Training Course
OF-301A	Volunteer Service Agreement used by the NPS and USFS
OSHA	Occupational Safety and Health Administration
Park	Generic term synonymous with Ice Age National Scenic Trail
PPE	Personal Protective Equipment
RM-50B	NPS’ Reference Manual: Occupation Safety & Health Program
SOP	Standard Operating Procedure
SPE	“Severity X Probability X Exposure” risk assessment model from <i>Trail Safe!</i>
Swamper	Someone directly assisting a chainsaw operator
<i>Trail Safe!</i>	Safety video series for Risk Management and the “human factor” of safety
UPBBP	Universal Precautions of Blood Borne Pathogens
USFS	United States Forest Service

Purpose:

It is National Park Service (NPS) policy to provide a safe and healthful workplace for individuals performing chainsaw operations. The purpose of this Standard Operating Procedure (SOP) is to provide the rules and guidelines for operating a chainsaw in non-wildland fire settings within Ice Age National Scenic Trail (IATR). This SOP applies to all volunteers, employees, and partners. Contractors (private sector vendors who are awarded contracts to perform chainsaw work on NPS lands) who are not working directly under NPS Supervision will be required to have an equivalent safety program that is approved by the NPS Contracting Officer. Non-NPS Emergency rescue crews are exempt and are expected to have their own training program and safety requirements.

Background and Explanation:

The route of the Ice Age National Scenic Trail extends for approximately 1,200 miles and crosses numerous land management agency jurisdictions, including NPS (both IATR and St. Croix National Scenic Riverway); USFS (Chequamegon-Nicolet NF); US Fish & Wildlife Service (USFWS) refuges; WI Department of Natural Resources (WIDNR) state parks and forests; numerous county public lands; and various other public and private properties. IATR requires a standardized chainsaw training and certification policy that is transferrable along various trail ownerships. Overall administration of the Ice Age National Scenic Trail is the responsibility of the Secretary of the Interior (*National Trails System Act, Public Law 90-543*).

There has previously been no NPS national policy, training, or certification program addressing chainsaw certification for non-wildland firefighters. The interagency Wildland Fire community had previously addressed this hazardous operation for Wildland Fire operations through policy and training, but much of the NPS felling operations are conducted by employees and volunteers who are not Wildland Firefighters. IATR policy until now has been to provide volunteers with a one-day chainsaw safety orientation course (FISTA curriculum offered at annual "Ice Age Trail-University" venues), but this training did not provide any official chainsaw certification designation for sawyers. USFS has had chainsaw certification standards in place for non-wildland fire personnel, but until recently those standards were not transferrable to NPS.

In 2016 the US Forest Service finalized its Forest Service Saw Plan (FSM 2350, Sections 2358.01 through 2358.6) found at <https://www.fs.usda.gov/about-agency/regulations-policies/saw-policy>

On April 8, 2019, the NPS' National Chainsaw Safety Program (NCSP) for Non-Wildland Fire Operations was signed, and included in NPS RM 50B, Chapter 15. https://www.nps.gov/policy/RM50B_chainsaw_safety.htm

On April 24, 2020, RM 50B was amended to allow *Trail Safe!* as an acceptable substitute to the 16-hour NPS Operational Leadership training required by the NCSP for volunteers of National Historic and Scenic Trails only. The amendment also better clarified the need for "universal precautions" of Blood Borne Pathogens training. See Appendix A.

On March 15, 2021 a Memorandum of Agreement (MOA) was signed between USFS and NPS allowing for reciprocity of approved chainsaw training and certification standards. This MOA was updated on June 22, 2022. See Appendix B.

On April 7, 2021, IATR was granted a written Implementation Extension of its chainsaw safety program until October 31, 2022 to allow time for new and existing IATR sawyers to rotate through the new training course(s). See Appendix C.

Due to the long distance route of the Trail, the current number of volunteer sawyers (approximately 100-110) and their widespread locations, availability of instructors/evaluators, and considering the logistics and timing of training courses needed to initially stand up and then recurrently recertify sawyers, it is the determination of the Superintendent that **IATR will train and certify sawyers via the Forest Service Saw Plan**, while also incorporating elements of the NPS NCSP.

This determination does not preclude IATR from certifying chainsaw operators using stand-alone NCSP procedures/training standards if deemed beneficial for the park in future circumstances.

Chainsaw Certification Steps-- Quick Reference

1. Student registers for upcoming course and submits all pre-requisite materials
2. Student attends course; instructor/evaluator completes the evaluation form recommending level of chainsaw certification
3. Evaluator provides all evaluation forms to NPS
4. NPS fills out the saw certification card; superintendent signs; cards are forwarded to USFS District Ranger
5. USFS District Ranger signs saw certification cards, and returns to NPS for distribution
6. NPS files electronic copies of all final documents and mails saw certification cards to students

Roles and Responsibilities:

Superintendent

The superintendent, or their designee, is responsible for:

1. Ensuring compliance with all requirements set forth under this policy, including:
 - a) Training requirements
 - b) Skill competencies
 - c) Safe work practices
2. Appointing a Chainsaw Safety Program Manager within the park
3. Ensuring chainsaw operators follow USFS and/or NPS chainsaw safety program requirements as outlined in this SOP
4. Performing an annual review to ensure compliance with this program
5. Signing the chainsaw operator's National Sawyer Certification Card Form FS-2300-53 (see Appendix D) as a Co-Approving Official with the USFS. This authority may be delegated. Signatures are based on receiving the recommendation from the Instructor/Competency Evaluator stating that the individual has successfully met the competency qualification requirements set forth by this policy
6. Forwarding the National Sawyer Certification Card to the USFS District Ranger, Medford-Park Falls District, Chequamegon-Nicolet National Forest for final Co-Approving Official signature, along with all corresponding FSM 2358.3 evaluation forms

USFS District Ranger

The District Ranger, Medford-Park Falls District, Chequamegon-Nicolet National Forest is responsible for:

1. Signing the National Sawyer Certification Cards, and returning them to NPS for distribution to sawyers
2. Input information from FSM 2358.3 evaluation forms into the National Sawyer Certification Database if available, or otherwise maintain internal records of qualified sawyers following local Forest policy

Chainsaw Safety Program Manager

The program manager is responsible for serving as the primary point-of-contact at IATR for the chainsaw safety program. As delegated by the superintendent, the Chainsaw Safety Program Manager may support or assist the superintendent in his/her duties.

Among other duties delegated by the superintendent, the IATR Chainsaw Safety Program Manager will be responsible for:

1. Procuring and providing necessary PPE for sawyers and swampers

2. Reporting and investigating all near misses and incidents resulting in injury or property damage according to NPS and Department of the Interior (DOI) policy as well as OSHA regulations, and sharing that information with the USFS if the incident occurred on lands administered by the USFS
3. Creating a Lesson Learned paper from the investigation and submit it to the Regional Risk Management Office, and USFS District Ranger as applicable

First Line Supervisors/Partner Group

The term “supervisor” is applicable to the IATR Chainsaw Safety Program Manager; and IATA Staff who maintain their chainsaw certification and assist the NPS with overall chainsaw program management, and coordinate volunteer events involving chainsaw work.

Supervisors are responsible for:

1. Ensuring that an individual is designated as a “qualified chainsaw operator” (for the specific skill level at which he/she is assigned to perform)
2. Ensuring all assigned chainsaw operations are within an operator’s skill level
3. Ensuring all chainsaw operator qualification cards, CPR and First Aid Certification Cards, and UPBBP training are current
4. Taking corrective actions if any unsafe practices are observed
5. Reviewing record keeping procedures to determine that up-to-date and accurate records are kept
6. Cooperatively plan and schedule training courses in locations and quantities sufficient to ensure program viability

Instructor/Competency Evaluator

The Instructor/Evaluator is responsible for:

1. Instructing at the skill level commensurate with their saw qualifications, to include chainsaw safety, maintenance, complexity assessment, and operations (use)
2. Conduct sawyer training using Nationally Recognized Sawyer Training Courses (NRSTC)
3. Evaluate sawyers’ proficiency in the field using the Sawyer Training and Field Evaluation Form FS-2300-52 (see Appendix E)
4. Sign the Sawyer Training and Field Evaluation Form as the sawyer evaluator for sawyers that are determined to have satisfactorily met the requirements for the safe use of saws and recommend them for certification by the certifying official

5. Provide the NPS Superintendent or the designated NPS Chainsaw Safety Program Manager with copies of all completed FS-2300-52 evaluation forms

Chainsaw Operator

Operators are responsible for:

1. Maintaining the correct tools and accessories in good repair before starting any chainsaw operation
2. Protecting equipment and tools from damage during transport or use
3. Operating chainsaws within their qualification rating (see Appendix F)
4. Conducting Risk Analysis and following JHA procedures before and during chainsaw operations (see Appendix G)
5. Always enlisting the assistance of a qualified swamper during chainsaw operations
6. Helping IATR/IATA to identify swampers in their section of the Trail so that appropriate PPE can be provided to the swampers
7. Notifying their first-line supervisor of any chainsaw operation they are not comfortable performing or that is above their ability to perform
8. Notifying the first-line supervisor of all chainsaw safety related incidents including injury, property damage, and “near miss” incidents
9. Maintaining records of their own required training and qualification/re-qualifications completed
10. Presenting verification of current chainsaw certification, and certification in First Aid, CPR, and UPBBP training to their first-line supervisor and/or mentor
11. Chainsaw operators must be at least 18 years of age

Swampers

Swampers are responsible for:

1. Meeting all pre-requisites before assisting sawyers (OF-301A Volunteer Agreement, currency in First Aid/CPR, and completion of *Trail Safe!* videos)
2. Wearing all PPE required of swampers (logger’s hard hat with eye and hearing protection, gloves, and sturdy leather boots)
3. Following all instructions from the sawyer

4. Assisting the sawyer to maintain control of the operation site and surrounding area

Mentors/Program Growth

An important component to the growth, and overall success, of the IATR Chainsaw Safety Program is the willingness for sawyers who currently have higher saw qualifications than others to facilitate opportunities for mentoring and skills coaching.

A chainsaw mentor is a sawyer who works with and coaches other certified sawyers having saw qualifications at or below the qualifications of the mentor. Mentoring will assist sawyers to gain additional practice and skills which may allow them to be recommended for a higher saw qualification during subsequent training and evaluation courses conducted by the Instructor/Competency Evaluator.

Mentors shall refer to the charts in Appendix F of this policy to ensure they are coaching other sawyers commensurate with the saw qualifications of all involved.

Training Course Scheduling & Rotation

Chainsaw certification is valid for three years. Courses are capped at 12 students per course. To consistently maintain a cadre of at least 100 qualified sawyers throughout IATR, three to four training courses must be offered each year. Training venues must be established in various geographic locations along the Trail route to minimize volunteer sawyer travel and personal expense. Training venues must also take into consideration the location of most existing IATR sawyers in order to maximize attendance while minimizing volunteer travel needs.

To the extent possible, IATR and IATA will schedule training courses within a 90-mile radius of known populations of existing sawyers (see Appendix H).

To the extent possible, recurring training courses (primarily refresher courses for current sawyers) will return to a previously established training venue three years after the initial course was provided at a particular venue/geographic area. (i.e.: training conducted in Cross Plains, WI in 2021 should again be offered there in 2024 to re-certify those who attended in 2021). Exact training venues may vary due to various factors such as property availability/permission, compliance requirements, etc., but should remain as near to previous venues within a geographic area as possible.

Attrition of existing sawyers will allow for a measured influx of new sawyers to attend upcoming training courses. To the extent possible, sawyers should attempt to receive their recertification within geographic venues where they initially attended, and in years when their expiration dates will occur. This will streamline planning processes and funding requests to

proactively ensure future courses are being offered in predictable manners, and ensure that training opportunities are available where and when needed most.

IATR and IATA may consider offering additional chainsaw skills training in places and at times as funding and logistics allow in order to grow the overall chainsaw program for new sawyer numbers, and offer opportunities for qualified sawyers to improve their skills, attain higher qualification levels, and/or serve as mentors to others.

Training course locations and dates will be determined annually by IATR and IATA, and will be announced to volunteers each year in time for individual planning by those who need to attend to maintain their certification, or those seeking to gain initial certification.

Training Application Process

As training courses are announced and advertised, volunteers will fill out and submit a Chainsaw Training Application to the IATA. This will assist IATA to determine class rosters and create “stand-by” lists. See Appendix I.

Training Pre-Requisites

Prior to being accepted into a chainsaw training course, all sawyers must fulfill the following training pre-requisites and provide verification as noted:

- **OF-301a Individual Volunteer Services Agreement**
Volunteers must have a completed and signed Individual Volunteer Agreement on file with the NPS. The form and instructions are available at https://www.iceagetrail.org/wp-content/uploads/fillable_individual-301a-updated-packet.pdf or https://www.nps.gov/iatr/getinvolved/supportyourpark/iatr_vip_program.htm
- **Trail Safe! Risk Management Videos**
Volunteers must view all eight safety videos in order to perform Risk Assessments as outlined below. Email the NPS your participation verification per the instructions found at <https://www.nps.gov/iatr/trail-safe.htm>. All videos are available through this same link.
- **First Aid/CPR Certification**
Volunteers must always maintain current certification in First Aid and CPR in order to operate chainsaws, and for acceptance into chainsaw training. Training should be attained from a nationally recognized provider such as American Red Cross, American Heart Association, or equivalent.

Physician and/or nursing certifications or licenses alone do not qualify as proof of currency in First Aid and CPR.

On-line only training is not sufficient to attain a saw qualification card or to operate a chainsaw. “Blended” courses that comprise a mix of on-line training and in-person skills training are acceptable. Certification cards that are “provisional” (meaning on-line only) are not sufficient.

(Provisional certification is acceptable only to participate in training and evaluation courses, but the sawyer will not be issued a saw card until the skills portion of First Aid/CPR has been completed—nor may the volunteer operate a chainsaw outside of the official training environment until they have met full compliance with First Aid/CPR requirements).*

Per Appendix A, First Aid and CPR certification courses must also include “Universal Precautions” of Blood Borne Pathogens (UPBBP). UPBBP (wearing rubber gloves while performing first aid, using barrier masks while performing CPR, etc.) are typically addressed by nationally recognized providers as part of the standard First Aid/CPR training curriculum. **There is no requirement to register and pay for the full Blood Borne Pathogens training** these vendors may offer. The full Blood Borne Pathogen certification is focused on those who work in the Emergency Medical Field and is not required for chainsaw certification.

Submit copies of your First Aid/CPR certification documentation to IATR and/or IATA.

Submit copies of your First Aid/CPR training receipts directly to IATA for reimbursement of personal expenses.

Swamper Qualifications

Swampers are subject to the same pre-requisites as sawyers. Follow the guidelines above for remaining current with an OF-301a Volunteer Agreement, *Trail Safe!* completion, and current certification in First Aid/CPR.

Chainsaw Operator Qualification Levels

Taken directly from USFS Saw Policy

A Sawyer. An apprentice sawyer who may saw only in the least complex situations or, for training purposes, at the next higher level and in either case only under the immediate supervision of a B or C Sawyer qualified to supervise the work (FSM 2358.1, Appendix F).

B Sawyer – Bucking Only (not applicable in the fire management context). An intermediate sawyer who may independently buck and limb any size material in moderately complex situations and who may saw at the next higher level, but only under the immediate supervision of a sawyer qualified to supervise the work (FSM 2358.1, Appendix F).

B Sawyer – Felling and Bucking. An intermediate sawyer who may independently fell, buck, and limb any size material in moderately complex situations. This person may saw at the next higher level under the immediate supervision of a sawyer qualified to supervise the work (FSM 2358.1, Appendix F). This person may also conduct classroom and field training for A and B Sawyers with prior written approval from the Saw Program Coordinator.

C Sawyer – Bucking Only (not applicable in the fire management context). An advanced sawyer who may independently buck and limb any size material in highly complex situations based on the Regional Saw Program Manager’s or Saw Program Coordinator’s written recommendation. The recommendation must be supported by demonstrated advanced saw knowledge, skills, and in most cases certification as a B Sawyer (FSM 2358.1, Appendix F). This person may conduct classroom and field training within that person’s skill level for A and B Sawyers, and may conduct field proficiency evaluations within that person’s skill level for A Sawyers and B Sawyers – Bucking Only.

C Sawyer – Felling and Bucking. An advanced sawyer who may independently fell, buck, and limb any size material in highly complex situations based on the Regional Saw Program Manager’s or Saw Program Coordinator’s written recommendation. The recommendation must be supported by demonstrated advanced saw knowledge, skills, and in most cases certification as a B Sawyer (FSM 2358.1, Appendix F). This person may conduct classroom, field training, and proficiency evaluations for A and B Sawyers.

C Sawyer Evaluator. An advanced sawyer who may independently fell, buck, and limb any size material in highly complex situations based on the Regional Saw Program Manager’s written recommendation. The recommendation must be supported by the successful completion of training on organizing and conducting advanced sawyer evaluation sessions in the field, demonstrated advanced saw knowledge and skills, and in most cases certification as a C Sawyer – Felling and Bucking for at least 3 years (FSM 2358.1, Appendix F). This person may conduct classroom, field training, and proficiency evaluations for sawyers at all certification levels.

Revocation

Revocation processes are initiated by the first-line supervisor and approved by the park superintendent. Revocation of chainsaw operator qualification may occur when:

1. An operator has failed to demonstrate appropriate operational procedures resulting in placing themselves or others in danger
2. An operator lacks the physical ability to safely undertake cutting activities commensurate with their qualification
3. The review of chainsaw-related accidents and near misses reveals the operator was acting outside of their qualification

Risk Analysis:

Prior to beginning each chainsaw operation/task, the crew/operator must perform a risk analysis using the *Trail Safe!* GAR and/or SPE analysis, or similar model, to determine a task rating of:

- a) Low risk
- b) Moderate risk
- c) High risk

Regardless of task rating, all sawyers must still operate within their skill level and certification limitations. Risk Analysis is performed to identify and mitigate hazards.

Personal Protective Equipment:

The intent of PPE is to protect an individual from injury or illness when a hazard cannot be controlled through engineering controls or other more suitable methods. It is the last line of defense.

Sawyers and Swampers will provide their own boots and gloves. The park will provide all other PPE. Refer to JHA #6 (Appendix G) for a list of required and recommended PPE for both Sawyers and Swampers.

Recommended PPE items (belt trauma kit and safety whistle) become mandatory PPE when the Risk Analysis indicates a high risk operation.

Mandatory First Aid Kit Supplies (29 CFR 1910.266)

The following list sets forth the minimally acceptable number and type of first aid supplies for first aid kits required under paragraph (d)(2) of the logging operations standard (29 CFR 1910.266). The contents of the first aid kit listed should be adequate for small work sites, consisting of approximately two to three individuals. When larger operations or multiple operations are being conducted at the same location, additional first aid kits should be provided at the work site or additional quantities of supplies should be included in the first aid kits:

- 1. Gauze pads (at least 4 x 4 inches).**
- 2. Two large gauze pads (at least 8 x 10 inches).**
- 3. Box adhesive bandages (Band-Aids).**
- 4. One package gauze roller bandage at least 2 inches wide.**
- 5. Two triangular bandages.**
- 6. Wound cleaning agent such as sealed moistened towelettes or bottles of sterile water.**
- 7. Scissors.**

8. At least one blanket.
9. Tweezers.
10. Adhesive tape.
11. Latex gloves.
12. Resuscitation equipment such as resuscitation bag, airway, or pocket mask.
13. Two elastic wraps.
14. Splint.
15. Directions for requesting emergency assistance.

Trauma kit must be kept in a properly labeled container that is organized and kept in a clean and neat condition.

In addition to the supplies listed above, each trauma kit must have a Safety Plan that is filled out at each job.

The park will provide First Aid Kits that meet this standard to all certified sawyers.

Appendix A

Trail Safe! and UPBBP Changes to RM 50B



United States Department of the Interior

NATIONAL PARK SERVICE
1849 C Street, N.W.
Washington, DC 20240

IN REPLY REFER TO:
2430

April 24, 2020

Memorandum

To: Regional, Associate, and Assistant Directors

From: Associate Director, Visitor and Resource Protection JENNIFER FLYNN Digitally signed by JENNIFER FLYNN
Date: 2020.04.24 16:14:29 -0400

Subject: Changes to Reference Manual 50B, Ch 15. *National Chainsaw Safety Program*

On April 17, 2019, the National Chainsaw Safety Program was released under Reference Manual 50B, *Occupational Safety and Health Program*, with an implementation date of May 1, 2020. Over two hundred comments were received from the field and addressed before the policy was released, and the National Park Service's first Servicewide chainsaw policy has been well received. During the last 12 months, members of the Chain Saw Safety Working Group have continued to look for opportunities to make the policy more effective, and to assist parks in implementing effective safety programs around this use. Two requirements that have caused the field difficulty have been identified, and the following changes are incorporated:

1. Bloodborne Pathogens Training. The current policy requires all chainsaw operators to complete Bloodborne Pathogens (BBP) training. The policy is amended to provide clarity that all chainsaw operators must receive training in "universal precautions". The concept of "universal precautions", a component of BBP protection, is addressed during required First Aid and CPR training. Supervisors shall ensure First Aid and CPR training for employees includes universal precautions.
2. Operational Leadership. The current policy requires chainsaw operators to complete the 16-hour NPS Operational Leadership Course. While over 30,000 NPS employees have completed the training, volunteers who work for partner organizations maintaining National Historic and Scenic Trails do not have ready access to this training; therefore, the chainsaw policy has been modified to allow trail volunteers supervised by partner organizations who are a part of the Trails system to complete the NPS "TrailSafe!" risk management training program as an equivalent training to fulfill this requirement. NPS employees and volunteers directly supervised by the NPS must continue to complete the 16-hour Operational Leadership training, but formal risk management training equivalent to the 16-hour Operational Leadership Course is acceptable until newly hired permanent or seasonal employees or volunteers are able to attend the NPS Operational Leadership Course. Regional

Appendix A continued

Safety Managers and the Office of Risk Management can be consulted for questions regarding equivalent training.

The changes listed above are in effect as of the date of this memorandum, and the new implementation date of the National Chain Saw Safety Program is May 1, 2021.

Please direct questions to Daryl Avery, Branch Chief, Occupational Safety and Health, at daryl_avery@nps.gov, or Susan Eaves, Occupational Safety Manager, at susan_eaves@nps.gov.

Attachments

Cc: (A) Deputy Director, Operations
Deputy Regional Directors
All Superintendents
Chief, Office of Risk Management
Regional Safety and Health Managers
National and Historic Trails Program Manager

MEMORANDUM OF AGREEMENT

between the

**UNITED STATES DEPARTMENT OF AGRICULTURE
UNITED STATES FOREST SERVICE**

and the

**UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE**

**REGARDING RECIPROCITY OF THEIR SAWYER TRAINING, EVALUATION, AND
CERTIFICATION PROGRAMS**

I. PARTIES

Agriculture (USDA), United States Forest Service (FS) and the United States Department of the Interior (DOI), National Park Service (NPS), collectively referred to as “the Agencies.”

II. PURPOSE

The purpose of this MOA is to document agreement between the FS and NPS to grant reciprocity to each other’s chainsaw and crosscut saw program (“saw program”) and to accept training, evaluation, and certification conducted by the other agency for volunteers and cooperators. This agreement does not apply to chainsaw use in wildland firefighting operations.

III. STATEMENT OF MUTUAL BENEFIT AND INTERESTS

The FS and NPS rely heavily on volunteers and cooperators utilizing chainsaws and crosscut saws (saws) to achieve each respective agency’s mission. Both the FS and NPS require saw operators to be trained, evaluated, and certified in accordance with specific requirements. After reviewing their saw programs as reflected in Attachment A and Attachment B, the FS and NPS have determined they are similar enough to accept the saw program training, evaluation, and certification conducted by the other Agency. Granting reciprocity to each other’s saw program will improve efficiency in program administration, particularly in use of chain saws and crosscut saws, while continuing to ensure competency of operators on lands managed or areas administered by the Agencies.

IV. AUTHORITY

This MOA is executed under the following authorities:

- A. Organic Administration Act, 16 U.S.C. § 551.

- B. Organic Act of 1916, 54 U.S.C. §100101 et seq.
- C. Occupational Safety and Health Act of 1970, Sections 6 and 19, 29 U.S.C. §§ 655 and 668.
- D. Executive Order 12196, Occupational Safety and Health Programs for Federal Employees.

V. RECIPROCIITY OF THE AGENCIES’ SAW PROGRAMS

The Agencies have reviewed each other’s sawyer training, evaluation, and certification programs as reflected in Attachments A and B and agree that:

- A. While the programs have different processes, the programs are similar, and both ensure the competency of operators.
- B. Each Agency will accept the saw program training, evaluation, and certification conducted under the other Agency’s program for individuals working under agreement for a volunteer partner or cooperator organization on lands managed or areas administered by each Agency.
- C. Volunteers and cooperators operating a chain saw or crosscut saw on lands managed or areas administered by either Agency:
 - 1. Must carry a valid FS National Sawyer Qualification Card or NPS National Chainsaw Safety Program Qualification Card; and
 - 2. Must be affiliated with a volunteer or cooperator organization authorized to perform work involving use of a chain saw or crosscut saw under an agreement with the Agency that has management or administration responsibility over the land or area.

VI. GENERAL PROVISIONS

FS Contact	NPS Contact
Pete Duncan National Saw Program Manager Recreation, Heritage, and Volunteer Resources USDA-Forest Service o: 530-394-8100 c: 530-394-8100 pete.duncan@usda.gov	Daryl Avery Branch Chief, Occupational Safety and Health DOI-National Park Service c: 202-768-1490 daryl_avery@nps.gov

- A. Principal Contacts. The principal contacts for this MOA are:
 Any communications by the FS or NPS related to the matters covered by this MOA will be delivered in person, mailed, or transmitted electronically by e-mail or facsimile to the contacts identified above.

B. Conduct of Activities. The FS and NPS and their respective divisions and offices will handle their own activities and utilize their own resources, including the expenditure of their own funds, in pursuing the objectives of this MOA. Each Agency will carry out its separate activities in a coordinated and mutually beneficial manner.

C. Non-Fund-Obligating Document. Nothing in this MOA shall obligate either the FS or NPS to obligate or transfer any funds. Specific work projects or activities that involve the transfer of funds, services, or property among the various divisions and offices of the FS or NPS will require execution of separate agreements and be contingent upon the availability of appropriated funds. Such activities must be independently authorized by appropriate statutory authority. This MOA does not provide such authority. Negotiation, execution, and administration of each such agreement must comply with all applicable statutes and regulations.

D. Lack of Benefit to Members of Congress. Pursuant to 41 U.S.C. § 22, no member of or delegate to Congress may benefit from this MOA, either directly or indirectly.

E. Enforceability. This MOA is not intended to, and does not create, any right or benefit, substantive or procedural, enforceable at law or equity, by a party against the United States, its agencies, its officers, or any person.

F. Existing Authority. Nothing in this MOA is intended to alter, limit, or expand the Agencies' statutory and regulatory authority.

G. Participation in Similar Activities. This MOA in no way restricts either of the Agencies from participating in similar activities with other public or private agencies, organizations, and individuals.

H. Effective Date, Extension, Amendment, and Termination. This MOA takes effect upon the signature of the FS and NPS and shall remain in effect for five years from the date of execution. This MOA may be extended or amended upon written request of either the FS or NPS and the subsequent written concurrence of the other Agency. Either the FS or NPS may terminate this MOA with a 60-day written notice to the other Agency.

VII. SIGNATORIES

By signing below, the respective Agencies certify that the individuals listed in this MOA are their representatives and are authorized to act in their respective areas for matters related to this MOA.

GORDON BLUM Digitally signed by GORDON BLUM
Date: 2022.06.22 08:43:06 -05'00'

Gordon Blum
Acting Director
Recreation Heritage, and Volunteer Resources
United States Department of Agriculture
United States Forest Service

Date

JENNIFER FLYNN Digitally signed by JENNIFER FLYNN
Date: 2022.06.06 13:11:21 -04'00'

Jennifer Flynn
Associate Director
Visitor and Resource Protection
United States Department of the Interior
National Park Service

Date

Appendix C

IATR Implementation Extension



United States Department of the Interior

NATIONAL PARK SERVICE
1849 C Street, N.W.
Washington, DC 20240

IN REPLY REFER TO:
I. C. (2400)

April 7, 2021

Memorandum

To: Superintendent, Ice Age National Scenic Trail

From: Associate Director, Visitor and Resource Protection **JENNIFER FLYNN** Digitally signed by JENNIFER FLYNN
Date: 2021.04.07 15:08:17 -0400

Subject: National Chainsaw Safety Program Policy – Implementation Extension

Your waiver request for the implementation of the training-related program elements outlined in Reference Manual 50B, *Occupational Safety and Health Program*, Chapter 15, *National Chainsaw Safety Program*, is approved. The full policy implementation deadline for Ice Age National Scenic Trail is now October 31, 2022.

As stated in your waiver request, all other program elements identified in Chapter 15 will follow the Servicewide implementation deadline. If you do achieve full implementation prior to October 31, 2022, please inform the Office of Risk Management.

As requested, the signed Reciprocity Memorandum of Agreement is attached for your reference.

Please direct questions to Daryl Avery, Branch Chief, Occupational Safety and Health, at daryl_avery@nps.gov or at 202-678-1490.


Attachment: NPS & USFS Memorandum of Agreement, Chainsaw Safety Reciprocity Agreement

Cc: Regional Director, Regions 3, 4, & 5
Chief, Office of Risk Management
Chief, Office of Policy
Regional Safety Manager, Regions 3, 4, & 5

Appendix D

Sawyer Certification Card

Form FS-2300-53, National Sawyer Certification Card

USDA United States Department of Agriculture			
National Sawyer Certification Card (Ref. FSM 2358)			
Sawyer Name:	Date Issued:		
Agency:	Region:		
Cooperator:	Forest:	District:	
 Forest Service <small>USDA is an equal opportunity provider and employer.</small>		<small>FS-2300-53 (09/2016)</small>	
Chain Saw Expiration	Crosscut	Saw Level	Evaluator (Print)
		A Sawyer — <input type="checkbox"/> Felling	
		B Sawyer — Bucking Only	
		B Sawyer — Felling and Bucking	
		C Sawyer — Bucking Only	
		C Sawyer — Felling and Bucking	
		C Sawyer — Evaluator	
Certifying Official Signature:		Title:	Date:

REFERENCE ONLY
DO NOT COPY

Appendix E
Evaluation Form

Form FS-2300-52, Sawyer Training and Field Evaluation for Chain Saws

Name:	Date:	Agency/Cooperator Name:
Training Location: <i>Classroom:</i> <i>Field:</i>	Address:	
Telephone Number:	<input type="checkbox"/> Yes, I permit the Forest Service to share my Sawyer qualifications and e-mail address with other federal agencies and non-federal organizations so that I can be contacted about saw project opportunities in my area. _____ (initial)	
E-mail Address:		
Previous Certification: Yes <input type="checkbox"/> No <input type="checkbox"/> Level _____ Agency/Unit _____ Year _____		
First Aid/CPR: <input type="checkbox"/> I certify that I have completed and will maintain first aid and CPR training _____ (initial)		

BELOW THIS LINE – TO BE COMPLETED BY SAWYER EVALUATOR

SAFETY EQUIPMENT AND TOOLS

Y/N		Y/N		Y/N	
	Hard hat		Gloves		Approved fuel/oil container
	Eye protection		Boots		Bar guard
	Hearing protection		Chaps		Whistle/radio/cellular telephone
	Long-sleeved shirt		Axe (3-5 lb)		Wedges
	First aid kit		Chain saw		Tool kit

SAW USE: APPLIES TO ALL CUTTING OPERATIONS

SCORE		SCORE	
	Starting procedure		Bar tip use (boring)
	Correct body position		Radio communication with co-workers
	Thumb placement		Control of cutting area
	Bar tip use (general)		Cut preparation
	Chain brake use		

LIMBING and BRUSHING

SCORE		SCORE	
	Overhead & ground hazard analysis		Limb removal sequence
	Escape route		Spring poles (tension/compression analysis)
	Swamp out of work area		Kickback recognition

BUCKING

SCORE		SCORE	
	Overhead & ground hazard analysis		Wedging procedure
	Swamp out of work area		Bucking sequence
	Bind/tension (compression analysis)		Axe use
	Kerf observation		Use of compound cuts
	Escape route		Kickback recognition
	Multiple bind situations		

Privacy Act Statement

Collection and use is covered by Privacy Act System of Records OPM/GOVT-1 and USDA/OP-1, and is consistent with the provisions of 5 USC 552a (Privacy Act of 1974), which authorizes acceptance of the information requested on this form. The data will be used to maintain official records of volunteers of the USDA for the purposes of tort claims and injury compensation. Furnishing this data is voluntary, however, if this form is incomplete, enrollment in the program cannot proceed.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all programs and activities on the basis of race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation, and marital or family status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, 1400 Independence Avenue, SW, Washington, DC 20250-9410 or call (800) 795-3272 (voice) or

Appendix E continued

Sawyer Name: _____



FELLING			
SCORE	FELLING AREA	SCORE	FELLING PROCEDURE
	Control of cutting area		Procedure alteration (if necessary)
	Ground & overhead hazard analysis		Wedging procedure
	Positive communication		Use of escape route/safety zone
	FELLING PROCEDURE		Exposure time at stump
	Go/no-go decision/walk away		
	Plumbing of lean (determination of lay)		STUMP ANALYSIS
	Cutting Plan		Felling to desired lay
	Use of gunning sights		Undercut/facecut
	Undercut/facecut		Stump shot
	Warning shout		Hinge/holding wood
	Back cut		Other
	Proper body position/looking up		

EVALUATOR'S STUMP ANALYSIS SKETCHES			
Tree 1		Tree 2	
Height _____	DBH _____	Height _____	DBH _____
% Slope _____	Species _____	% Slope _____	Species _____
Condition _____		Condition _____	
Feet from center of lay _____		Feet from center of lay _____	
Tree 3			
Height _____	DBH _____	Height _____	DBH _____
% Slope _____	Species _____	% Slope _____	Species _____
Condition _____		Condition _____	
Feet from center of lay _____		Feet from center of lay _____	
COMMENTS: Attitude, Confidence, Comfort level, Technical Skills, Awareness, Verbal Skills, Weak-Strong Traits, etc.			

Certification Level, Subject to Final Approval

- A Sawyer
 B Sawyer – Bucking Only
 B Sawyer – Felling and Bucking
 C Sawyer – Bucking Only
 C Sawyer – Felling and Bucking
 C Sawyer Evaluator

Evaluator's Signature _____ Sawyer Level _____

Evaluator's Name _____ Evaluator's E-mail Address _____

Evaluator's Signature _____ Sawyer Level _____

Evaluator's Name _____ Evaluator's E-mail Address _____

Student's Signature _____

Appendix F

FSM 2358.1: Sawyer Responsibilities and Limitations and Training, Knowledge, and Skill Requirements

<p>A Sawyer</p>	<p>May saw only in the least complex situations or, for training purposes, at the next higher level and in either case only under the immediate supervision of a B or C Sawyer qualified to supervise the work.</p> <p>Sawing activities restricted to brushing, bucking, and limbing and, if specifically noted on the sawyer's National Sawyer Certification Card, felling the least complex, small-diameter trees.</p> <p>Has successfully completed an NRSTC that introduces general sawing principles, including brushing, bucking, limbing, and felling; has been trained at the introductory level; and has successfully completed a sawyer training and field proficiency evaluation for that level.</p> <p>The proficiency of A Sawyers is determined by a sawyer evaluator, certified by the certifying official, and documented on the National Sawyer Certification Card.</p>	<p>Formal Instruction: at least 4 hours</p> <p>Demonstrated Field Proficiency: at least 8 hours</p> <p>Total Training: 12-36 hours</p> <p>Prerequisites: First Aid and CPR</p>	<p>Acquired through formal instruction utilizing one or more NRSTCs, including introduction and review of:</p> <ul style="list-style-type: none"> • JHA. • PPE requirements. • Saw accidents, near misses, and lessons learned from them. • Forest Service saw directives (FSM 2358 and FSH 6709.11, sec. 22.48). • Situation awareness. • Proper selection, maintenance, and care of saws and other cutting equipment. • Operational safety. • Introduction to brushing, bucking, limbing, and felling techniques. • Proper stance and maintenance of a safe work area. 	<p>Developed through hands-on operation of saws and axes.</p> <ul style="list-style-type: none"> • Emphasis is placed on situation awareness, correctly selecting and using tools, and saw and axe handling techniques. • Practices and successfully demonstrates brushing, bucking, and limbing logs of various sizes and in minimally complex situations. • Introduced to felling in minimally complex situations. • Demonstrates ability to identify various binds and the proper method and sequence of cuts to safely release them. • Demonstrates ability to assess when a sawing task exceeds the sawyer's capabilities. <p>Field Evaluation: Demonstrated application of formal instruction in brushing, bucking, and limbing techniques of least complexity. Demonstrated proficiency in and safe use of a saw in the least complex situations.</p>
------------------------	---	--	---	--

Appendix F continued

FSM 2358.1: Sawyer Responsibilities and Limitations and Training, Knowledge, and Skill Requirements

<p>B Sawyer – Bucking Only</p>	<p>This certification level is not used for fire management activities. There is no Incident Qualification and Certification System (IQCS) equivalent.</p> <p>May independently buck and limb any size material in moderately complex situations within the restrictions noted on the sawyer’s National Sawyer Certification Card.</p> <p>May saw at the next higher level, but only under the immediate supervision of a sawyer qualified to supervise the work.</p> <p>May not fell.</p> <p>Can supervise A Sawyers when they are bucking but not when felling</p> <p>Has successfully completed an NRSTC covering general saw bucking, limbing, and brushing.</p> <p>The proficiency of B Sawyers – Bucking Only is determined by a sawyer evaluator, certified by the certifying official, and documented on the National Sawyer Certification Card.</p>	<p>Formal Instruction: at least 4 hours</p> <p>Demonstrated Field Proficiency: at least 4 hours</p> <p>Total Training: 8-36 hours</p> <p>Prerequisites: First Aid and CPR</p>	<p>Acquired through formal instruction utilizing one or more NRSTCs, which review the topics covered in A Sawyer training and introduce:</p> <ul style="list-style-type: none"> • Types of binds and techniques to relieve them. • In-depth instruction on bucking, limbing, and brushing techniques. • Identification and evaluation of hazardous bucking situations. • Proper turndown procedure for cutting situations that exceed the sawyer’s abilities. • Specialized saw uses, as needed. 	<ul style="list-style-type: none"> • Proficient in basic saw skills and use of tools needed for crosscut, axe, and chain saw use. • Successfully demonstrates techniques for brushing, bucking, and limbing logs of various sizes and in various binds. • Demonstrates completeness and accuracy of log size-up, placement of wedges, complexity analysis, and application of safe bucking techniques. • When using a crosscut saw, proficient in single and double bucking techniques, including clear team communication. • Demonstrates ability to assess when a sawing task exceeds the sawyer’s capabilities. <p>Field Evaluation: Demonstrated application of formal instruction in brushing, bucking, and limbing techniques of moderate complexity. Demonstrated proficiency in and safe use of a saw in moderately complex situations.</p>
---------------------------------------	--	---	---	---

Appendix F continued

FSM 2358.1: Sawyer Responsibilities and Limitations and Training, Knowledge, and Skill Requirements

<p><u>B Sawyer – Felling and Bucking</u></p>	<p><u>May independently fell, buck, and limb any size material in moderately complex situations within the restrictions noted on the sawyer’s National Sawyer Certification Card.</u></p> <p><u>May saw at the next higher level under the immediate supervision of a sawyer qualified to supervise the work.</u></p> <p><u>Has successfully completed an NRSTC for general felling and bucking.</u></p> <p><u>Can supervise any A Sawyer.</u></p> <p><u>May conduct formal instruction for A and B Sawyers with written approval from the Saw Program Coordinator.</u></p> <p><u>May not conduct field proficiency evaluations of A and B Sawyers.</u></p> <p><u>The proficiency of B Sawyers – Felling and Bucking is determined by a sawyer evaluator, certified by the certifying official, and documented on the National Sawyer Certification Card.</u></p>	<p><u>Formal Instruction: at least 8 hours</u></p> <p><u>Demonstrated Field Proficiency: at least 12 hours</u></p> <p><u>Total Training: 20-36 hours</u></p> <p><u>Prerequisites: First Aid and CPR</u></p>	<p><u>Acquired through formal instruction utilizing one or more NRSTCs, which review the topics covered in A Sawyer training and introduce:</u></p> <p><u>Types of binds and mitigation techniques.</u></p> <p><u>Principles of felling and bucking.</u></p> <p><u>In-depth instruction on felling techniques in moderately complex situations.</u></p> <p><u>Identification and evaluation of hazardous felling and bucking situations.</u></p> <p><u>Proper turndown procedure for cutting situations that exceed the sawyer’s abilities.</u></p> <p><u>Solutions for hung-up trees.</u></p> <p><u>Specialized saw uses, as needed.</u></p>	<p><u>Proficient in basic saw skills and tools needed for crosscut, axe, and chain saw use.</u></p> <p><u>Demonstrates proficiency in all skills listed in B Sawyer – Bucking Only.</u></p> <p><u>Demonstrates proper placement of face cuts and back cuts in sound trees, as verified by stump analysis.</u></p> <p><u>Demonstrates completeness and accuracy in tree size-up, complexity analysis, placement of wedges, undercuts, back cuts, and stump analysis.</u></p> <p><u>Proficient in single and double bucking techniques, including clear team communication (crosscut saw only).</u></p> <p><u>Demonstrates ability to assess when a sawing task exceeds sawyer’s capabilities.</u></p> <p><u>Can safely remove hung-up trees of low complexity.</u></p> <p><u>Field Evaluation:</u></p> <p><u>Demonstrated application of formal instruction in brushing/felling/bucking/limbing tech. of moderate complexity.</u></p> <p><u>Demonstrated proficiency in/safe use of saw in moderately complex situations.</u></p>
--	---	---	---	--

Appendix F continued

FSM 2358.1: Sawyer Responsibilities and Limitations and Training, Knowledge, and Skill Requirements

<p>C Sawyer – Bucking Only</p>	<p>This certification level is not used for fire management activities. There is no IQCS equivalent.</p> <p>May independently buck and limb any size material in highly complex situations based on the recommendation of the Regional Saw Program Manager or Saw Program Coordinator, which is supported by demonstrated advanced saw knowledge and skills and, in most cases, certification as a B Sawyer.</p> <p>Has experience working with C Sawyers in analyzing and implementing safe bucking practices in complex situations. Has demonstrated ability for advanced saw work, advanced understanding of Forest Service saw directives, and ability to teach saw skills to others. Has demonstrated good judgment in assessing complex situations and own skill limitations and in safely completing sawing tasks.</p> <p>May conduct formal instruction within that person’s skill level for A and B Sawyers.</p> <p>May conduct field proficiency evaluations within their skill level for A Sawyers and B Sawyers – Bucking Only.</p> <p>The proficiency of C Sawyers – Bucking Only is determined by one sawyer evaluator, certified by the certifying official, and documented on the National Sawyer Certification Card.</p>	<p>Formal Instruction: required; variable</p> <p>Demonstrated Field Proficiency: variable</p> <p>Total Training: to be determined by sawyer instructor</p> <p>Prerequisites: First Aid and CPR</p>	<p>Acquired through formal instruction that:</p> <p>(a) utilizes information gathered and activities designed by the C Sawyer Evaluator that are specifically tailored to local needs;</p> <p>(b) reviews the topics covered in B Sawyer training; and</p> <p>(c) introduces:</p> <ul style="list-style-type: none"> • Principles of advanced bucking. • Advanced bucking techniques. • Determination of complexity of saw operations. • Tree health. • Fiber characteristics. • Advanced teaching methods and techniques for evaluating A and B Sawyers. 	<ul style="list-style-type: none"> • Proficient in advanced saw skills and tools needed for crosscut saw, axe, and chain saw use. • Able to communicate knowledge effectively and demonstrate field skills clearly to A and B Sawyers. • Able to understand, use, and communicate the contents of applicable federal regulations regarding the use of saws in the workplace and Forest Service saw directives to other sawyers and staff. • Able to complete complex bucking tasks safely, including single and double bucking (crosscut saw only). • Able to identify defects in danger trees comprehensively and clearly. • Additional skills may include refinement of various cutting techniques; decision processes for determining the use of saws, rigging, and explosives; and techniques for removing cut logs, such as use of skids and other mechanical means. <p>Field Evaluation: Evaluations may take place during regularly scheduled NRSTCs. Demonstrated application of formal instruction in brushing, bucking, and limbing techniques in highly complex situations. Demonstrated proficiency in and safe use of a saw in highly complex situations.</p>
---------------------------------------	---	--	---	---

Appendix F continued

FSM 2358.1: Sawyer Responsibilities and Limitations and Training, Knowledge, and Skill Requirements

<p>C Sawyer – Felling and Bucking</p>	<p>May independently fell, buck, and limb any size material in highly complex situations based on the written recommendation of the Regional Saw Program Manager or Saw Program Coordinator, which is supported by demonstrated advanced saw knowledge and skills and, in most cases, certification as a B Sawyer.</p> <p>Has experience working with C Sawyers in analyzing and implementing safe felling and bucking practices in complex situations. Has demonstrated ability for advanced saw work, advanced understanding of Forest Service saw directives, and the ability to teach saw skills to others. Has demonstrated good judgment in assessing complex situations and own skill limitations and in safely completing sawing tasks. May conduct formal instruction and proficiency evaluations for A and B Sawyers.</p> <p>The proficiency of C Sawyers – Felling and Bucking is determined by two sawyer evaluators, certified by the certifying official, and documented on the National Sawyer Certification Card.</p>	<p>Formal Instruction: required; variable</p> <p>Demonstrated Field Proficiency: variable</p> <p>Total Training: to be determined by sawyer instructor</p> <p>Prerequisites: First Aid and CPR</p>	<p>Acquired through formal instruction that:</p> <p>(a) utilizes information gathered and activities designed by the C Sawyer Evaluator that are specifically tailored to local needs;</p> <p>(b) reviews the topics covered in B Sawyer training; and</p> <p>(c) introduces:</p> <ul style="list-style-type: none"> • Principles of advanced felling and bucking. • Advanced felling and bucking techniques. • Determining complexity of saw operations. • Tree health. • Fiber characteristics. • Advanced teaching methods and techniques for evaluating A and B Sawyers. 	<ul style="list-style-type: none"> • Proficient in advanced saw skills and tools needed for crosscut, axe, and chain saw use. • Demonstrates proficiency in all skills listed in C Sawyer – Bucking Only. • Able to communicate knowledge effectively and demonstrate field skills clearly to A and B Sawyers. • Able to identify defects in danger trees comprehensively and clearly. • Able to fell trees of a greater diameter than the length of the saw bar (chain saw only). • Able to fell trees against their natural lean. • Additional skills may include refinement of various cutting techniques; decision processes for determining the use of saws, rigging, and explosives; and techniques for removing standing trees. <p>Field Evaluation: Evaluations may take place during regularly scheduled NRSTCs. Demonstrated application of formal instruction in brushing, bucking, felling, and limbing techniques in highly complex situations. Demonstrated proficiency in and safe use of a saw in highly complex situations.</p>
--	---	--	--	--

Appendix F continued

FSM 2358.1: Sawyer Responsibilities and Limitations and Training, Knowledge, and Skill Requirements

<p>C Sawyer – Evaluator</p>	<p>May independently fell, buck, and limb any size material in highly complex situations.</p> <p>May conduct formal instruction and proficiency evaluations for all sawyer certification levels.</p> <p>This certification level is not used for fire management activities. There is no IQCS equivalent.</p> <p>Has successfully completed training to organize and conduct advanced sawyer certification sessions in the field and has received a recommendation from the Regional Saw Program Manager, which is supported by demonstrated advanced saw knowledge and skills and, in most cases, certification as a C Sawyer – Felling and Bucking for at least 3 years.</p> <p>Has demonstrated ability for advanced instruction, hazard assessment, and instruction in complex sawing techniques and an advanced understanding of Forest Service saw directives. Has demonstrated good judgment in assessing complex situations and own skill limitations and in safely completing sawing tasks.</p> <p>The proficiency of C Sawyer Evaluators is determined by the Regional Saw Program Manager (or that person’s designee) and another sawyer evaluator, certified by the certifying official, and documented on the National Sawyer Certification Card.</p>	<p>Formal Instruction: required</p> <p>Demonstrated Field Proficiency: variable</p> <p>Total Training: to be determined by Regional Saw Program Manager (or that person’s designee)</p> <p>Prerequisites: First Aid and CPR</p>	<p>Must be recommended for the training by the immediate supervisor, a line officer, or the Saw Program Coordinator.</p> <p>Acquired through formal instruction that:</p> <p>(a) utilizes information gathered and activities designed by the Regional Saw Program Manager (or that person’s designee) that are specifically tailored to local needs;</p> <p>(b) may be tailored to the students’ needs; and</p> <p>(c) includes:</p> <ul style="list-style-type: none"> • Administrative duties and responsibilities. • Advanced teaching methods and techniques for evaluating A, B, and C Sawyers. 	<ul style="list-style-type: none"> • Able to effectively demonstrate and teach advanced sawing techniques, field skills, and hazard assessment decision-making processes. • Able to understand, use, and communicate applicable federal regulations regarding the use of saws in the workplace and Forest Service saw directives to other sawyers and staff. <p>Field Evaluation: Evaluations may take place during regularly scheduled C Sawyer NRSTCs. Demonstrated knowledge of techniques for providing instruction in brushing, bucking, felling, and limbing techniques in highly complex situations. Demonstrated ability to provide instruction in safe use of a saw in highly complex situations.</p>
------------------------------------	--	---	---	---

Appendix G

JOB HAZARD ANALYSIS (JHA): Ice Age National Scenic Trail

Chainsaw Operations: IATR-06



Analysis By: Daniel W. Watson, VIP Coordinator

Approved By: Eric Gabriel, Superintendent

ERIC GABRIEL Digitally signed by ERIC GABRIEL
Date: 2021.07.30 17:12:07 -05'00'

Required Personal Protective Equipment (PPE): Hard Hat (ANSI Z89.1 compliant), Sturdy leather (cut-resistant) Boots, leather or other sturdy Work Gloves, Eye Protection/Face Shield (ANSI Z87.1 compliant), Hearing Protection (ear muffs, plugs, or a combination), Saw Chaps (meets or exceeds USFS 6170-4F), Weather-Appropriate Shirt & Long Pants

* Swampers also required to wear identified PPE, minus chaps

Recommended Additional PPE: Blood Stopper Belt Trauma Kit, Safety Whistle

Tools and Equipment: Chainsaw, Saw Kit, Fuel & Bar Oil, Logger’s First Aid Kit (meets 29 CFR 1910.266), Cellular Phone or Two-Way Radio

Required Standards and General Notes: Chainsaw Operators must possess a valid National Sawyer Certification Card. Chainsaw operations always involve at least two people for safety enhancement. Sawyers and Swampers maintain currency in First Aid/CPR, *Trail Safe!* videos, and an approved OF-301A Volunteer Services Agreement

Sequence of Job Steps	Potential Hazards/ Injury Sources	Safe Action or Procedure
Certification/Training	Various potential injuries due to operating saw outside of skill/training level	Complete approved chainsaw operator training (NRSTP); operate chainsaw within certification parameters
Risk Management Analysis	Site-Specific Hazards	Identify site-specific hazards associated with each saw operation, mitigate hazards or stop work until safety concerns are addressed. Utilize <i>Trail Safe!</i> risk analysis tools (SPE/GAR) to determine Low, Moderate, or High Risk

Fueling	Fire from gas spilled on muffler or other ignition source; fuel geysering; damage to equipment from improperly labeled fuel	<p>Let saw cool before refueling.</p> <p>Fuel on bare ground, use funnels.</p>
	containers	<p>No smoking during refueling, or during chainsaw operations (includes vaping and e-cigarettes)</p> <p>Move at least 10 feet away from fueling site before starting saw.</p> <p>Replace excessively gas/oil-soaked gloves.</p> <p>Mix fuel in well ventilated area.</p> <p>Clean up spills promptly.</p> <p>Gasoline will be stored in approved containers or Department of Transportation (DOT) approved containers in quantities of 5 gallons or less. "Approved" containers are tested and certified by a nationally recognized testing laboratory (NRTL) such as Underwriters Laboratory (UL) or Factory Mutual Engineering Corp (FM). Approved containers will be marked or labeled with the UL or FM label. A safety can is a common type of approved container with a flash arresting screen, spring-closing lid and spout cover, and so designed that it will safely relieve internal pressure when subjected to fire exposure.</p> <p>Clearly mark fuel containers that have gas/oil mix ratio.</p>
Saw Maintenance	Fatigue/injury from improper saw maintenance	<p>Keep saw sharpened.</p> <p>Keep idle adjusted properly.</p> <p>Inspect for bar wear/proper chain tension.</p> <p>Take frequent rest breaks.</p>

Sharpening Chain	Cuts to hands	<p>Wear gloves when sharpening chain.</p> <p>Use vise if available.</p> <p>Never file chain while saw is running.</p>
------------------	---------------	---

Transporting Saw	Injury due to falls while carrying saw	<p>Always employ chain guard (scabbard) whenever saw is not in operation.</p>
------------------	--	---

<p>All Sawing Maneuvers</p>	<p>Cuts to body, various reasons</p>	<p>Wear all PPE (chaps, gloves, boots, etc.).</p> <p>Drop-starting a chainsaw is prohibited. A chainsaw must be started with the chain brake engaged and the operator holding the saw firmly in a manner that minimizes movement of the saw when pulling the starter handle.</p> <p>Chainsaws may not be operated unless the manufacturer’s safety devices are in proper working order. Chainsaw safety devices may not be removed or modified.</p> <p>The chain brake must be engaged or the engine shut off if it is carried more than two steps.</p> <p>In manual tree felling operations, notches (face cuts) must be used on all trees and trunks greater than 5 inches in DBH.</p> <p>Check chain tension periodically to avoid “throwing” chain.</p> <p>When more than one individual is limbing or bucking a tree, each is positioned and their duties organized so the actions of one individual will not create a hazard for the other individual.</p> <p>Chainsaw engines must be started and operated at a 10-foot minimum distance from other individuals.</p>
<p>Felling *Securing Felling Area</p>	<p>Others being struck by trees/limbs/debris</p>	<p>The sawyer has the responsibility and authority to identify, secure, and manage the felling area. A MINIMUM OF 2.5 TIMES THE</p>

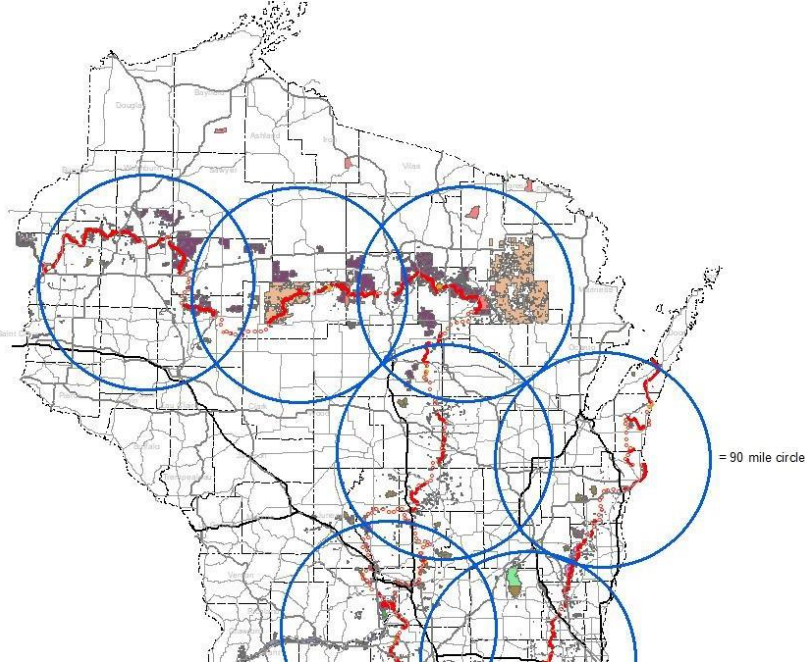
		<p>HEIGHT OF MATERIAL BEING FELLED IN ALL DIRECTIONS MUST BE SECURED. <i>Note: This requirement does not apply in the presence of site restrictions, such as waterways or cliffs. Other individuals must be beyond a tree's striking range and at a distance as close to twice the tree's height as practical</i></p> <p>No one is allowed inside secured felling area without authorization of the sawyer.</p> <p>Additionally, the entire downhill side will be included in the secure area on hillsides with steep slopes where material can roll for long, unpredictable distances.</p> <p>Establish a safe zone outside secured area where everyone remains until felling is completed and the sawyer signals "all clear."</p> <p>Position lookouts on all trails and roads entering the secured felling area.</p> <p>Before leaving the secured felling area, the sawyer must ensure that no hazards remain such as hang ups, unstable logs, or other dangers.</p> <p>It is the responsibility of the work leader and other volunteer workers to understand and follow these established standards, and to follow the direction of the sawyer.</p> <p>At times when Risk Assessments are elevated due to more complex operations, especially when chainsaw operations are part of a larger overall event with multiple workers moving through an area, the sawyer should enlist the help of another qualified sawyer (person of appropriate skills and knowledge) to serve as an overall lookout to maintain control of the</p>
--	--	---

		<p>secured area, allowing the active sawyer and swamper team to more fully focus on their immediate tasks, thus mitigating the chance of unapproved others entering the secured area.</p>
<p>Saw Certification & Working within the Felling Area</p>	<p>Other crew members observing felling procedures</p>	<p>Make sure all trainees are aware of which tree is to be felled and what direction it is planned to fall.</p> <p>Point out identified hazards from size up.</p> <p>It is the sawyer’s discretion to allow trainees within the 2-tree lengths to observe felling, but regardless, maintain safe distance and established escape route.</p> <p>All observers must remain quiet during felling.</p>
<p>Medical Emergencies</p>	<p>Personal injury or illness</p>	<p>All sawyers & swampers will maintain current First Aid/CPR training, and all saw work will be performed by sawyer/swamper buddy-system teams.</p> <p>Each operation must include a “safety station” within 100 feet of the work zone that contains a logger’s first aid kit meeting paragraph (d)(2) of the logging standard 29 CFR 1910.266(e)(1) and (e)(2), Logging Operations.</p> <p>The safety station shall include “Site Safety Plan” information available to all people on site denoting the location of the work site (physical address, Lat/Long, GPS coordinates, or other appropriate locator info) and the name, address, and phone number of the nearest medical facility. IATA “Safety Net” documentation is sufficient for this purpose at larger sponsored work events. It is recommended that the Site Safety Plan be kept inside the logger’s first aid kit within the safety station.</p>

		<p>Each logger's first aid kit comes with an "<i>Emergency Assistance Instructions</i>" card that should be filled out to satisfy this requirement.</p> <p>Communications to request advanced emergency medical treatment must be provided for (cellular phones/radios, etc.).</p>
--	--	---

Appendix H

Training Venue Radius Map



Appendix I



2022 NPS Volunteer Sawyer Training Application

Your Name:

E-MAIL:

Street Address:

City, State, Zip:

Day Telephone:

Cell or Evening Telephone:

Are you a member of the Alliance?

Yes No

Are you currently First Aid / CPR Certified?

Yes No

Have you completed the "Trail Safe" online safety training?

Yes No

How many times have you used a chainsaw in the last year?

0 1-4 5-9 10+

Will use your own chainsaw and PPE – chaps, cut resistant safety boots, helmet w/eye & hearing protection – for this training?

Yes No

If not using your chainsaw & PPE, what length of chaps do you need as measured from the belt line to about 2" below the boot top (not an inseam measurement)?

32" 36" 40"

Emergency Contact Name and Telephone:

Do you actively volunteer on the Ice Age Trail? Please describe:

Please list any relevant trainings, such as Game of Logging, Crew Leadership and Skills or otherwise, you have completed in the last 3 years:

Please complete and return (email is preferred) this form to riley@iceagetrail.org or mail to: Ice Age Trail Alliance, 2110 Main Street, Cross Plains, WI 53528, attention Riley Dupee

This is an application and not an approval for the training. Limited space is available for each class. Individuals will be notified of acceptance to the training.

A Sawyer

A Sawyer Certified at the **A level** may operate a saw in the least complex situations and must be under the direct supervision of a B or C Sawyer. This certification applies to either chainsaw or crosscut use and can be for bucking only for those sawyers not needing to fall trees.

Skill Level	Responsibilities and Limitations	Training	Knowledge	Skills
A Sawyer	<p>May saw only in the least complex situations or, for training purposes, at the next higher level and in either case only under the immediate supervision of a B or C Sawyer qualified to supervise the work. Sawing activities restricted to brushing, bucking, and limbing and, if specifically noted on the sawyer's National Sawyer Certification Card, felling the least complex, small-diameter trees.</p> <p>Has successfully completed an nationally recognized saw training courses (NRSTC) that introduces general sawing principles, including brushing, bucking, limbing, and felling; has been trained at the introductory level; and has successfully completed a sawyer training and field proficiency evaluation for that level.</p>	<p>Formal Instruction: at least 4 hours</p> <p>Demonstrated Field Proficiency: at least 8 hours</p> <p>Total Training: 12-36 hours</p> <p>Prerequisites: First Aid and CPR</p>	<p>Acquired through formal instruction utilizing one or more NRSTCs, including introduction and review of:</p> <ul style="list-style-type: none"> • Job Hazard Analysis (JHA). • Personal Protective Equipment (PPE) requirements. • Saw accidents, near misses, and lessons learned from them. • Forest Service saw directives (FSM 2358 and FSH 6709.11, sec. 22.48). • Situation awareness. • Proper selection, maintenance, and care of saws and other cutting equipment. • Operational safety. • Introduction to brushing, bucking, limbing, and felling techniques. • Proper stance and maintenance of a safe work area. 	<p>Developed through hands-on operation of saws.</p> <ul style="list-style-type: none"> • Emphasis is placed on situation awareness, correctly selecting and using tools, and saw and axe handling techniques. • Practices and successfully demonstrates brushing, bucking, and limbing logs of various sizes and in minimally complex situations. • Introduced to felling in minimally complex situations. • Demonstrates ability to identify various binds and the proper method and sequence of cuts to safely release them. • Demonstrates ability to assess when a sawing task exceeds the sawyer's capabilities. <p>Field Evaluation: Demonstrated knowledge of brushing, bucking, limbing and if applicable felling techniques in situations of least complexity.</p>



B Sawyer

A Sawyer **Certified at the B** level may operate a saw in moderately complex situations. This certification applies to either chainsaw or crosscut use and can be for bucking only for those sawyers not needing to fall trees.

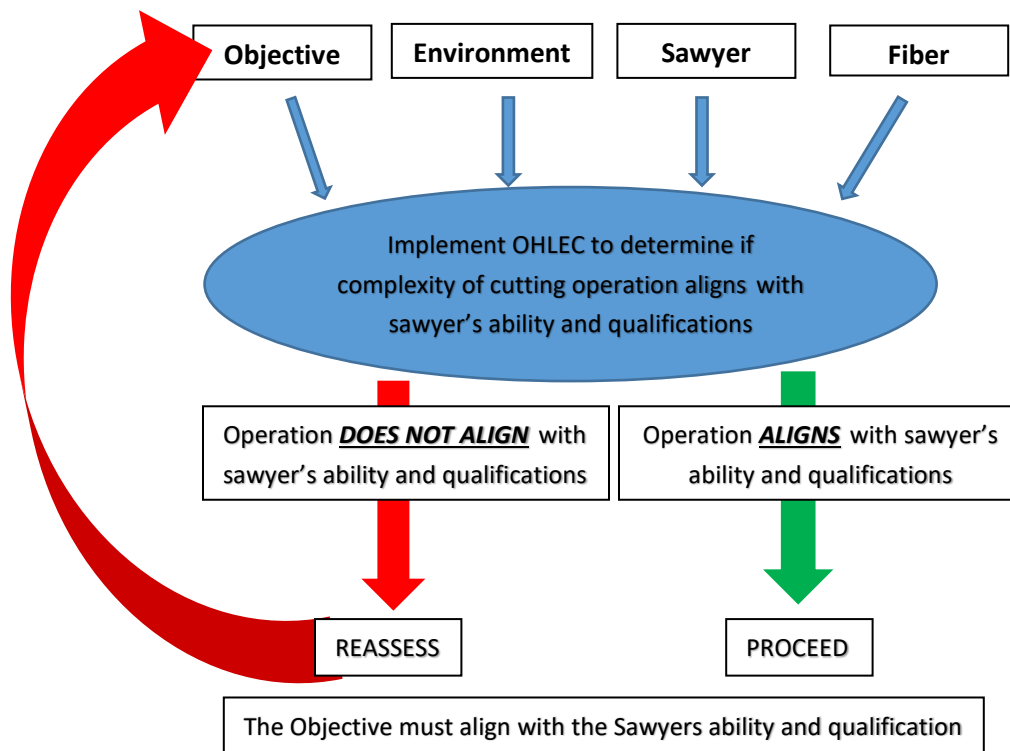
Skill Level	Responsibilities and Limitations	Training	Knowledge	Skills
B Sawyer	<p>May independently fell, buck, and limb any size material in moderately complex situations.</p> <p>May saw at the next higher level under the immediate supervision of a sawyer qualified to supervise the work.</p> <p>Can supervise any A Sawyer.</p> <p>May conduct formal instruction for A and B Sawyers with written approval from the Saw Program Coordinator.</p> <p>May <u>not</u> conduct field proficiency evaluations of A and B Sawyers.</p>	<p>Formal Instruction: at least 8 hours</p> <p>Demonstrated Field Proficiency: at least 12 hours</p> <p>Total Training: 20-36 hours</p> <p>Prerequisites: First Aid and CPR</p>	<p>Acquired through formal instruction utilizing one or more nationally recognized saw training courses (NRSTC), which review the topics covered in A Sawyer training <u>and</u> introduce:</p> <ul style="list-style-type: none"> Principles of limbing, bucking and felling techniques in moderately complex situations. Identification and evaluation of hazardous felling and bucking situations. Proper turndown procedure for cutting situations that exceed the sawyer's abilities. 	<p>Proficient in basic saw skills and tools needed for crosscut and chain saw use.</p> <ul style="list-style-type: none"> Demonstrates proper placement of under cuts and back cuts in sound trees. Demonstrates completeness and accuracy in tree size-up, complexity analysis, placement of wedges, undercuts, back cuts, and stump analysis. Proficient in single and double bucking techniques, including clear team communication (crosscut saw only). Demonstrates ability to assess when a sawing task exceeds sawyer's capabilities. <p>Field Evaluation: Demonstrated knowledge of brushing, felling, bucking and limbing tech. of moderate complexity.</p>



Operational Complexity Diagram

The complexity of a saw operation is dependent on four components:

- **Objective**—The operation to be completed
 - Felling
 - Bucking
 - Limbing/brushing
- **Environment**—The ever changing conditions of the weather
 - Wind
 - Topography
 - Rain or snow
- **Sawyer**—The state of mind and ability of the sawyer
 - Training
 - Experience
 - State of mind
 - Attitude
 - Pressure
 - Unfamiliar equipment
- **Fiber**—The condition/attitude of the wood itself
 - Sound or rotten
 - Fire weakened
 - Lean or bind



At the time of the operation, the objective and the condition of the fiber/wood will remain static while the complexity is being determined. The physical environment and the sawyer themselves have a dynamic influence on the overall complexity given changes from one minute to the next.





CHAIN SAW OPERATION¹

Train, Check and Plan: Before you put a chain saw into your hands. **SAFETY COMES FIRST!**

Before you start the saw check for

1. Loose screws, nuts and bolts
2. Cracks/damage to the saw's body
3. Missing or damaged spark arrester
4. Proper tension on the chain
5. Operational chain brake
6. Operational start/stop switch
7. Operational throttle trigger lock
8. Intact chain catch and hand guard

Maintain the saw according to the manufacturer's specifications.

1. Keep the saw clean
2. Fuel and lubricate
3. Properly maintain bar
4. Properly sharpen the chain
5. Ensure air filter is clean

Personal Protective Equipment

1. Hard hat
2. Eye protection
3. Hearing protection
4. Chain saw chaps or chain saw pants
5. Chain saw protective footwear
6. Hand Protection
7. First aid kit



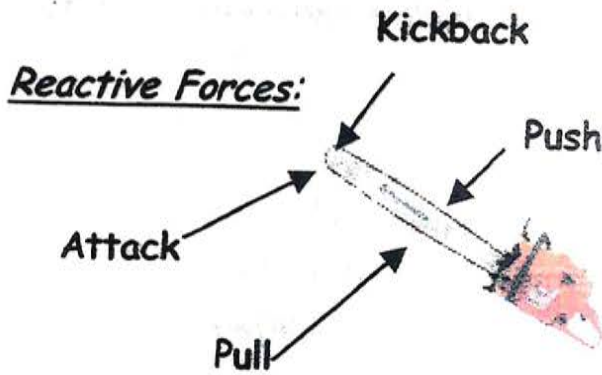
Fueling: Use the gas to oil ratio recommended by the saw's manufacturer. Do not add fuel within 20 feet of a flame source. Let the motor cool and place the saw on the ground before refueling. Wipe gas spills off the saw.

Starting: Start the saw at least 10 feet away from the fueling area, on flat, level ground or by another approved method where the saw is firmly supported. *Never* drop-start the saw. *Always* start the saw with the chain brake on.

Handling and Carrying: Keep your thumbs tightly wrapped around the handlebars. Carry the saw by the front handle with the motor stopped and the bar and muffler away from your body.

¹ Understanding the proper and safe use of a chain saw requires training. Never attempt to use a chain saw without training in safety and maintenance. Read the manual for your saw before attempting to use the saw.

- ◆ Do not work alone
- ◆ Recognize how climatic extremes (wind, heat, cold, precipitation) affect your health and safety.
- ◆ Use proper body positioning techniques to avoid back injuries.



Kickback is the violent backward and/or upward motion of the chain saw when the chain at the kickback corner of the guide bar tip contacts any object. Kickback can cause loss of control and serious injury.

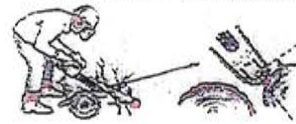


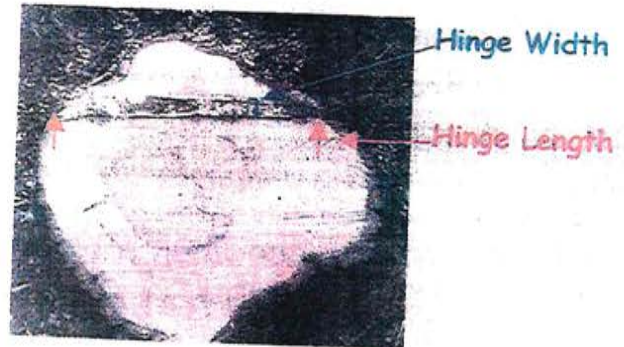
Illustration from www.oregonchain.com

The Felling Five:

1. **Hazards.** What are they and how can they be mitigated or avoided?
2. **Lean or crown weight distribution.** Calculate forward or back and side (left or right) lean or weight distribution.
3. **Escape route.** Plan and clear an escape route at a 45° angle from the back of the tree, away from the falling direction.

4. **Hinge.** Calculate hinge length and width.

Length: minimum of 80% of dbh
Width: maximum of 10% of dbh

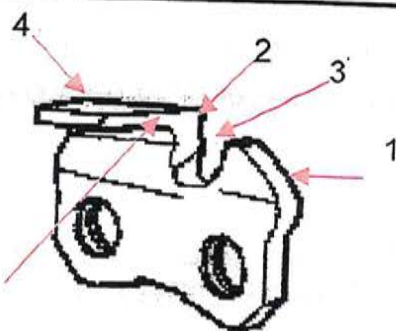


5. **Cutting plan.** Plan and visualize how you will execute the notch and back cut to fell the tree safely and on target.

CAUTION: If any of these 5 cannot be planned and executed safely, do not cut the tree!

The Cutter

1. Depth gauge: sets the thickness of the chip
2. Point: breaks into and begins to cut the fiber
3. Side plate: cuts the fiber off (0-10°)
4. Top plate: keeps the chain straight in the cut (25-30°)
5. Chisel: cuts the chip off (45.0°)



3/16
32.5

5

Five Step Cutting Process

Objective

Regardless of task, develop a plan to determine where you want the cut piece to end up.

- If felling, plan the most desirable placement or lay for the tree
- If bucking, plan where you want the bucked log or round to go
- If limbing, determine sequence and direction for large branches when cut
- If brushing, particularly in thick brush, plan how you will remove the brush when it is cut

Hazards/obstacles

Develop a plan to identify the hazards/obstacles:

- That are overhead (fire, rotten top, widow makers and loose bark),
- That are in the piece of wood being cut (fire, rot and hinge wood integrity, hollow, bar/saw length compared to diameter, bees or poison plants)
- Springpoles,
- Buildings, equipment. or other trees you don't want damaged
- That are associated with people and cutting area control

Leans/binds

Since lay, cut piece placement, sequence or removal was determined in O, develop a plan to:

- Determine lean of a standing tree. Calculate, in feet, the amount of head/back lean and side lean
- Determine binds in log to be bucked, springpoles, limbs or brush to be removed

Escape paths

Since leans and binds were determined in the previous step, develop a plan to:

- Determine the 'good' and 'bad' side of the tree, log, springpole, limb or brush
- Determine and clear an escape route (or 2 routes if necessary for crosscut saw/axe work or situations that require two routes)

Cut Plan

Develop a cut plan to determine which technique will be used to remove wood fiber to achieve the desired result including:

- Face notch construction type (conventional, Humboldt, or open face)
- Hinge position, length of hinge, depth of hinge and amount of stump shot needed
- Back cut type (straight in from the back or chase, boring back cut and out the back, boring back cut with release or holding wood or strap)
- Wedge placement including number of wedges and axe placement
- Sawyer communication to crew members, swamper or crosscut sawyer partner



Bucking Evaluation

What is our objective?

Identify hazards - aerial, ground, product, structures, weather, people.

Identify Binds (different types of bind)

- **Top bind**
When the compression is on the top and the tension is on the bottom.
- **Bottom bind**
When the tension is on the top and the compression is on the bottom.
- **Side bind**
When the tension or the compression is on the side. If not, sure which side is under pressure **DO NOT CUT!!** this could come back at the sawyer
- **End bind**
When there is pressure either uphill or downhill causing the saw to pinch from the gravity weight of the tree. Other end binds may be where the tree is pushed against other trees, hillsides or other obstacles causing the tree to be forced back towards the sawyer causing the saw to pinch or the tree to shoot back at the sawyer.
Always pay attention to your chainsaw's cut (kerf) opening or closing on the bar.

Escape route - always have a way out

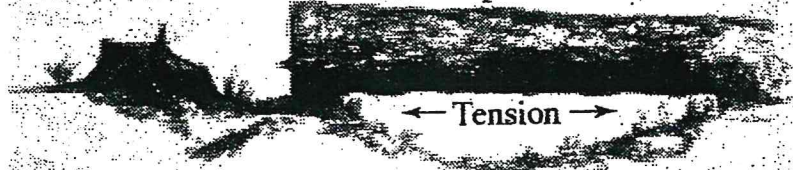
Make a Plan - If your plan changes you must reevaluate

(If there is no objective, cannot mitigate a hazard, cannot read, or identify the bind, have no escape route, or your plan just does not come together **we do not make the cut!**)

TOP BIND

→ Compression ←

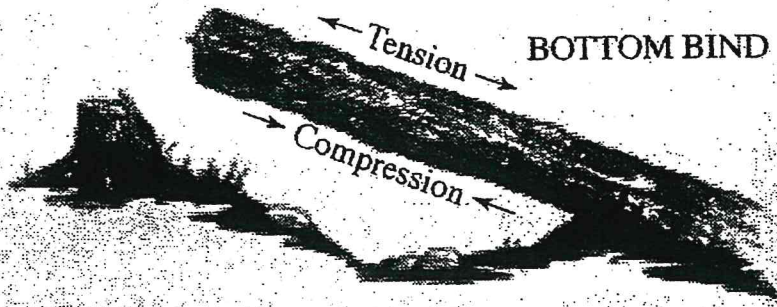
← Tension →



BOTTOM BIND

← Tension →

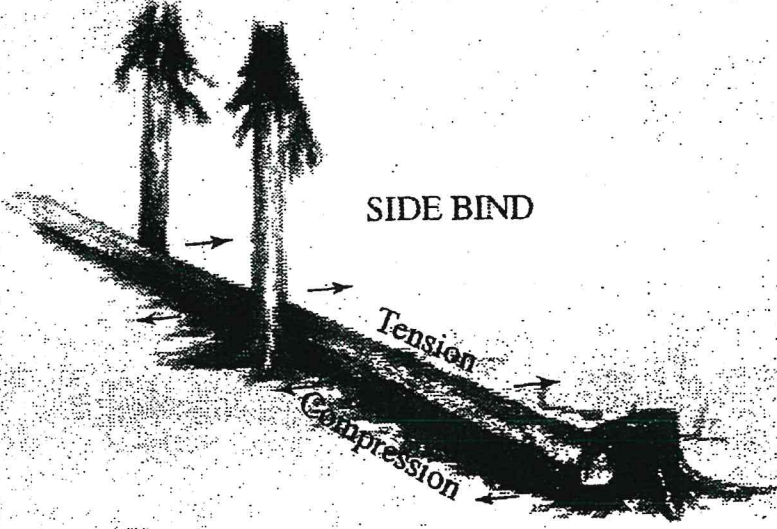
→ Compression ←



SIDE BIND

← Tension →

→ Compression ←

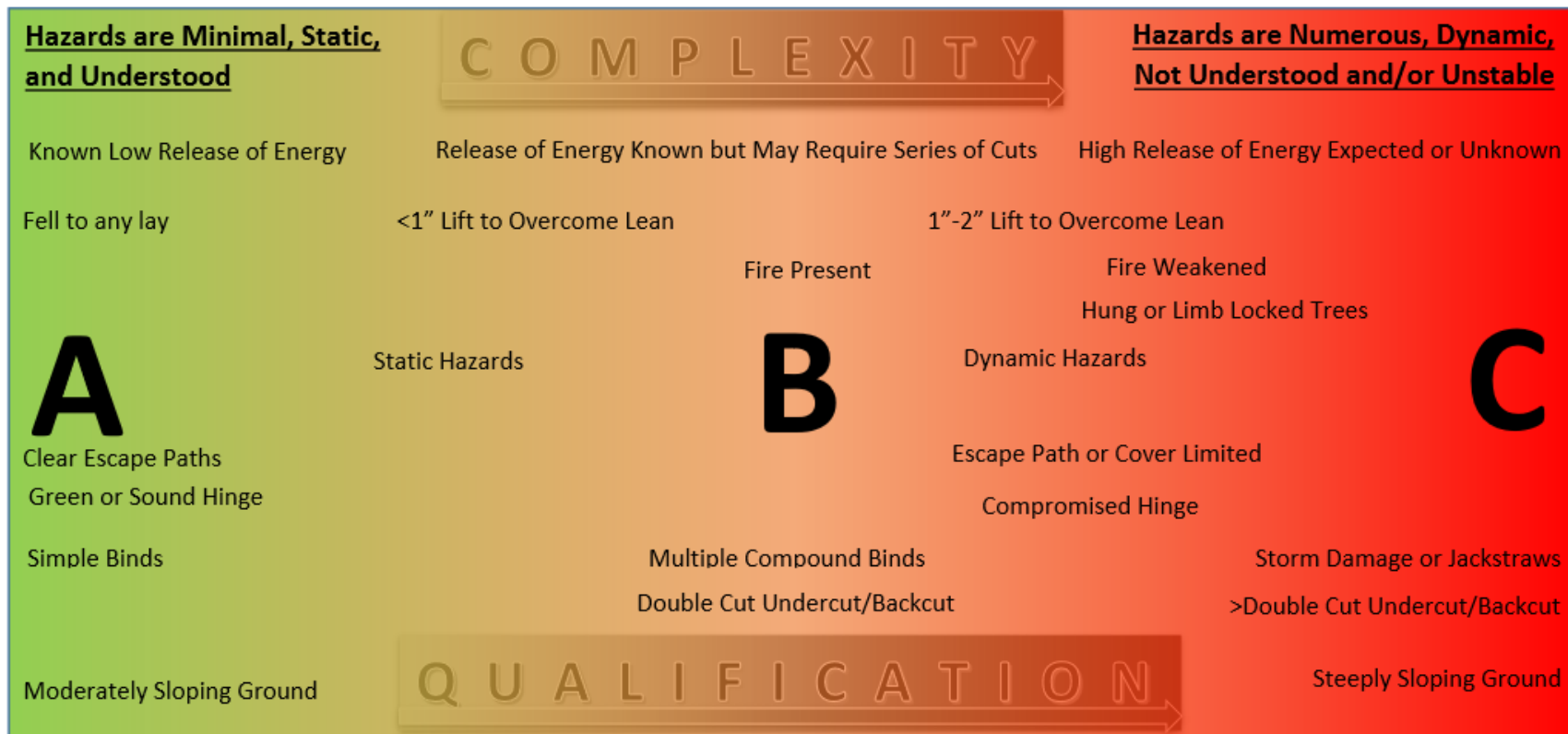


END BIND

Weight causes compression.



Complexity Guide



Dynamic Factors Affecting Saw Operation

Human Factors

Attitude, Fatigue, Stress, Unexpected Reactions, Plan Failure

Environment

Wind, Fire, Precipitation, Soil, Overhead, Unknown Tree Defects

Static Factors Affecting Saw Operation

Objective, Fiber, Lay, Terrain, Known Tree Defects

Do these factors align with your ability and qualification?

If YES, Proceed

If NO, Reassess

STOP
Reevaluate
No Safe lay
No Escape Route
No Escape from Hazards
<30% Fiber at Hinge
Base Won't Support Stem if Cut
Cutting Plan ≠ Objective
Cutting Plan Changed

OHLEC

US Forest Service Saw Program Complexity Guide

OHLEC



Forest Service



Inspecting, Cleaning, Repairing, and Retiring USDA Forest Service Chain Saw Chaps

Lori Messenger, Project Assistant, and Tony Petrilli, Project Leader

Since 1965, the U.S. Department of Agriculture, Forest Service has provided cut-resistant, protective chaps for chain saw operators. Chain saw chaps have prevented thousands of serious injuries. The Missoula Technology and Development Center (MTDC) has tracked chain contact injuries and accidents and has improved the chaps over the past 35 years.

The protective pad in the original style of Forest Service chain saw chaps consisted of four layers of ballistic nylon. This ballistic nylon resisted a chain speed of 1,800 feet per minute without cutting through. In 1981, Forest Service chain saw chaps were redesigned to be stronger and more comfortable. The ballistic nylon was replaced with a Kevlar pad. The level of protection was increased to a chain speed of 2,500 feet per minute without cutting through and the weight of the chaps was reduced by 40 percent.

In 2000, chain saw chaps were redesigned to provide more protection and to increase the coverage area. The new chaps are designed to provide protection to a chain speed of 3,200 feet per minute without cutting through.

Because chain saws are operated in the right hand, the majority of chain contact injuries are on the left leg. The coverage area on the left side of the left leg was increased by about 2½ inches and on the left side of the right leg by about 1½ inches. Because the chaps provide more protection, and cover more area, the weight of each pair of chaps increased by 6 to 8 ounces (depending on the length of chaps required by the user: 32, 36, or 40 inches). Full details on the chaps are included in MTDC specification 6170-4.

How Forest Service Chain Saw Chaps Protect the User

The back-coated nylon shell covering the protective Kevlar pad is resistant to water, oil, and abrasion. The pad consists of a shell of coated nylon duck with five layers of Kevlar inside: woven Kevlar, felted Kevlar, woven Kevlar, woven Kevlar, and felted Kevlar (figure 1).



Figure 1—A chain saw chap has five layers of Kevlar.

Kevlar is a synthetic fiber (aramid) similar to Nomex, but with higher flame resistance (FR) properties. When the chaps are exposed to temperatures higher than 500 °F, the nylon shell may melt, but the Kevlar pad will not.



The chain saw chaps protect the user by slowing and stopping the chain. Fibers of the protective pad are pulled into the saw's drive sprocket, causing the saw to jam (figure 2).



Figure 2—Kevlar fibers jam the chain saw's drive sprocket, stopping the chain saw and preventing injuries.

Chain saw chaps should be adjusted for a snug fit that will keep them positioned correctly on the legs. Chain saw users also need to wear chaps long enough to reach 2 inches below the boot tops. **PROPER FIT AND CORRECT LENGTH MAXIMIZE PROTECTION!**

Inspection and Retirement

Chain saw chaps need to be inspected frequently and retired when appropriate. Retire chain saw chaps when:

- The outer shell has numerous holes and cuts. Such holes allow bar oil to contaminate the Kevlar pad. The oil acts as an adhesive, reducing the level of protection (figure 3).
- Wood chips and sawdust are evident inside the layers at the bottom of the chaps.
- Improper repairs have been made, such as patch jobs that stitched through the Kevlar pad. Machine or hand stitching the pad prevents the fibers from moving, which lowers the level of cut-through protection (figure 4).
- Chaps have been improperly cleaned. Using detergents with bleach additives decreases the level of cut-through protection. High-pressure washing destroys the pad.
- The outer shell is caked with oil and dirt deposits that can't be removed with cleaning. Testing shows that chaps with such deposits offer much less protection than relatively clean chaps.
- The first layer of yellow Kevlar has a cut that is more than 1 inch long.



Figure 3—Retire chaps when they have numerous holes and cuts.



Figure 4—Retire chaps when they have been improperly repaired by stitching through the protective pad.

Care and Cleaning

Treat your chain saw chaps as a piece of **CRITICAL** safety equipment. Do not use your chaps as a chain stop. Keep them as clean as possible. Correct and timely cleaning reduces general wear and tear and the chaps' flammability.

We recommend cleaning chain saw chaps with a commercially available citrus-based cleaning product called *CitroSqueeze*, which has been tested by DuPont and approved to clean Nomex and Kevlar. *Do not machine wash or machine dry chain saw chaps.*

Hose and brush off chaps to remove dirt and large contaminants. Dilute the CitroSqueeze and follow the manufacturer's instructions. For heavy petroleum contamination, fill a soak tank with 10 to 15 gallons of diluted CitroSqueeze solution. Soak the chaps for at least 4 hours (overnight if possible). After the chaps have soaked, scrub them with a bristle brush, rinse them thoroughly with cold water, and allow them to line dry. Many pairs of chaps can be cleaned in the soak tank.

For light soiling, use CitroSqueeze solution in a spray bottle, containing 1 part CitroSqueeze concentrate to 10 parts water. Spray the solution on the area to be cleaned and scrub with a bristle brush (figure 5). Wait one-half hour. Thoroughly brush the chaps, hose them off with cold water, and allow them to line dry.



Figure 5—Clean lightly soiled chaps with a CitroSqueeze solution and a scrub brush.

Repairs

Clean all chaps before repairing them. Repair cuts and holes in the outer shell as soon as possible to keep sawdust and petroleum products from contaminating the protective Kevlar pad.

We recommend a commercially available product called *Seam Grip* for repairing damage to the chaps' nylon shell. Seam Grip provides a flexible, waterproof, abrasion-resistant patch that will protect the Kevlar pad from contaminants.

To repair holes shorter than one-half inch, apply a dot of Seam Grip over the hole, and allow the Seam Grip to dry.

To repair holes and tears in the nylon shell that are longer than one-half inch:

- Cut a piece of notebook or printer paper that extends about 2 inches beyond the edge of the damage. Slip the paper inside the hole or tear in the nylon shell so that the paper lies on top of the Kevlar pad (figure 6).



Figure 6—Use paper to prevent Seam Grip patching adhesive from adhering to the protective pad.

- Lay the chain saw chaps on a flat, level surface and press the nylon shell onto the piece of paper.
- Squeeze Seam Grip onto the paper and onto the sides of the tear, covering all sides of the tear or hole (figure 7).
- Allow the chaps to dry for at least 12 hours before using them.



Figure 7—Spread Seam Grip over the entire hole.

CitroSqueeze is available from:
 CDR Chemical, Inc.
 16182 Gothard St., Suite J
 Huntington Beach, CA 92647
 Phone: 888-270-4237
 Web site: <http://cdrchemical.com>

Solutions Safety Services, Inc.
 1516 E. Edinger Ave. Unit A
 Santa Ana, CA 92705
 Phone: 714-849-5653
 Fax: 714-843-6743
 Web site: <http://www.solutionsafety.com>

Seam Grip is available from numerous outdoor retailers.
 To learn of the retailers close to you, contact:

McNett Corporation
 1411 Meador Ave.
 Bellingham, WA 98229
 Phone: 360-671-2227
 Fax: 360-671-4521
 Web site: <http://www.mcnett.com>

About the Authors—Lori Messenger joined her first fire crew at the Boise National Forest in 1997, then moved to the Union Hotshots. She became a Missoula smokejumper in 2000, after receiving her master of fine arts degree in creative writing from the University of Pittsburgh. Messenger has spent many winters coaching cross-country skiing and teaching creative writing to young people. During the spring of 2003, she began teaching basic firefighting classes in Missoula. She completed a part-time detail at MTDC that summer.

Tony Petrilli is an equipment specialist for the fire and aviation and safety and health programs at MTDC. He has a bachelor's degree in education from Western Montana College. Petrilli began working for the Forest Service in 1982 and joined the MTDC full time in 2000. He has worked as a firefighter on the Lewis and Clark and Beaverhead National Forests and as a smokejumper for the Northern Region. Petrilli is a division/group supervisor, a type III incident commander, and has served on more than 20 fire entrapment review or investigation teams. He is certified as a Class 3 Advanced Sawyer in the Northern Region.

Library Card—Messenger, Lori; Petrilli, Tony. 2004. Inspecting, cleaning, repairing, and retiring USDA Forest Service chain saw chaps. Tech Tip 0451-2324P-MTDC. Missoula, MT: U.S. Department of Agriculture, Forest Service, Missoula Technology and Development Center. 4 p.

Describes how to inspect, clean, and repair chaps that protect the user from chain saw injuries. The chaps, developed by the Forest Service's Missoula Technology and Development Center, use five layers of Kevlar to bind the chain saw, stopping the chain, and preventing injuries. Improperly maintained chaps do not provide as much protection as chaps that are maintained according to the instructions. Chaps should be retired (taken out of service) when someone has sewn through the five-layer Kevlar pad or when the chaps have many holes and cuts.

Keywords: clothing, Kevlar, maintenance, personal protective equipment, safety at work

Single copies of this document may be ordered from:
 USDA FS, Missoula Technology and Development Center
 5785 Hwy. 10 West
 Missoula, MT 59808-9361
 Phone: 406-329-3978
 Fax: 406-329-3719
 E-mail: wo_mtdc_pubs@fs.fed.us

Forest Service and Bureau of Land Management employees can search a more complete collection of MTDC's documents, videos, and CDs on their internal computer network at:
<http://fsfweb.mtdc.wo.fs.fed.us/search>

For further technical information, contact Tony Petrilli at MTDC.
 Phone: 406-329-3965
 Fax: 406-329-3719
 E-mail: apetrilli@fs.fed.us

Electronic copies of MTDC's documents are available on the Internet at:
<http://www.fs.fed.us/lt-d>



The Forest Service, United States Department of Agriculture (USDA), has developed this information for the guidance of its employees, its contractors, and its cooperating Federal and State agencies and is not responsible for the interpretation or use of this information by anyone except its own employees. The use of trade, firm, or corporation names in this document is for the information and convenience of the reader and does not constitute an endorsement by the Department of any product or service to the exclusion of others that may be suitable.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410, or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

Personal Protective Equipment (PPE) Required for Saw Operations

PPE	Chain Saw Operations	Crosscut Saw Operations
Hard Hat	Hard hat or cutting helmet meeting ANSI Z89.1.	Same as chain saw
Safety Glasses	Safety glasses, mesh face shield or “bug-eye” type goggles that meet ANSI Z87.1 standard.	Same as chain saw
Hearing Protection	Hearing protection required for gasoline powered chain saw use.	None required
Gloves	Gloves or chain saw mitts are required for all chain saw operations. Leather required for sharpening. Alternative style of gloves may be used for inclement weather conditions, based on Job Hazard Analysis (JHA).	Same as chain saw
Shirt, Pants	Long sleeved shirt and long pants	Long sleeved shirt and long pants
Leg Protection	Chaps or cut-resistant pants for chain saw use shall meet the requirements of Forest Service 6170-4 or ASTM F-1897 (current version). Chaps shall overlap boots by at least 2”.	None required
Boots	Cut-resistant or leather, laced 8 inch (204 mm) high boots that provide ankle support and nonskid soles. Use JHA to determine proper footwear for the environment and/or related tasks.	Cut-resistant or leather, laced boots that provide ankle support and nonskid soles. Use JHA to determine proper footwear for the environment and/or associated tasks.

National Park Service SPE Risk Assessment Worksheet

A SPE is used during the ORM Process to assess specific hazards using severity, probability, and exposure characteristics for each hazard associated with a task/event.

1. Event/Mission/Task Description:	2. Event Date:
3. Prepared By:	4. Title/Position:
5. Event/Mission/Task Location:	6. Park/Unit/Division/Workgroup:

SPE RISK ASSESSMENT MATRIX		PROBABILITY				
		Likelihood of Accident if Hazard is Present <small>(Exposure: probability increases if number of personnel or duration of exposure increases)</small>				
		Almost Certain <small>(Likely to occur many times)</small>	Likely <small>(Likely to occur sometimes)</small>	Possible <small>(Possible to occur, but not probable)</small>	Unlikely <small>(Very unlikely to occur)</small>	Rare <small>(Almost inconceivable that the event will occur)</small>
SEVERITY	Catastrophic <small>(Death, loss of critical equipment and work ceases)</small>	Extremely High	Extremely High	Extremely High	High	Medium
	Critical <small>(Long-term hospitalization and permanent disability, loss of critical equipment and work slows)</small>	Extremely High	Extremely High	High	Medium	Medium
	Moderate <small>(Medical treatment from a doctor and loss of work time, equipment damage impairs mission efficiency)</small>	High	High	Medium	Low	Low
	Negligible <small>(Little consequence in terms of injury, no significant loss of work, equipment damage does not affect work efficiency)</small>	Medium	Medium	Low	Low	Low



SPE Risk Assessment Matrix

5-Step Operational Risk Management Process

7. Step	8. Hazard	9. Initial Risk Level	10. Control/Mitigation	11. How to Implement / Who will Implement	12. Residual Risk Level
				How:	
				Who:	
				How:	
				Who:	
				How:	
				Who:	

7. Step	8. Hazard	9. Initial Risk Level	10. Control/Mitigation	11. How to Implement / Who will Implement	12. Residual Risk Level
				How:	
				Who:	
				How:	
				Who:	
				How:	
				Who:	

13. Overall Residual Risk Level (assuming all controls implemented):	Low	Medium	High	Extremely High
14. Gain Level:	Low	Medium	High	
15. Risk Decision Authority:				
16. Overall Plan and Course of Action / Implementation Strategy if Approved / Personnel and Resource Assignments / Approver Comments				
17. Approver Name/Title/Date:	18. Approval or Disapproval of Task/Event:			
	Approve		Disapprove	
19. Feedback / Lessons Learned				

Instructions for Completing SPE Risk Assessment Worksheet

- | | |
|---|--|
| <ol style="list-style-type: none"> 1. Event/Mission/Task Description: Briefly describe the overall event or task being evaluated with the SPE risk assessment. 2. Event Date: Record the date the event is planned to occur. 3. Prepared By: Name of person or persons leading the SPE risk assessment discussion. 4. Title/Position: Title or position of the person leading the discussion. 5. Event/Mission/Task Location: Briefly describe the location or address where the event or task will take place. 6. Park/Unit/Division/Workgroup: Record the 4-letter park code or other identifying unit name, the division or divisions who will be conducting the event/task, and the workgroup or workgroups who will be conducting the event/task. 7. Step: Briefly describe major subtasks or steps involved in the operation. 8. Hazard: Identify the hazards associated with the subtask. Only one hazard can be assessed at a time. If more than one hazard is identified within a subtask, list the subtask again so hazards can be listed individually. 9. Initial Risk Level: Initial risk is the level of risk calculated prior to implementing mitigation/control measures. Determine initial risk level using the SPE Risk Assessment Matrix shown above. Use probability and severity for the hazard being evaluated to identify either low, medium, high, or extremely high risk. 10. Control/Mitigation: Discuss controls/mitigations for the specific hazard that will reduce risk to 'As Low As Reasonably Practicable (ALRP).' 11. How to Implement/Who will Implement: Identify who (individual, workgroup who is responsible) will implement the control and how the control will be implemented. 12. Residual Risk Level: Residual risk is the level of risk calculated that remains after mitigation measures have been employed. After controls are recorded, determine the residual risk level using the SPE Risk Assessment Matrix to re-score the hazard being evaluated to identify low, medium, high, or extremely high. Ideally, residual risk is lower than initial risk. If that is not the case for your assessment, revisit your controls to determine if additional or different controls will reduce risk to ALRP. | <ol style="list-style-type: none"> 13. Overall Residual Risk Level: The overall residual risk level is not an average of all residual risk levels. If you have assessed multiple hazards associated with the same task, adopt the risk level for the hazard with the highest residual risk to determine overall residual risk for the event/task. 14. Gain Level: Identify the gain level for the event/task as low, medium, or high. Low Gain - Situation with unclear benefits or a low probability for providing concrete results. Examples: optional duties during inclement weather, non-urgent logistics mission, body recovery operation during hazardous conditions when known loss of life of victim has occurred. Medium Gain - Situation that provides immediate and real benefits. Examples: saving property, addressing urgent threats to park resources, supporting critical operations as identified by your local leader's intent. High Gain - Situation that provides immediate and real benefits that if ignored could result in loss of life or serious injury. Examples: Search and Rescue (SAR) and MEDEVACs, Extraction of personnel in compromised position. 15. Risk Decision Authority: Using the overall residual risk level identified in 13 and the gain level for the event/task identified in 14, use the Risk Decision Authority Chart (below) to identify where residual risk and gain levels intersect on the chart to determine who can make the risk decision for the event/task. 16. Overall Plan/Course of Action/Implementation Strategy/Approver Comments: Clarify any task assignments and next steps (who, what, when, where, how). Approver may add comments as needed. 17. Approver Name/Title/Date: Individual identified using the Risk Decision Authority Chart. 18. Approval or Disapproval of Task/Event: Mark approval or disapproval column based on approver review and decision. 19. Feedback/Lessons Learned: After the event/task is complete, conduct an After Action Review (AAR) to learn from what when well and what could be improved upon for future events. |
|---|--|

Risk	Gain		
	High	Medium	Low
Low	Accept the mission, monitor risk factors, and re-evaluate if conditions or mission/activities change.	Accept the mission, monitor risk factors, and re-evaluate if conditions or mission/activities change.	Accept the mission, monitor risk factors, and re-evaluate if conditions or mission/activities change.
Medium	Accept the mission only with approval from a first-line supervisor. Monitor risk factors and re-evaluate if conditions or the mission change.	Accept the mission only with approval from a first-line supervisor. Monitor risk factors and re-evaluate if conditions or the mission change.	Accept the mission only with the approval from Division Chief or Superintendent (or equivalent) level. Communicate risk vs. gain to chain-of-command. Implement controls and continuously evaluate conditions and mission for change.
High	Accept the mission only with the approval from Division Chief or Superintendent (or equivalent) level. Communicate risk vs. gain to chain-of-command. Implement controls and continuously evaluate conditions and mission for change.	Accept the mission only with the approval from Division Chief or Superintendent (or equivalent) level. Communicate risk vs. gain to chain-of-command. Implement controls and continuously evaluate conditions and mission for change.	DO NOT accept the mission. Communicate to chain-of-command. Approval must come from Superintendent (or equivalent) level. Wait until risk factors change, or controls are available to warrant risk exposure.
Extremely High	Accept the mission only with the approval from Division Chief or Superintendent (or equivalent) level. Communicate risk vs. gain to chain-of-command. Implement controls and continuously evaluate conditions and mission for change.	DO NOT accept the mission. Communicate to chain-of-command. Approval must come from Superintendent (or equivalent) level. Wait until risk factors change, or controls are available to warrant risk exposure.	DO NOT accept the mission. Communicate to chain-of-command. Approval must come from Superintendent (or equivalent) level. Wait until risk factors change, or controls are available to warrant risk exposure.