



## **CHAIN SAW SAFETY GUIDELINES AND PROTOCOL**

Chainsaws are portable power tools that are both efficient and productive, yet at the same time they are dangerous if used incorrectly and without proper training.

Safety is a priority for all activities undertaken by the Pennsylvania Parks and Forests Foundation, our friends groups, and volunteers. In order to establish a safety standard and ensure a consistency of training, the Foundation has enacted the following guidelines in agreement with DCNR bureaus of state parks and state forestry. Not only does this establish safety it sets an agreed upon standard.

### **Prerequisites:**

1. Chainsaw operators (sawyers) must have a combination of at least 7 1/2 hours of training on the operation, maintenance, and safety of chain saws from a recognized trainer, along with field instruction utilizing the chain saw. Recognized trainers include:
  - a. USFS training program
  - b. STIHL
  - c. Game of Logging
  - d. Penn Trails
  - e. National Training Solutions
2. Training program will include the following:
  - a. Specific work procedures, practices and requirements, including general and specific safety and health hazard recognition, prevention, and control.
  - b. How to safely perform tasks typically associated with volunteers using chainsaws, such as trail work, limbing, bucking, etc.
  - c. The specific hazards and controls associated with each task.
  - d. How to safely use, operate, and maintain chainsaw.
3. Sawyers agree that chainsaws will not be operated alone. A second volunteer or staff person must be present should an emergency arise and to direct any visitors that may enter the safety zone of operation. (Sawyers cutting firewood may operate alone if others are aware of their activity and they have taken necessary safety precautions and are working within their skillset).
4. When doing trail work, it is preferable for the second person to be trained as a swamper, understanding the mechanics of limb removal and safety guidelines.

5. All sawyers and swampers will have first aid training and carry a first aid kit and radio/cell phone for use in case of emergencies.
6. Personal Protective Equipment, PPE, must be worn when operating a chainsaw. PPE consists of regulation chaps, helmet, safety glasses, face guard, ear protect, leather boots, leather palmed gloves. Chaps should cover boots by 2 inches.
7. All sawyers and swampers MUST be signed up through DCNR's Conservation Volunteer Program

### **Before Leaving Home:**

1. Identify emergency services for location where you will be working. Will you have cell reception should an emergency occur?
2. Develop an evacuation plan for the work area.
3. Leave a plan with family or friend and the park/forest office.
4. Know the medical issues of people in your work party.
5. Bring along first aid kit—and know how to use it.
6. Bring food, water, and clothing for the weather, in addition to your PPE.
7. Make sure that your chainsaw is properly maintained and you have the tools you need with you.
8. Keep chainsaw fuel away from food and beverage.
9. Don't overload yourself—chainsaw use requires energy. Be sure to eat and drink throughout the day, and take breaks as needed.

### **Work Area Safety:**

1. Make sure that there are no known events occurring in the area in which you will be working.
2. Make sure that the park manager/district forester or a representative knows that you will be sawing in the designated area—when you expect to be there and when you expect to complete.
3. Area where working must be marked and no people allowed in the immediate area.
4. In the very rare case in which volunteers are felling trees, other workers must be at least double the length of the height of the potential tree fall.
5. All obstacles to work must be removed to ensure safety and ensure stable footing and/or path of retreat.
6. Identify hangers or widowmakers—items that could dislodge and cause accidents during the process.
7. Monitor weather—wind, rain, snow load, lightning.
8. Be aware of spring poles when removing downed trees.

### ***Before Starting the Chainsaw:***

1. Check controls, chain tension and all bolts and handles to ensure they are functioning properly and adjusted according to the manufacturer's instructions.
  - a. Five point safety check: a fully functional throttle trigger interlock, fully functional reduced-vibration system; a fully functioning chain break; a functional chain catch pin; a function spark arrestor screen.
2. Ensure the chainsaw engine is the appropriate size for the project and within the operators training and ability to use
3. Fuel the saw at least 10 feet away from ignition sources. Do not fuel a hot saw! Make sure to vaporize both chambers (saw and fuel container) before opening completely.
4. Check the fuel container to ensure it:
  - a. Is metal or plastic.
  - b. Does not exceed 5 gallons in capacity.
  - c. Is approved by the Underwriters Laboratory, FM Approvals (FM), or the Department of Transportation (DOT).
5. Ensure electric chainsaws are tested and certified by a Nationally Recognized Testing Laboratory (NRTL). Extension cords shall be sized according to the chainsaw manufacturer's instructions.
6. Check that all safety devices are working properly.
7. Do not operate a chainsaw that is damaged or has disengaged safety devices.
8. Look for nails, spikes, or other metal objects in trees prior to cutting.
9. Clear away dirt, debris, small tree limbs, and rocks from the chainsaw's path.
10. Never work alone.
11. Use proper personal protective equipment (PPE).

### ***Operating the Chainsaw:***

1. Always follow the manufacturer's instructions for chainsaw operation and maintenance.
2. Start the saw on the ground, held by your foot, or by placing handle of saw between knees, using firm support with the brake engaged.
3. Keep both hands on the handles and maintain secure footing. Keep your thumb wrapped on the handle and use your wrist to engage the safety brake.
4. Plan where the object will fall; ensure that the fall area is free of hazards; and avoid felling an object into other objects.
5. Plan the cut; watch for objects under tension; use extreme care to bring objects safely to the ground.

6. Be prepared for kickback; avoid cutting in the kickback zone and use saws that reduce kickback danger (chain brakes, low kickback chains, guide bars, etc.).
7. Do not cut directly overhead. Do not use a ladder for cutting.
8. Shut off or release throttle prior to retreating.
9. Shut off or engage the chain brake whenever the saw is carried more than 50 feet or across hazardous terrain.
10. Take breaks as needed as fatigue increases the risk for accident and injury.

***Operate Within Your Skill Level:***

1. Accidents can happen when chainsaw operators perform tasks that are beyond their capabilities or training level. Higher risk operations may include: {
  - a. Trees on unstable ground or steep slopes.
  - b. Trees with a heavy lean.
  - c. Trees with stem or root rot. {
  - d. Trees known to split.
2. Operating a chainsaw above shoulder height or above ground level, such as from a ladder or tree increases likelihood of injury and should be avoided.
3. Proper personal protective equipment (PPE) can prevent or lessen the severity of injuries to workers using chain saws. Ensure that PPE is in good working condition prior to starting work. The purchase of PPE is a legitimate expenditure by a friends group.
4. PPE needed includes:
  - a. Head protection, such as a hard hat
  - b. Hearing protection sufficient to reduce noise exposure to 90 decibels or less
  - c. Eye/Face Protection such as safety glasses.
  - d. Appropriate protective footwear.
  - e. Leg protection such as chaps.
  - f. Work gloves.
  - g. Fall protection as necessary.
  - h. Preferred—warning flags to alert visitors to the area.
  - i. Sufficient water to remain hydrated and snacks to maintain energy levels

**If an accident or injury occurs:**

**Dial 911**

**Alert park/forest staff**

**Alert DCNR**