

# SOP Appendix M

## Muzzleloading Rifle

### 2/1/2024

1. Purpose
  - a. To establish standard procedures for operating a Muzzleloading Rifle shooting range.
2. Additional Information
  - a. Appendix 1 – **Range Ownership and Contact Information**
  - b. Appendix 2 – **Emergency Range Procedures**
  - c. Appendix 3 – **Code of Conduct and Discipline Policy**
  - d. Appendix 4 – **Range Operations**
  - e. Appendix 5 – **Range Opening, Operating, and Closing Procedures**
  - f. Appendix 6 – **Acceptable Calibers and Ammunition**
3. References
  - a. BSA Guide To Safe Scouting
  - b. NRA Muzzleloading Instruction Manual
  - c. NRA Range Safety Officer Manual
  - d. BSA National Camp School Training Manual
  - e. BSA Muzzleloading Rifle Shooting Merit Badge pamphlet or NRA First Steps
  - f. BSA Shooting Sports Manual
4. Personnel
  - a. Operation of a Muzzleloading Rifle range requires qualified supervision.
  - b. Definition and requirements of Range Officers and Shooter ratios is found in SOP Appendix 4– Range Operations.
5. Persons Authorized to Shoot
  - a. All participants must have the physical strength and manual dexterity required to shoot safely.
  - b. If range personnel are uncertain of a shooter’s ability, the range personnel may test the participant and make appropriate physical arrangements (if possible) to assure a safe shooting experience.
  - c. All participants are responsible for following Rules of Safe Gun Handling and following the instructions of the range personnel. The Rules of Safe Gun handling are:
    - i. ALWAYS keep the gun pointed in a safe direction.
    - ii. ALWAYS keep your finger off the trigger until ready to shoot.
    - iii. ALWAYS keep the gun unloaded until ready to use.
  - d. Any participant behaving in an unsafe or disruptive manner may be removed from the range by any one of the range personnel.
  - e. See SOP Appendix 4 – Range Operations for other restrictions for Persons Authorized to Shoot on the range.
6. Authorized Shooting Equipment
  - a. See SOP Appendix 4 – Range Operations for rules regarding Authorized Shooting Equipment.
7. First Aid Kit and Fire Extinguisher
  - a. An appropriately stocked First Aid kit is required.
  - b. An appropriate Fire Extinguisher for Range conditions required.
8. Safety Equipment
  - a. All participants, range personnel, and other individuals must wear eye and hearing protection while in the immediate, designated area.
  - b. Hearing protection may be provided by the shooting event or furnished by the individual participant.
    - i. If furnished by the event organizers, an assortment of sizes of earmuffs should be on hand to ensure proper fit.

- ii. If provided by the individual, the range safety officer or NRA instructor should verify that the hearing protection fits properly.
- iii. For hearing protection, earmuffs are usually preferred to earplugs.
- iv. If earplugs are used, visual verification of fit should be made.
- v. Earplugs are not to be exchanged with other individuals under any circumstances.
- c. Eye protection may be provided by the shooting event or furnished by the individual participant.
  - i. If furnished by the event organizers, an assortment of sizes should be on hand to ensure proper fit, for use as either standalone glasses or with prescription glasses.
  - ii. If provided by the individual, the range safety officer or NRA instructor should verify that the eyeglasses have adequate lens area to offer protection and that they fit properly and securely.
    - 1. Prescription glasses with plastic lenses may be considered as eye protection when worn.
    - 2. Non-prescription Sunglasses may be worn as eye protection if they are ANSI Z87.1 rated.

## 9. Range Layout

- a. The Range must meet all National BSA regulations

## 10. Equipment Storage

- a. See SOP Appendix 4 – Range Operations for rules regarding Storage and Transportation.

## 11. Operation of Range

- a. The range is opened only when all of the Range Officers described in Qualified Supervision of SOP Appendix 4 – Range Operations are present.
- b. Follow the rules in SOP Appendix 5 – Range Opening, Operating, and Closing Procedures.
- c. Shooting Procedure
  - i. Each shooter must be given a short shooting orientation before they are allowed to shoot. Shooters need only be given this orientation once per camping session or once for the event. The orientation will cover;
    - 1. How to handle the Muzzleloading Rifle
    - 2. Loading procedures and Safety
    - 3. Unloading procedures and Safety
    - 4. How to make the Muzzleloading Rifle SAFE
    - 5. Range procedures
    - 6. Safety procedures
  - ii. Allow the opportunity for the shooter to ask questions about any procedure and safety.
  - iii. The shooter must follow the three rules of gun safety:
    - 1. ALWAYS keep the gun pointed in a safe direction.
    - 2. ALWAYS keep your finger off the trigger until ready to shoot.
    - 3. ALWAYS keep the gun unloaded until ready to use.
  - iv. After the Range Officers are satisfied that the participants are ready to shoot safely, the command to commence shooting may be given.
  - v. Scouts BSA Procedures
    - 1. Startup
      - a. Daily before using and after cleaning, the Instructor will snap off a few caps through each rifle being used to ensure the breech is clear and dry.
      - b. Ensure this is done in a designated area
      - c. Look for tell-tale signs that the barrel is clear (blade of grass, leaves, etc.)
      - d. Move the rifle to the loading area awaiting participants
    - 2. The Instructor carries the rifle to the firing station. There are only two safe directions for the muzzle to be pointed—straight up or down range from the firing line.
    - 3. Under close scrutiny of the Instructor, the shooters load the rifle at a firing station loading rack or bench.

4. The shooter checks to make sure the rifle is on half cock, drops the ramrod down the barrel to make sure the rifle is empty, removes the ramrod, measures out the powder and pours the powder down the barrel. Shooter then places the pre-lubed patch on the end of the muzzle and centers the ball upon it.
  5. Shooter then thumbs in the ball or uses the short starter to start the ball followed by long end of the short starter to put the ball 4 to 6 inches down the barrel.
  6. Shooter then uses a ramrod to ram the ball down the barrel using short strokes. Each ramrod will have witness marks to indicate when the ball is fully seated. The ramrod must not be aggressively bounced on the ball.
  7. The shooter, under the direct supervision of the Instructor brings the rifle to the firing line and points it down range. The Instructor then makes sure that the shooter is holding the rifle tight on his shoulder and has toed the firing line. Typically, shooters should only use the front trigger, not the set trigger if equipped.
  8. The Instructor places a cap on the nipple of the rifle and stands back. Only range personnel are allowed to handle caps
  9. The shooter squeezes the trigger and stays on the line until the Instructor releases him. The shooter then returns to the loading rack carrying the rifle muzzle up.
  10. Upon returning the rifle to the loading rack, the shooter will then drop the ramrod down the barrel to make sure it is clear, put the rifle on half cock, and return the ramrod to its proper place.
  11. Depending upon which type of propellant used, rifles should be wiped out frequently, at least after each shooting session.
  12. In rare cases, shooters may wish to move stations after a rifle has been loaded but before it is capped. This request is usually denied. Only the RSO can move a loaded rifle.
- d. Misfires – Conventional means
- i. In case of a misfire, the shooter is instructed by the Instructor to keep the rifle on his shoulder and pointed down range for 2 minutes.
  - ii. If the cap didn't ignite, the shooter is instructed to pull the hammer back and to shoot again.
  - iii. If the cap did ignite, the shooter is instructed to keep the rifle pointed down range and the Instructor replaces the cap after 1 minute and asks the shooter to fire again. The Instructor can repeat these procedures two or three times.
  - iv. If the rifle still does not fire, the Instructor can use the nipple pick to attempt to clear the passage and re-cap and attempt to fire the rifle again.
  - v. If the rifle still does not fire, the Instructor requests help from the RSO.
  - vi. The preferred method to clear the round is to use a CO2 ball discharger
  - vii. As a last resort, the rifle barrel can be removed from the line, placed in bucket of water for 1 hour in a safe location before attempting to pull the ball/charge manually.
  - viii. Remove the barrel from the water and allow to drain.
  - ix. Using a bench rod (T-handled, heavy, strong ramrod) with a bullet puller attached, screw the puller into the projectile by applying a downward pressure and turning the work rod in a clockwise direction.
  - x. Once the puller has a good grip on the projectile, pull it straight out the muzzle. **Exercise extreme care, being certain that no part of the body is in front of the muzzle.**
  - xi. The safest and easiest way is to place the T-handled work rod in a padded vise, the crotch of a tree limb, or the rafters of a covered firing line and pull on the barrel.
  - xii. After pulling the projectile, clean the barrel to remove all traces of the deactivated charge and to prevent rust.
  - xiii. Thoroughly dry the barrel before reassembling the rifle

- xiv. If the projectile cannot be removed in a safe manner, the rifle must be taken to a competent muzzleloading gunsmith.
- e. Hang Fires
  - i. In the event of a hang fire, range personnel should inspect the Muzzleloading Rifle for obstructions and for operational fitness before it is allowed to resume shooting.
- f. Squibs
  - i. In the event of a squib load, the Muzzleloading Rifle will be removed from the line immediately and marked out of service until it can be corrected by qualified personnel. Disable the Muzzleloading Rifle by removing the barrel, if possible, and mark the Muzzleloading Rifle appropriately.

## 12. Training

- a. Utilize the current NRA Muzzleloading Rifle Instructor Certification (or NRA Coop Muzzleloading Rifle Instructor Certification) and NRA Range Safety Officer Certification.
- b. Range personnel must successfully complete training and certification for their position of responsibility.
- c. Range personnel are responsible for maintaining their credentials. Credentials need to be available for inspection.
- d. Range personnel should renew/attend training regularly as continuing education.
- e. Range personnel need to conduct impromptu training to accommodate range needs.
- f. Oregon Trail Council reserves the right to accept or deny credentialing as fitness for range operations.

## 13. Ceremonial Salutes

- a. Flag salutes and all other ceremonial salutes are not allowed.