

# Archery Range SOP

## V1.01 – 11/11/2020

1. Purpose
  - a. To establish standard procedures for operating an archery 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 4a – **Range Operations**
  - e. Appendix 5a – **Range Opening, Operating, and Closing Procedures**
3. References
  - a. BSA Guide To Safe Scouting
  - b. USA Archery Level 1 Instructor Manual
  - c. BSA National Camp School Training Manual
  - d. BSA Archery Merit Badge pamphlet
  - e. BSA National Shooting Sports Manual
4. Personnel
  - a. Operation of an Archery range requires qualified supervision.
  - b. Definition and requirements of Range Officers and Shooter ratios is found in SOP Appendix 4a – 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 Handling and following the instructions of the range personnel. The Rules of Safe handling are:
    - i. ALWAYS keep the bow pointed in a safe direction.
    - ii. ALWAYS keep their finger off the bowstring until ready to shoot.
    - iii. ALWAYS keep the bow 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 4a – Range Operations for specific range restrictions for Persons Authorized to Shoot on the range.
6. Authorized Shooting Equipment
  - a. See SOP Appendix 4a – Range Operations for rules regarding Authorized Shooting Equipment and Other Range Equipment and Supplies.
7. Safety Equipment
  - a. Finger Protection
    - i. A form of draw hand finger protection is required for all archers.
    - ii. On Bowstring
      1. A product such as “Finger Savers,” rubber pads affixed to the bowstring may be used on lightweight bows.
    - iii. Off Bowstring
      1. If a “Finger Saver” type product is not used, then a finger tab or shooting glove must be used.
  - b. Arm Protection
    - i. Every archer must wear an armguard on the bow arm to protect from string slap. No specific make/model of armguard is recommended.
  - c. Quiver

- i. A ground quiver or personal quiver must be provided for each archer to safety store the arrows.
      - d. Bow Stringer
        - i. Use of a bow stringer is necessary to prevent limb twist during the stringing process. A bow stringer made of cord and leather/plastic is necessary on this range.
- 8. Range Layout
  - a. The Range must meet all National BSA regulations
- 9. Equipment Storage
  - a. See SOP Appendix 4a – Range Operations for rules regarding Storage and Transportation.
- 10. Range Operation
  - a. The range is opened only when all of the Range Officers described in Qualified Supervision of SOP Appendix 4a – Range Operations are present.
  - b. Follow the rules in SOP Appendix 5a – Range Opening, Operating, and Closing Procedures.
  - c. Shooting Procedure
    - i. Each shooter must be given a short 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. Whistle Commands
      - 2. How to handle the bow and arrow
      - 3. Loading procedures and Safety
      - 4. Range procedures
      - 5. 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 safety
      - 1. ALWAYS keep the bow pointed in a safe direction.
      - 2. ALWAYS keep their finger off the bowstring until ready to shoot.
      - 3. ALWAYS keep the bow 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.
  - d. Dry Fire
    - i. In the event of a dry fire, the bow will be removed from the shooting line immediately and marked out of service until it can be thoroughly inspected by qualified personnel
- 11. Training
  - a. Utilize the current USA Archery Instructor Certification and BSA Archery Rangemaster 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. Cascade Pacific Council reserves the right to accept or deny credentialing as fitness for range operations.
- 12. Ceremonial Salutes
  - a. Flag salutes and all other ceremonial salutes are not permitted under any circumstances.

# **SOP Appendix 1 – Range Ownership and Contact Information**

## **V1.0 – 6/17/2020**

### **Owner:**

Cascade Pacific Council, Boy Scouts of America  
2145 SW Natio Parkway  
Portland, OR 97201  
503–226–3423

### **Properties:**

Camp Meriwether/Clark  
17500 Cape Lookout Road  
Cloverdale, OR 97112

Butte Creek Scout Camp  
13462 S. Butte Creek Road  
Scotts Mills, OR 97375

Camp Baldwin  
76201 Dufur Valley Road  
Dufur, OR 97021

Camp Lewis  
14004 NE 271st Cr  
Battle Ground, WA 98604

Camp Pioneer  
62681 NF–2261  
Idanha, OR 97350

Camp Ireland  
31624 NW Camp Ireland St  
Hillsboro, OR 97124

Camp Cooper  
6000 Bald Mountain Access Road  
Willamina, OR 97396

### **Council Contacts:**

Matt Devore, Scout Executive/CEO, 503–225–5756  
Bo Henderson, Director of Facilities, 503–225–5744  
Todd McDonald, Director of Program, 503–225–5711

### **Camp Rangers:**

Steve Parks, Meriwether/Clark, 503–965–6541  
Gary Cuppy, Meriwether/Clark, 503–965–6541  
Brian Kittelson, Baldwin, 541–467–2550  
Bill Hood, Pioneer, 503–539–3834  
Aaron Yoder, Cooper, 503–703–9246  
Bill Hood, Butte Creek, 503–539–3834  
Bo Henderson, Camp Lewis, 503–225–5744

# **SOP Appendix 2 – Emergency Range Procedures**

## **V1.0 – 6/17/2020**

### **Emergency Communications**

All Shooting sports operations must have access to communication to emergency medical services (EMS) at the range or via relay through radio or other reliable devices, to an individual who can perform this communication. In the case of a relay, the following conditions must be in place to meet the policy.

1. The relay person must be able to make EMS contact within 1 minute of receiving a call.
2. The relay person must all ways be in the range of service for the relay device.
3. The relay person must have in their possession the contact list for crisis communication.
4. A runner must be sent to guide EMS to the affected range.
5. The relay person must understand the policy stated below Council Crisis Intervention Protocol (CCIP).

In the case where reliable communication exists directly to EMS at the range, the following conditions must be in place to meet the policy.

1. The relay person must have in their possession the contact list for crisis communication.
2. The relay person must understand the policy stated below for communication beyond EMS.
3. If the communication device does not allow to complete the communications beyond EMS, a runner may be sent to make the communications required by the Council Crisis Intervention Protocol.
4. A runner must be sent to guide EMS to the affected range.

### **Emergency Procedure**

During the operation of any shooting range, the opportunity for an incident which requires external intervention and reporting may occur. The timeliness and procedures for this communication depend on the scenario. The three categories of incidents are:

- **Serious**
- **Near Miss**
- **Minor Injury or Significant Non–Injury**

#### **Serious Incident**

A serious incident results in serious injury, illness, or damage. In the event of a serious injury, the following procedures occur in this order.

- Cease Fire Immediately.
- Notify the Range Officer in charge.
- Follow all instructions given by the Range Officer in charge.
- Offer assistance if you are able.
- Take charge of the situation. Determine seriousness of injury.
- Stabilize the Victim. First–aid kit is located in the Range Storage Room. There is an Automatic External Defibrillator (AED) located in the Main Camp Lodge.
- Notify EMS (in person or via relay).
- Follow EMS directions.
- Send a runner to guide EMS to the affected area.
- Contact Property Ranger (If on–site).
- Contact Event Lead, (in the case of a council or district–run activity).
- Execute Council Crisis Intervention Protocol (CCIP).
- Once the situation is resolved, ask witnesses to write down what they saw and did.
- Treat witnesses for crisis exposure.
  - If needed, treat for shock.
  - Check on the emotional wellbeing of each witness.

- Connect each witness to a trusted person for self-assurance.
- Close the range or ranges until a council review has been conducted.

### **Near Miss Incident**

A near miss is an incident that does not result in injury, illness, or damage, by definition, but it had the potential to do so. In the event of a near miss injury, the following procedures occur in this order.

- Cease Fire Immediately.
- Notify the Range Officer in charge.
- Follow all instructions given by the Range Officer in charge.
- Contact Property Ranger (If on-site).
- Contact Event Lead, (in the case of a council or district-run activity).
- Execute Council Crisis Intervention Protocol (CCIP).
- Once the situation is resolved, ask witnesses to write down what they saw and did.
- Close the range or ranges until a council review has been conducted.

If the range witnesses an event where injury or damage was avoided, a near-miss report must be completed and submitted to the council office within 72 hours of the event. The event leader and the property ranger should also be notified of the near-miss within 2 hours of the incident. If the event involves a ricochet or other shooting related event and the cause cannot be identified, the range must be closed until a range inspection has been completed by qualified Certified personnel and the situation has been resolved.

Near Miss Report must be available to the shooting range prior to its operation. The near-miss form can be found on <https://www.scouting.org/health-and-safety/incident-report/> or contact the council office.

### **Minor Injury or Significant Non-Injury Incident**

Any event where an injury or other significant non-injury event occurred. In such an event, the following procedures occur in this order.

- Cease Fire Immediately.
- Notify the Range Officer in charge.
- Follow all instructions given by the Range Officer in charge.
- Offer assistance if you are able.
- Take charge of the situation. Determine seriousness of injury.
- Stabilize the Victim. First-aid kit is located in the Range Storage Room. There is an AED (Automatic Defibrillator Device) located in the Main Camp Lodge.
- Contact Property Ranger (If on-site).
- Contact Event Lead, (in the case of a council or district-run activity).
- Execute Council Crisis Intervention Protocol (CCIP).
- Once the situation is resolved, ask witnesses to write down what they saw and did.
- Close the range or ranges until a council review has been conducted.

An incident report must be completed and submitted to the Council Office within 72 hours. This is the report that instigates review that leads to future avoidance of the incident and informs council leaders to help protect the interests of the leaders and council. The event leader and property ranger should be informed within 2 hours of an incident.

Incident Report Forms must be available to the shooting range prior to its operation. Incident Report forms can be found on <https://www.scouting.org/health-and-safety/incident-report/> or contact the council office.

### **Council Crisis Intervention Protocol (CCIP)**

The Council Crisis Intervention Protocol (CCIP) exists to engage trained crisis administrators to help affected individuals, ensure the protection of volunteers and the council. Once an administrator is contacted, they will most likely take control of the incident response and begin travel to the site.

### **Key Contacts**

Each year the council identifies the key people to contact and posts this information at each property. The Council (as part of the duties of the Camp Ranger or Camp Director or other staff as the council may designate from time to time) will post this list at the shooting sports range for reference.

The contacts include but are not limited to:

1. Council Director of Program
2. Council Director of Facilities
3. Council Director of Support Services
4. Council Scout Executive

These people work with people on-site to create a report of the incident, support the witnesses, contact families, and, if needed, work with the media.

### **Arrival of the Media**

Only the Council Scout Executive or his designee can speak to the media. If the media arrive, the following procedures must be executed. The Scout Executive identifies someone to speak with them.

1. Be polite.
2. Create a location away from the incident for the media to gather. This location must be away from campers, or others they may solicit for a story.
3. Offer them snacks and drinks and make them comfortable.
4. Please inform the media that only the Scout Executive is allowed to make a comment. You can say, "I am not authorized to speak with the media; someone will be along soon who can speak with you."

### **First Aid Procedures**

All personnel rendering first aid should be aware of the precautions surrounding blood borne pathogens in the event of an accident. The following guidelines should be followed if someone is injured and you come in contact with biohazardous materials including but not limited to: blood, secretions, fluids, fluids visibly contaminated with blood, organ or tissues, cleaning items, and first aid dressings. Universal precautions should be used; all blood and body fluids must be treated as potentially infectious. Government guidelines can be found at [www.OSHA.gov](http://www.OSHA.gov), search for OSHA Occupational Exposure to Bloodborne Pathogens.

### **Personal Protective Equipment**

**Appropriate equipment should be used when coming in contact with biohazardous material:**

- Gloves, eye and face protection
- Fluid-proof over garments
- Shoe coverings
- Resuscitation mouthpieces for CPR

### **Procedure for Cleaning Surfaces Contaminated with Biohazardous Material**

Only those personnel trained and designated as the Bloodborne Pathogen Team should be in charge of the cleanup procedure. In addition to training, each individual should be inoculated for Hepatitis C. Your local physician is capable of administering the vaccine regimen.

- An approved Bloodborne Pathogen Cleanup Kit should be used for cleaning.

- If a large amount of blood or other biohazardous material exists on surfaces or on equipment, the area must be roped off with "Caution Biohazard" tape. The personnel in charge of the cleanup must adorn whatever amount of personal protective equipment is needed for protection. The biohazardous material must be wiped up with paper towels or sprinkled with liquid-congealing powder. The paper towels or powder must then be placed in a red biohazard bag.
- The surface, floor, or equipment must then be decontaminated using an approved germicidal liquid. The solution must remain on the surface for ten minutes or as directed and then wiped off with water. In addition to commercially available germicides, a 1 part solution of sodium hypochlorite (common household bleach) to 10 parts water prepared daily is an effective germicide.
- For a small drop of blood or other biohazardous material that exists on a surface or equipment, wipe off with approved germicidal liquid. Do not use rubbing alcohol as a cleaning solution as it does not kill viruses. The solution must remain on equipment or surface for 10 minutes and then wipe off with water.

Disposal of Contaminated Material (i.e. paper towels, personal protective equipment, saturated dressing): All contaminated materials including personal protective equipment must be placed in a red biohazard bag; the bag must be closed with a metal twist closure or tied in a knot. The bag must then be taken to a Biohazard Laboratory for proper disposal.

## **SOP Appendix 3 – Range Conduct and Discipline Policy**

### **V1.0 – 6/17/2020**

All persons on the range are expected to exhibit “Scout Spirit”, which is defined as the daily living of the Scout Oath, Law, Outdoor Code, and Motto. This expectation is there for all aspects of Scouting and continues on the range.

All persons on the range are expected to show appropriate self–control and self–discipline.

All persons on the range are expected to follow reasonable directives.

All persons on the range are required to abide by the rules of the SOP.

All Youth Protection Guidelines, Guide to Safe Scouting, and BSA Shooting Sports standards must be followed at all times.

#### **Oath**

“On my honor I will do my best to do my duty to God and my country and to obey the Scout Law; to help other people at all times; to keep myself physically strong, mentally awake, and morally straight.”

#### **Law**

“A Scout is Trustworthy, Loyal, Helpful, Friendly, Courteous, Kind, Obedient, Cheerful, Thrifty, Brave, Clean, and Reverent.”

#### **Outdoor Code**

“As an American, I will do my best to – Be clean in my outdoor manners, Be careful with fire, Be considerate in the outdoors, Be conservation minded.”

#### **Motto**

“Be Prepared”



# SOP Appendix 4a – Range Operations

## Archery Ranges

### V1.0 – 6/17/2020

#### 1. Range Officers

##### a. Archery Instructor (Instructor)

- i. The Archery Instructor is responsible for supervising and instructing the shooting participants.
- ii. Must be an adult (18 years of age or older)
- iii. Must be a currently certified USA Archery Level 1 Instructor, or higher level.
- iv. Responsible for inspecting range and ensuring it meets USA Archery standards.
- v. Has overall responsibility for setup and safe operation of the range.
- vi. Has experience in this role.
- vii. Understands and agrees to operate the range using the procedures outlined in this document.
- viii. Has the authority to close the range in case of a safety concern or violation
- ix. Has responsibility for equipment inventory, safety inspections, and maintenance of shooting equipment.

##### b. Archery Director (Director)

- i. The Archery Director is responsible for supervising and instructing the shooting participants.
- ii. Has responsibility for safe operation of the range.
- iii. Responsible for inspecting range and monitoring range operation
- iv. Must be an adult (18 years of age or older)
- v. The Archery Director may act as Archery Merit Badge Counselor as part of Archery Staff at summer camp.
- vi. Must be a currently Certified USA Archery Level 1 Instructor or may be (per NCAP rules) trained by an National Camp School Shooting Sports Director (NCS SSD). When trained by an NCS SSD the following requirements must be met:
  1. The training must be a full 8 hour course.
  2. The NCS SSD must use the USA Archery Level 1 training materials as a guide for the training.
  3. The training materials are only a guide to help the Director learn how to run and teach a safe and effective program.
  4. The training received in this manner is good only for one summer camp season.
  5. For CPC Scouts BSA camps, there is **NOT** an option to use a BSA Cub Scout Archery Rangemaster certification to become an Archery Director.
- vii. Has experience in this role.
- viii. Understands and agrees to operate the range using the procedures outlined in this document.
- ix. Has the authority to close the range in case of a safety concern or violation
- x. Has responsibility for equipment inventory, standard safety–checks, and maintenance of shooting equipment.

##### c. BSA Archery Rangemaster (Rangemaster)

- i. The Archery Rangemaster is responsible for supervising and instructing the shooting participants.
- ii. Has responsibility for safe operation of the range.
- iii. Responsible for inspecting range and monitoring range operation
- iv. Must be an adult (18 years of age or older)
- v. Must be a currently Certified BSA Archery Rangemaster.

- vi. Has experience in this role.
- vii. Understands and agrees to operate the range using the procedures outlined in this document.
- viii. Has the authority to close the range in case of a safety concern or violation
- ix. Has responsibility for equipment inventory, standard safety–checks, and maintenance of shooting equipment.

## 2. Supervision Ratios

### a. NCAP Standards

- i. Per the NCAP standards, Scouts BSA Resident Camp Supervision shall consist of one (1) Instructor **OR** one (1) Director. This range supervision, per NCAP standards, permits the single Instructor **OR** single Director to supervise up to eight (8) archers.
  - 1. Additional archers above the single supervisor limit require additional supervisors with the same supervision limit. When additional supervision is required:
    - a. a minimum of one (1) Instructor is required
    - b. the remaining required supervision may be any combination of Instructors and Directors
- ii. Non–Certified range personnel may not be counted as supervisors.
- iii. When there are multiple supervisors, one supervisor must serve as the leader of all other supervisors.

### b. USA Archery Standards

- i. USA Archery mandates that safety of the archer is the number one goal of any archery activity. To assist with this goal, USA Archery mandates certain Instructor to Student (archer) ratios. These ratios are regardless of the presence of uncertified assistants. These limits are dependent upon multiple factors and may be reduced by the Instructor directly overseeing the archery activity.
  - 1. 6–7 years old – up to 3 archers
  - 2. 8–9 years old – up to 6 archers
  - 3. 10–11 years old – up to 10 archers
  - 4. 12 years and older – up to 12 archers
- ii. Additional archers above the single supervisor limit require additional supervisors.
- iii. Archers may be grouped by ages to accommodate more participants based on available supervisors.
- iv. Non–Certified range personnel may not be counted as supervisors.
- v. When there are multiple supervisors, one supervisor must serve as the leader of all other supervisors.

## 3. Equipment and Supplies

### a. Bows

- i. BSA recommends light draw weight, take–down, recurve bows.
- ii. Care should be taken to ensure that archers are not overbowed. This means that the Archer needs to be utilizing a bow with a draw weight that they are fully capable of drawing and holding.
- iii. The use of an arrow rest will depend on the fletching used for the arrows to be used. If the arrows are fletched with feathers, they may be shot off of the shelf of the riser and an arrow rest is not necessary. If the arrows are fletched with vanes, then an arrow rest needs to be installed on the sight window directly above the shelf of the riser.
- iv. Bow Length and Draw Weight
  - 1. Bow length and draw weight are dependent on safety requirements for the activity performed. Additionally, the participants must be considered when evaluating the appropriate bow length and draw weight for a particular use situation.
  - 2. Cub Scout Day Camp Use
    - a. A bow length of 54 inches is recommended
    - b. A draw weight of approximately 10# is recommended

3. Cub Scout Resident Camp Use
    - a. A bow length of 54 inches is recommended
    - b. A draw weight of approximately 10# is recommended
  4. Scouts BSA Resident Camp Use
    - a. A bow length of 62–66 inches is recommended
    - b. A draw weight of between 15# and 25# is recommended
  5. Off–Season Scouts BSA Camp Use
    - a. A bow length of 62–66 inches is recommended
    - b. A draw weight of between 15# and 25# is recommended
  6. Off Season Venturing Use
    - a. A bow length of 62–66 inches is recommended
    - b. A draw weight of between 15# and 25# is recommended
  7. Other Uses
    - a. Bow length should be appropriate to the participants.
    - b. Draw weight should be appropriate to the participants.
- b. Bowstring
- i. BSA states that a proper length, well served, 10 strand bowstring be used and that a nock point indicator is properly installed utilizing a bowyer’s square.
- c. Arrows
- i. The arrow recommended by the CPC Shooting Sports Committee is the “Lightning” arrow with a feather fletching, manufactured by Gold Tip.
  - ii. Arrows may be shafted in wood, fiberglass, aluminum, or carbon fiber. Carbon fiber is the recommended material.
  - iii. Arrows must be long enough for the archer shooting them. If the arrow length is shorter than an archer’s draw length, it is unsafe and alternate equipment needs to be found or the archer cannot participate.
  - iv. The only approved arrowhead for use is a Target Point.
  - v. Nocks should fit the serving of the bowstring being used. If it does not securely click into place, it is unsafe to shoot.
  - vi. Either feathers or vanes may be used. The choice should depend if the bows are set–up to shoot off of a rest or off of a shelf.
- d. First Aid Kit
- i. An appropriately stocked first aid kit is required for range operation.
- e. Repair Equipment
- i. Basic maintenance equipment is necessary to ensure continued safe functioning of all equipment. This includes
    1. Bowyer’s Square(s)
    2. Replacement nock point indicators
    3. Nock Pliers
    4. Fletching Jig(s)
    5. Replacement fletchings
    6. Appropriate adhesive for fletching/shaft combination
    7. Rubbing Alcohol is useful for ensuring both fletching and arrow shaft are clean prior to glue up.
    8. Bowstring Wax
    9. A scrap of leather can be useful for protecting your fingers from burn while rubbing wax into bowstring.
    10. Hex Wrench set
    11. Replacement target point arrow heads
    12. Replacement arrow rests (if used)
- f. Target Butt

- i. BSA recommends large diameter target butts to reduce the frequency that arrows miss the target. A target butt of 36 inches is appropriate to mount a 32–inch ten ring face.
  - g. Target Stand
    - i. The target stand needs to securely hold the butt and face while shooting. It must also steadily hold the butt and face through light weather (wind). BSA recommends a “stable tripod,” though many viable options exist.
  - h. Target Faces
    - i. Cub Scouts
      - 1. Colored ring target faces are the only acceptable targets for Cub Scouts to shoot at. 3D targets are not approved for this age group.
    - ii. Scouts/Venturers
      - 1. These Scouts are permitted to use colored ring target faces as well as “tasteful and appropriate” animal (wild game species that are legal for hunting) silhouette targets as well as 3D. A 32 inch, ten–ring target face is used in merit badge qualification.
    - iii. Not Permitted Targets
      - 1. Human Form
      - 2. Zombie Silhoutettes
      - 3. Scouts of all ages are *\*not\** permitted to shoot at zombie or human form paper/silhouette targets.
- 4. Range Use
  - a. Scouts BSA Resident Camp
    - i. Use of a range is permitted for Scouts BSA Resident Camp.
    - ii. Persons Authorized to Shoot
      - 1. Scouts BSA, Venturers, Explorers, and adults may shoot.
      - 2. Cub Scouts or younger age youth are not permitted to shoot.
    - iii. Qualified Supervision
      - 1. Follows NCAP Standards for Supervision Ratios.
    - iv. Mixed Use of Range
      - 1. Mixed Use of the Range is defined as having more than one discipline in use on the same range at the same time (Archery and BB Guns, etc.).
      - 2. Mixed use of range is not permitted for Scouts BSA Resident Camp.
  - b. Off–Season Scouts BSA Camp
    - i. Use of a range is permitted for Off–Season Scouts BSA Camp events, for example – Super Weekends.
    - ii. Persons Authorized to Shoot
      - 1. Cub Scouts, Scouts BSA, Venturers, Explorers, and adults may shoot.
      - 2. Younger age youth are not permitted to shoot.
    - iii. Qualified Supervision
      - 1. Follows USA Archery Standards for Supervision Ratios.
    - iv. Mixed Use of Range
      - 1. Mixed Use of the Range is defined as having more than one discipline in use on the same range at the same time (Archery and BB Guns, etc.).
      - 2. Mixed use of range is not permitted for Off–Season Scouts BSA Camp.
  - c. Off Season Venturing
    - i. Use of a range is permitted for Off Season Venturing events, for example – RAVE.
    - ii. Persons Authorized to Shoot
      - 1. Venturers, Explorers, and adults may shoot.
      - 2. Scouts BSA, Cub Scouts or younger age youth are not permitted to shoot.
    - iii. Qualified Supervision
      - 1. Follows USA Archery Standards for Supervision Ratios.
    - iv. Mixed Use of Range

1. Mixed Use of the Range is defined as having more than one discipline in use on the same range at the same time (Archery and BB Guns, etc.).
  2. Mixed use of range is not permitted for Off Season Venturing.
  - v. Archers may use Council supplied equipment or may provide their own equipment.
  - vi. Personal equipment used on the range is not the responsibility of the Cascade Pacific Council and is the responsibility of the owner of the equipment.
- d. Off Season Council Cub Scout Events held at Scouts BSA Camp
- i. Use of a range is permitted for Council Cub Scout Events (such as District Webelos Woods) provided that the range is used exclusively for the Cub Scout Event and only for the approved Cub Scout Shooting Sports activity.
  - ii. Persons Authorized to Shoot
    1. Cub Scouts, Scouts BSA, Venturers, Explorers, and adults may shoot.
    2. Younger age youth are not permitted to shoot.
  - iii. Qualified Supervision
    1. Follows NCAP Standards for Supervision Ratios.
  - iv. Mixed Use of Range
    1. Mixed Use of the Range is defined as having more than one discipline in use on the range at the same time (Archery and BB Guns, etc.).
    2. Mixed use of range is not permitted for Off Season Council Cub Scout Events held at Scouts BSA Camp.
- e. Council Cub Scout Camp Use – Resident and Day Camp
- i. Use of a range is permitted for Council Cub Scout Events provided that the range is used exclusively for the Cub Scout Event and only for the approved Cub Scout Shooting Sports activity.
  - ii. Persons Authorized to Shoot
    1. Cub Scouts, Scouts BSA, Venturers, Explorers, and adults may shoot.
    2. Younger age youth are not permitted to shoot.
  - iii. Qualified Supervision
    1. Follows NCAP Standards for Supervision Ratios.
  - iv. Mixed Use of Range
    1. Mixed Use of the Range is defined as having more than one discipline in use on the range (Archery and BB Guns, etc.).
    2. Mixed use of range is not permitted for Council Cub Scout Camp Use – Resident and Day Camp.
- f. Shooting Sports Training
- i. Range Operations require advance permission from the Cascade Pacific Council
  - ii. Persons Authorized to Shoot
    1. Persons training and participating in the Shooting Sports Training are permitted to shoot
  - iii. Qualified Supervision
    1. Follows USA Archery Standards for Supervision Ratios.
  - iv. Mixed Use of Range
    1. Mixed Use of the Range is defined as having more than one discipline in use on the range (Archery and BB Guns, etc.).
    2. Mixed use of range is not permitted for Shooting Sports Training.
- g. Other
- i. Prior to use of a range, a written request must be made to the Cascade Pacific Council Director of Facilities for use of a range including a list of all types of equipment to be used and any mixed use planned. Written approval by the Cascade Pacific Council must be granted before the event may be held. Approval may add requirements or change Qualified Supervision at the discretion of the Cascade Pacific Council.
  - ii. Persons Authorized to Shoot

1. Persons participating in the Other are permitted to shoot.
    - iii. Qualified Supervision
      1. Follows USA Archery Standards for Supervision Ratios.
    - iv. Mixed Use of Range
      1. Mixed Use of the Range is defined as having more than one discipline in use on the range (Archery and BB Guns, etc.).
      2. Mixed use of range is permitted for Other.
5. Storage and Transportation
  - a. Shooting Equipment – Bows, Arrows, Other equipment
    - i. Council Owned
      1. Access to the equipment will be restricted to range personnel and camp management.
      2. Bows and Arrows will be stored on-site (the range) in a locked area dedicated for this purpose when not in use.
      3. Transporting of equipment will be done in a safe manner.
      4. Inventory of the equipment is the responsibility of the range personnel.
      5. Equipment stored at the range and on camp property will be controlled according to BSA policy and regulations.
    - ii. Staff or Participant Owned
      1. The individual owner is responsible for safe and secure storage of all of their owned equipment.
      2. Access to storage of the equipment is the responsibility of the individual owner.
      3. Transporting of equipment will be done in a safe manner.
      4. Inventory of the equipment is the responsibility of the individual owner.
      5. Cascade Pacific Council is not responsible for the storage or use of the individual equipment.

# **SOP Appendix 5a – Range Opening, Operating, and Closing Procedures**

## **Archery Ranges**

### **V1.0 – 6/17/2020**

#### **1. Range Opening Procedure**

- a. Opening the facility
  - i. Unlock and open the facility. Turn on lights as needed. Visually verify equipment is in place from previous range session. Investigate and note anything unusual.
  - ii. Walk the facility looking for any condition which seems out of normal or might be a safety concern.
  - iii. Equipment should remain in storage until handling of equipment is deemed appropriate.
- b. Range Inspection – make corrections as needed.
  - i. Verify all signage is up and visible.
  - ii. Verify berms are intact and functional.
  - iii. Verify there are no hazards/obstructions between the shooting line and the impact area.
  - iv. Verify the area is clean.
  - v. Verify target area.
  - vi. Verify crowd control and the waiting area is ready.
  - vii. If a problem is found that can't be corrected immediately, determine if the range may can be run safely with the existing problem or if the range must be closed.
    1. If the range can be run safely with restrictions – For example: If an area of the range has a large amount of pooled water, the range could still be opened but the affected section would not be used.
    2. If the range cannot be run safely – **DO NOT OPEN THE RANGE.**
    3. In both cases – Report the problem to the camp director as soon as possible so that the Camp Ranger can address the problem. Additionally, hang a sign so that every range officer coming to the range will be aware of the problem.
- c. Equipment Inspection
  - i. Regular inspection (daily, weekly and seasonal) of equipment (bows, arrows, safety equipment, etc.) is required to ensure operational soundness and safety. A maintenance log is to be kept noting inspection date, general condition, and any issues.
  - ii. Storage safes and enclosures may have operating humidity/condensation control devices, report issues to camp director.
  - iii. Equipment with mechanical issues shall be disabled and marked out of service until a qualified individual can make repairs.
  - iv. Inspect protection equipment and verify they are clean and suitable for use.
  - v. Inspect any other equipment used during shooting.
- d. Making the Range Ready
  - i. Upon completion of inspections, it is time to make the range ready for operation. Ensure all required staff are present.
  - ii. Setup shooting positions and anything else required for range operations. Assemble and arrange as required.
  - iii. Verify safety equipment is available for all shooting positions.
  - iv. Set out and arrange bows and arrows at the shooting positions. Once bows and arrows are placed at every shooting position, make the range safe. When range is safe, range personnel are either downrange or behind the ready line. No standing near the bows.
  - v. Raise the range flag to indicate the range is open.
  - vi. The range is ready to accept shooters.

#### **2. Range Operating Procedure**

- a. Before Shooting

- i. Invite the shooters into the range area and have them store any of their personal belongings in the designated area.
  - ii. Keep watch over the entire range to insure that there is no unauthorized handling of bows or arrows.
  - iii. Issue safety equipment to all participants. It is preferred that safety equipment is issued to participants as they enter or after they are behind the waiting line.
  - iv. Verify that all participants are wearing their safety equipment properly. Make any corrections as needed before continuing.
- b. Making the range HOT
- i. Once the range officers are satisfied that participants have their safety equipment on and a double check that the range is clear, the range can be made hot.
  - ii. **Two Whistle Blasts** – archers may proceed to the shooting line, take the correct stance, and archers wait for the next command.
  - iii. Once the range officers are satisfied that the participants are ready to proceed, a **Single Whistle Blast** is given to instruct archers to nock and arrow and begin shooting.
  - iv. A range officer must always be monitoring the shooting line and the range.
  - v. If a range officer must help an archer and no other range personnel are available, the line must be shut down until the range officer is free to continue their duty.
- c. Making the range safe, making the range COLD
- i. Common reasons for closing the range are:
    - 1. To reset or fix targets.
    - 2. If animals are sighted on the range.
    - 3. To investigate possible safety concerns.
  - ii. **Five Or More Whistle Blasts** is the signal to stop shooting immediately.
  - iii. Any participant can halt activity within the range for immediate safety concerns by announcing “**CEASE FIRE**”. At such point as the participant announces “**CEASE FIRE**”, a range officer must immediately respond with **Five Or More Whistle Blasts**.
  - iv. Upon hearing the **Five Or More Whistle Blasts**, archers are to let down their bow strings, remove any nocked arrows from bow strings replacing them in the ground quiver, set down their bows, and move behind the waiting line.
  - v. Once the cause of the stopping of shooting has been determined, further instructions to the archers may need to be given. Take appropriate action to keep the range safe while the stoppage is handled.
- d. Remind shooters to:
- i. After returning from forward of the shooting line, move behind the waiting line.
  - ii. Do not handle bows under any circumstances while anyone is forward of the shooting line.
  - iii. Handle retrieved arrows as instructed.

### 3. Range Closing Procedure

- a. Clearing the range
  - i. Make the range safe.
  - ii. All shooters can proceed downrange and retrieve targets and target holders.
  - iii. The shooters can be dismissed from the range once range personnel are satisfied they have completed shooter housekeeping tasks (shooters will also be included in cleaning process to facilitate the merit badge lesson on cleaning).
  - iv. Lower range flag to close the range to shooters.
- b. Equipment Cleaning and Inspection
  - i. Cleaning should be a regularly scheduled task. Precautions should be taken to protect personnel prior to start of cleaning process.
  - ii. No solvents other than plain water or Isopropyl Alcohol (aka Rubbing Alcohol) should be used on any of the archery equipment.



- iii. Any wet equipment should be towel dried and air dried if needed to complete the drying process. This includes bows, arrows, safety equipment and other range equipment..
  - iv. Inspect all bow components, arrows, safety equipment and other range equipment for defects/damage or excessive wear regularly. Replace as necessary.
  - v. Always reassemble using correct components (same limbs, same order of limbs, same string per bow, etc.).
  - vi. The bows, arrows, safety equipment and other range equipment can now be secured in the storage area.
  - vii. The storage area should be large enough that each of the pieces of gear can be safely accessed without causing other items to become damaged. Keep items that might harm other items separated to minimize damage in storage. Storing of all gear for a range in a single loose jumble in a box or a bag is not acceptable practice.
- c. Range Inspection
- i. Walk the range looking for debris and or damage that may have occurred during the shooting session. Verify impact area, back and side berms are intact and operational.
  - ii. Make corrections immediately if possible. If not, address them as soon as possible prior to your next session. Significant issues that would be a safety concern should be noted in the range log and reported to the Area Director.
- d. Securing the Facility
- i. Remove all shooting equipment to the storage room that needs to be secured for breaks in operations. Some equipment (such as target holders) may be left in place on a weekly or seasonal basis (summer camp) at the discretion of the Area Director.
  - ii. Sweep floors and empty trash.
  - iii. Ensure all storage areas are secure and locked.
  - iv. Turn off lights and lock up facility.

## **SOP Appendix 6 – Acceptable Calibers and Ammunition V1.02 – 6/11/2021**

Fully jacketed ammunition is preferred, however, shooters may use lead, semi-jacketed soft points, and semi-jacketed hollow points provided the ammunition also meets all the following conditions.

- Factory ammo only, no reloads.
- No armor piercing. Note: This includes steel core or hardened steel tips designed to penetrate steel.
- No incendiary or tracer ammunition.
- No large magnum calibers, handgun or rifle.
- No centerfire caliber rifles with muzzle energy exceeding 1600 ft lbs.
- Shotgun slugs are prohibited.
- See the chart below for allowed calibers.

Allowed Handgun Calibers: 22 short, 22 long, 22 long rifle (22LR)

Allowed Rifle Calibers: 22 short, 22 long, 22 long rifle (22LR)

Allowed Shotgun Gauges: 12, 20 or 410 gauges are allowed utilizing steel shot. Muzzleloading shotguns may utilize 10, 12 or 20 gauge and lead shot.

Allowed Muzzleloading (Rifle, Shotgun, Pistol) Calibers: All calibers accepted, patched round ball or conical lead bullets. Limited to 1 grain powder per caliber for BSA use. Muzzle energy to be 1600 ft lbs or lower. Muzzleloaders will only use black powder or acceptable black powder substitutes.

Allowed BB Gun Calibers: .177

Allowed Pellet Gun Calibers: .177

Allowed Chalk Ball Calibers: .68

Note: Use of the range utilizing calibers other than .22 long rifle or Muzzleloading requires Cascade Pacific Council authorization and verification of proper credentialing and a firearm/caliber declaration. See CPC Director of Facilities for authorization. Utilization of firearms other than those owned by the range owner will be at the discretion of Cascade Pacific Council.

# Backstop Requirements

Industry and government have researched backstop materials for effectiveness and longevity. The most recommended materials for use in backstops are made from AR steel (AR means Abrasion Resistant) and the steel plate is rated at either 400 or 500 on the Brinell scale (which measures hardness with an indenter) – thus the plate is referred to as AR400 or AR500 plate with an associated thickness. Mild steel and other alloys have been tested by industry and government agencies and are not reasonable substitutes. In addition, abrasion resistance can not be improved by thickening the plate. Plate thickness is important in dissipation of energy, especially repeated impacts in a concentrated area – common for target shooting.

Effective backstop require that the backstop be angled – to ensure that fragmented bullets are directed toward the soft ground, and to allow the bullet energy to be better dissipated because the angle causes the impact zone to be larger (simple geometry).

Two factors determine the requirements for backstops using plate steel – velocity and energy.

The velocity of the bullet at the target must be less than 2850 fps – this value is widely published by sellers of targets of AR400 and AR500 steel. The factor that causes pitting is the heat generated at impact of the bullet to the plate. When the bullet velocity at a particular distance is greater than 2850 fps, the only solution is to move the target to a further distance so that the bullet has lost enough velocity before impact. For some bullets, it may be necessary for the target to be located at 200 or 300 yards, perhaps even further.

The second factor that must be considered for backstops is the energy of the bullet at the target. Almost all cartridges manufactured have had the bullet energy measured at the muzzle (Muzzle Energy) and at distances. For rifle rounds, the distances are typically 100 yards and increments beyond 100 yards. For handgun rounds, most target shooting is much closer than rifle shooting, so Muzzle Energy alone is used for the backstop requirements.

Various manufactures have published charts showing the relationship between Energy and target plate thickness. Using the manufacturer's recommendations, we can group various projectiles into groups and then show which backstop material and thickness is effect for the target to survive repeated impacts.

Group	Muzzle Energy (ft lbs)	Plate Type	Plate Thickness
A	0 to 300	AR400	3/16"
B	300 to 700	AR500	1/4"
C	700 to 2,100	AR500	3/8"
D	2,100 to 4,000	AR500	1/2"
E	4,000 to 10,000	AR500	5/8"

The backstop on the Rifle Range at Camp Meriwether is 3/16" AR400 steel plate. All other backstops at other camps are dirt embankments.

A chart from one company:

<https://shootingtargets7.com/pages/target-selection>

This chart shows how we would group various projectiles (reproduced and modified following).

The number for each projectile is the distance (in yards) at which the muzzle velocity is less than 2850 fps (as an example, 0 indicates the bullet velocity is less than 2850 fps at the muzzle and 200 indicates the bullet

velocity is less than 2850 fps at 200 yards). The column of the group indicates which backstop would be effective (as an example, 22 LR handguns or rifles would be Group A which is 3/16" AR400 Plate).

	Projectile	Group A	Group B	Group C	Group D	Group E
<b>Handgun</b>  Recommended greater than 10 yards for target	BB	0				
	Pellet	0				
	Chalk Ball	0				
	22 Short	0				
	22 Long	0				
	22 LR	0				
	380	0				
	9mm		0			
	38 Special	0				
	357 Mag		0			
	40		0			
	10mm		0			
	45 ACP		0			
	44 MAG			0		
	50 S&W			0		
	36 cal round ball 15gr FFF	0				
	44 cal round ball 25gr FFF	0				
54 cal round ball 35gr FFF	0					
<b>Rifle</b>  Recommended greater than 100 yards for target	BB	0				
	Pellet	0				
	Chalk Ball	0				
	22 Short	0				
	22 Long	0				
	22 LR	0				
	17 HMR	0				
	17 WSM		50			
	22-250			300		
	223/5.56			200		
	243 WSSM			200		
	270 WIN				200	
	30-30 WIN			0		
	308 WIN				0	
	30-06 SPFD				100	
	300 WSM				200	
	300 WIN MAG				200	
	7.62x39				100	
	7.62x54R				100	
	338 WIN MAG				0	
	50 BMG					0
	36 cal round ball 30gr FFF	0				
	40 cal round ball 40gr FFF		0			
50 cal round ball 50gr FFF		0				

Round ball figures derived from GOEX powder charts and the Round Ball Ballistic Calculator from ctmmuzzleloaders.com which gave the projectile energy at distance and our target distance is 15 yards.