

Tomahawk Challenge Range

Standards and Procedures Manual

An Introduction of a
New Target Range Design and
Innovative Instructional Format for
Field and Camp Activities of
The Boy Scouts of America

This document was prepared at the request and
as a courtesy for DelMarVa Council

Standards and Procedures for Tomahawk Challenge Range Design, Construction and Activities

Introduction

In this manual you will find simple tools, methods and examples to promote positive experiences for both Scouts and Scouters.. This set of standards and procedures was specifically developed to accommodate large group events, where many participants must move through the range experience during a specific timeframe, such as Summer camps, Jamborees or Camporees. The range design and instructions can be tailored, scaled, and adapted for smaller group events where time is a less critical factor or sportsmanship and games of skill are the primary focus. Successful tomahawk throwing experiences can increase a Scout's sense of personal achievement and build confidence to acquire other outdoor adventure skills.

Rationale

Some elements of a traditional tomahawk range have resulted in less than satisfactory event experiences for some of the participants. During these events, both Scouts and Scouters have experienced unnecessary frustration and discouragement in attempts to practice tomahawk skills due to conditions created by these elements.

Cross-sectional, half and whole log targets have shown inherent inconsistencies of wood grain, knotting, and heartwood. These "natural" targets have also proven difficult to position and stabilize under field conditions in a manner conducive to large group events that may entail several hundred throws in a relatively short time period. Even well-seasoned practitioners have experienced difficulties adjusting throwing force and technique to accommodate unfavorable target conditions. For the less experienced or first time thrower, these target and design difficulties have resulted in unnecessary discouragement, frustration and unwillingness to continue.

These negative outcomes can be prevented by utilizing frame targets based on the design found in the attached schematics. This design offers ease of maintenance, maximum use of material, and quick rotation of paper or laminate targets.

The traditional tomahawk range with multiple parallel throwing lanes, each with individual targets at the end of each lane is designed as a scaled-down archery or firearm range. Field experience shows this to be unnecessary. Unlike bullets and BBs, all the kinetic energy of tomahawks is absorbed by solid targets for scoring evaluation purposes. And unlike misdirected arrows, a smaller area is required for the stopping and recovering of thrown tomahawks that have missed these solid targets. Also, a smaller area is required to provide an adequate safety zone beyond these targets. The comparatively short “release-to-target” distance of a tomahawk throw lessens the length of the throwing lanes in comparison to the rifle, BB, and archery ranges.

The range design illustrated in this manual eliminates the drawbacks of traditional ranges while offering the additional benefits of expedited and simultaneous participation, and improved safety and procedural monitoring by range officers.

Disclaimer

It should be recognized that the activities outlined in this manual are inherently dangerous. Lack of proper training or poor judgment could result in serious injury or even death. This guide is meant to be a reference only and is by no means a substitute for proper and thorough training, proficiency, mental alertness, and good judgment. Anyone acting as a range officer or tomahawk thrower should adhere to safety and best practice guidelines that are equal to or greater than those outlined in this manual.

Introductory Session

A brief introductory session should always precede any range event. The session should include a statement of expectations, a rehearsal of pertinent procedures, and a review of safety guidelines. Questions and concerns can also be addressed at this time.

Factors Affecting the Event

Factors influencing the tomahawk range event can be grouped into categories that facilitate instruction and task performance.

The interaction of these factors results in an *open-ended, dynamic system of action* encompassing multiple *and constantly changing variables*. An infinite variety of outcome

combinations are possible. Alertness, clear communication, and pre-determined action criteria will keep these variables manageable and the outcomes beneficial.

Environmental factors that may impact the quality of the event experience should be brought to the attention of both officers and throwers. Such factors may be inherent in the local surroundings and be beyond human control (weather, ticks, poison ivy, slope of terrain, tripping hazards, etc).

Human factors that may impact the quality of the event experience should also be brought to the attention of participants. Some of these may be within the sphere of human control but manifest themselves in varying degrees across a spectrum of observable behaviors (dehydration, inattentiveness, disregard of Scout values, physical and biochemical medical conditions, horseplay, etc.).

Equipment factors that may impact the quality of the event experience include degradation of both tomahawks and targets as the event proceeds. On site replacement material and supplies for speedy maintenance and repairs will ensure an uninterrupted flow of action.

Procedural factors may impact the quality of the event experience. Consistent adherence to assigned roles and duties by participants will ensure safe, efficient traffic flow of tomahawk throwers through the range. Benefits of the experience will thus be enjoyed by a greater number during the time period allotted.

Participant Perceptions

Field observations indicate that Scouts, Scouters, and other practitioners exhibit varying levels of interest, ability and excitement regarding the Tomahawk Challenge Range experience. Some individuals may approach the activity with limited, specific preconceptions or goals in mind. Some may view the process as a continuum of action offering unlimited opportunities for experimentation, progressive skill acquisition, or personal empowerment. Some may associate the activity with sports, media events or entertainment, computerized games or simulations, or prior personal experiences. While participation by all is encouraged, Range Officers are advised to be sensitive to the predispositions and capacities of individuals in order to increase the probability of positive outcomes.

Establishment of a Theme

Establishing a theme places individual event experiences within the larger context of Scouting. Range Officers, tomahawk throwers, and interested spectators can creatively contribute ideas appropriate to immediate circumstances, long-term goals, or other criteria of interest while formulating the event theme.

Sample Theme: "Every throw of the tomahawk is like one more step on the Trail to Eagle."

Statements that support the theme:

"Focus on the target just like you focus on a rank advancement..."

"Throw with balance and awareness, just like when you walk in the woods..."

"Consistent effort will result in merit badges and well-thrown tomahawks..."

"Replacing the tomahawks as you found them shows courtesy and kindness..."

Metaphors and analogies such as these assist in the convergence and reinforcement of common group values and increase involvement of individuals in the group dynamic process. The fun and excitement generated by this mental exercise evokes the Spirit of Scouting and enhances the sense of adventure that energizes the physical aspects of the event.

Practical Applications

Systematic operation and integration of procedures ensures adequate traffic flow, adherence to safety guidelines, and multiple opportunities for Range Officers and tomahawk throwers to improve their respective skill sets and experience personal growth while participating in the Tomahawk Challenge.

Responsibilities of Range Officers

Range Officers are responsible for the physical elements of the tomahawk range and equipment. Safety tape, fences, gateways, tomahawks, and targets must be kept in good working order. Appropriate tools and materials should be readily available if repairs are needed. Irreparable items should be removed from the field as they may prove to be either hazards or distractions.

Range Officers are responsible for the safety and wellbeing of themselves, tomahawk throwers, observers, and bystanders. Safety is of the utmost priority and the Range Officers' primary concern. Acceptable and expected behaviors of range participation can be demonstrated by Range Officers " walking through " the entire process of entering the range, positioning at throwing stations, the throwing and recovery of tomahawks, and exiting the range. Questions, concerns, or and any additional clarifications can be addressed at this time.

Range Officers are responsible for adequate and timely traffic flow of participants through the range during the time frame allotted for the event. This can be achieved by maintaining a steady tempo and rhythm of activity. Participants waiting in line can be encouraged to observe and emulate the efficient and successful behaviors of those who precede them.

Range Officers are responsible for disassembly and storage of the range and equipment after the event. Grounds should be policed and cleared of debris.

Expectations of Tomahawk Throwers and Spectator Behavior

Tomahawk throwers are expected to act in a "Scout-like" manner while observing, waiting in line, and participating "on range". They are expected to encourage the other participants to "Do their Best" – cheering and applause is appreciated. Horseplay, running, shoving, heckling, or any other behaviors deemed inappropriate by the Range Officers can be considered safety violations and should be addressed swiftly in a proactive fashion.

Sample Scenario of one Senior Range Officer, two Junior Range Officers; three Scouts (tomahawk throwers), nine tomahawks (three at each tomahawk station)

It is helpful to the Range Officers if those Scouts who are next in line to enter the range act as "gatekeepers" who ensure that no one attempts to enter the range while throwing is in progress.

After entering the range, throwers walk directly to the throwing stations, placing one foot on the Tomahawk Thrower Station (TTS) marker. Three (3) tomahawks are already in place on each tomahawk station (TS). The Scouts DO NOT TOUCH OR PICK UP the tomahawks at this time.

Range Officers are at the Range Officer (RO) station markers, using right-handed (ROR) or left- handed options (ROL).

Officers quickly scan range for proper positioning of all Officers and throwers, field periphery for clearance and inactivity, and gate to confirm gate closure and attentiveness of new Gatekeepers.

Senior Range Officer (SRO): "Officers ready?"

Junior Range Officers (JRO)s: "Officers ready!" Thumbs-sign and eye contact with other Officers confirms readiness

SRO: "Throwers ready?"

Scouts: "Throwers ready!" Thumbs-up sign, eyes on targets.

SRO: "Gentlemen, pick up your tomahawks....Fire at will!"

Scouts throw the allotted tomahawks (three per Scout). Scouts stay at stations.

SRO: "All clear?"

Scouts and JROs: "All clear!"

SRO: "Gentlemen, recover your tomahawks." Scouts proceed forward with Junior Range Officers who assist in recovery. Any scored paper or laminate targets are recovered and replaced. After safely recovering thrown tomahawks, Scouts are expected to place them as they found them, in parallel with blades to the left.

Officers and throwers return to stations. Procedure is repeated once again.

After the second replacement of tomahawks, Scouts safely exit the range as Gatekeepers enter. The next scouts in line become the new Gatekeepers.

The date, location, and witnessing signatures can be written on the paper or laminate targets and during this transitional time. Tomahawk throwers may keep these as mementos or memorabilia. Minor repairs or maintenance can also occur as Officers share tasks.

Managing the range is a progressive learning experience for Range Officers. Successful increases in specific skills, perceptions, and management techniques may lead Officers to choose to shorten the Question/Command sequences to "All ready?", "Fire!", "Clear?", "Recover!".

This decision will accelerate traffic flow speed. Eye contact and body language *must* be congruent and consistent with intended actions. Safe practices *must not* be compromised if this accelerated method is exercised.

Procedure Rationale

The waiting line is formed along the fence perimeter immediately opposite the target impact surface. This positioning permits clear observation of range activities by those waiting in line. In addition to tomahawk throwing and recovery, range activities include safety and procedural demonstrations by Range Officers.

The typical procedure utilized in the above scenario results in three Scouts throwing and recovering three tomahawks twice in a two to three minute time interval, yielding a total of eighteen throws. The Range Officers' overlapping visual fields increase the probability of adherence to safe practice guidelines. The verbal question/permission sequence reinforced by hand signals, eye contact, and structured timing serve as additional safety checks. At any instant, an Officer, scout, gatekeeper or observer can give "FREEZE!" commands if safety violations appear imminent. Once the real or perceived safety issue has been adequately resolved, the SRO gives a clear "Proceed!" command or an equivalent signal. It has proven beneficial to rehearse this "Freeze/Proceed" action sequence both during the Introductory Session and periodically during the event as new participants arrive.

In prior observed events, when four or more tomahawks were thrown, recovery times were extensive and inconsistent. These unpredictable delays interfered with resetting times for additional throws. The Scouts (tomahawk throwers) also expressed a need for a "second chance", even when six tomahawks were thrown in a single series. The time interval between the first and second sets now allows brief coaching for scouts who have questions, are experiencing difficulties, or want tips on how to improve their techniques. In general, the second set of throws is consistently better than the first set.

By taking on the role of gatekeepers, by putting one foot on the tomahawk thrower station marker, and by waiting for permission before touching the tomahawks, the Scouts convey to the Officers that they can follow verbal instructions. Participation in the question/permission /thumbs-up safety sequence indicates a readiness for action.

Excitement is at its peak immediately following the first and second set of throws. All Scouts and Officers must be calm and focused enough to safely recover the tomahawks. Past experience has shown that the "All clear!" and the "...recover your tomahawks!" sequence is necessary to redirect this energetic enthusiasm.

Resetting the tomahawks after both sets serves multiple purposes. Scouts and Officers must refocus on the task at hand. It serves as an additional calming mechanism. It reinforces the need for structured, planned, sequential action. It also serves as a reminder to leave no trace. It is also acts as a reminder to extend the courtesies shown by those who have proceeded to those who will follow.

Notes on Target Schematic

The schematic illustrates a target design capable of enduring several hundred impacts. Tomahawks should be thrown vertically, in line with the wood grain of the target boards. Note that all wood components can be cut from inexpensive, readily available, and easily transportable framing lumber (eight foot long, untreated 2X4's) with minimal waste. Any cutoffs can be used for stakes, shims and blocks. The framework is constructed slightly wider than the combined widths of the Target Boards (TBs). This takes into account lumber inconsistencies. Blocks and shims can be used to prevent movement. TBs can be removed and rotated as needed to ensure even wear.

The "Y" brace is one possible method of reinforcing and stabilizing the TBs. Another is to attach four evenly-spaced Optional Retaining Boards (ORBs) horizontally on the back of the frame. ORBs overlapping the front horizontal frame and upper and lower portions of the TBs will minimize the probability of target boards rebounding out of the frame as tomahawks impact. ORBs should be secured with three-inch wood or deck screws rather than nails in order to facilitate TB replacement or repositioning. A battery-powered driver and extra screws can be kept on hand for maintenance and repairs.

Lumber will expand and contract with changes in temperature and humidity while in use or in storage. It deteriorates when exposed to the elements. Proper storage of components is advised.

Notes on Throwing Techniques

The distance from the Tomahawk Thrower Station (TTS) to the target is specifically chosen to allow a simple vertical overhand throw resulting in a single rotation of the tomahawk before it impacts the target. This basic "single rotation" throw can be easily visualized, imitated, and implemented by most beginners in a relatively short time. Throwing techniques can usually be adjusted by self-management of biomechanics in order to achieve greater accuracy according

to imagined vertical, horizontal, and diagonal reference lines in relation to the desired point of impact.

Vertical throws are more likely to remain in the target as they will be in line with the wood grain of the vertical boards.

The Range Officers can help participants achieve a greater percentage of successful throws by recommending adjustments of posture, foot position, hand release, rotation, speed, ballistic arc and impact force. These recommendations will vary in combination and degree according to the specific particulars of any given participant's skill performance capacity at a given point in time. Successful and progressive coaching skills can be acquired through individual and group practice by the Range Officers themselves.

Summary and Conclusion

Safety is the primary priority. Range officer skills and tomahawk throwing skills are progressive. These procedures have evolved from successful application, observation, and quasi-experimentation. Continuous improvement and refinement is anticipated. All elements, procedures, and features have been and should continue to be evaluated according to their capacity to enhance and improve positive Tomahawk Challenge Range experiences.

Helpful Hints

Range Officers should position themselves away from the area directly behind throwers.

Officers may want to keep some personal gear on hand: Drinking water, bug repellent, sunscreen, raingear, hat, personal first aid kit, snacks, etc.

In dry weather, wooden tomahawk handles tend to dehydrate and shrink. Periodically soaking them (head immersed) in a bucket of water will keep the steel heads from slipping.

Wooden targets will split less often and retain tomahawks more often if they are periodically soaked or doused with water.

Inexpensive, laminated playing cards make excellent small targets. Attach them with pushpins to the larger wooden targets.

Choose the orientation of the range carefully, i.e., "backs to the sun" when in throwing position. If level land is unavailable, the target area can be positioned on the downward slope of slight inclines. Target incline angles can be adjusted accordingly.

Keep duct tape and a multipurpose lubricant on site in order to facilitate repairs and maintain tomahawks.

Terrycloth and paper towels are useful to dry tomahawk handles in wet or muddy conditions.

Keep track of the waiting line. Safety practices and procedural guidelines should be periodically demonstrated as new participants move forward.

Periodically toss a few tomahawks. Well-thrown tomahawks will inspire others to achieve. Not- so -well-thrown tomahawks will inspire others to attempt.

Tie bright orange safety tape around the tomahawk handles close to the heads. Leave six inch tails. Locating them in grass, leaves, and wildflowers will be much easier. Colorful electrical tape, yellow caution tape, or fluorescent spray paint won't work as well.

If possible, keep the range open and available for after the scheduled activities for those who show an interest in returning. Easy accessibility to tomahawk ranges is rare. Your kindness and extra effort will be appreciated.