



Safety and Risk Management Guide
For
Mounted Archery

2021 Edition

Note: The following documents have been valuable resource information and inspiration for this Safety and Risk Management Guide for Mounted Archery:

British Horseback Archery Association (BHAA): Horseback Archery – ancient Art to Modern Sport; 3rd Ed., 2020.

International Horseback Archery Alliance (IHAA): IHAA Rulebook, 2018.

Archery Canada “Safety Regulations – AC Range Safety Officer Certification Program” document, revised December 2020, available online at <https://archerycanada.ca/wp-content/uploads/2019/06/Current-RSO-Manual-v2020.pdf>

Archery Society of Western Australia Inc: Risk Management - A Resource for Clubs, 2007; available online at https://archerywa.com.au/awa_documents/2007_risk_management.pdf

Horse Archery USA: Horse Archery Safety Procedures; 2016, available online at http://www.horsearchery.us/wp-content/uploads/2016/04/HAUSA_SAFETY_PROCEDURES.pdf

Society for Creative Anachronism (SCA): Target Archery Marshal’s Handbook, July 2020, available online at https://www.sca.org/wp-content/uploads/2020/01/target_archery_rules.pdf

Society for Creative Anachronism (SCA): Equestrian Marshal’s Handbook, April 2020, available online at https://www.sca.org/wp-content/uploads/2019/12/equestrian_handbook.pdf

Society for Creative Anachronism (SCA): “Mounted Archery in the SCA Part One: How to Get Started”, by Lady Sayako Enoki (MKA Linda Tsubaki), Quivers & Quarrels Volume 2 Issue 3, 2015, p. 10-15. Available online at <https://www.socpsy.com/casks/wp-content/uploads/2016/01/Quivers-and-Quarrels-Winter15-16.pdf>

The Experts-Robson Forensic: “Equine Activity Risk Assessments - Expert Article”, by J. Tim Potter, June 2020, available online at <https://www.robsonforensic.com/articles/equine-activity-risk-assessment-expert/>

The Experts-Robson Forensic: “Risk Assessment and Hazard Analysis - Expert Article”, by Ron Schaible, February 2017, available online at <https://www.robsonforensic.com/articles/risk-assessment-hazard-analysis-expert-witness>

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Introduction

Archery is widely known as one of the safest sports in the world. Nevertheless, even archery has some inherent risk that needs to be managed. Gone are the “Days of Olde”, when for example Henry VIII, King of England, had passed the law that: “.. that if any archer killed a man he could not be sued or in any way be molested, if he had before he shot called out “FAST!” a word common at the time” [Thomas Waring, “A Treatise on Archery, or the Art of Shooting with the Long Bow”, p.7, 1830]. As well, horses are sentient prey animals and can be unpredictable. This can compound the inherent danger; therefore, combining the two successfully into Mounted Archery requires knowledge of the sport, recognition of the hazards, management of the risks, and implementation of safe procedures.

Objectives of this manual:

- To reduce the incidents of injury to participants, officials, spectators and other persons associated with mounted archery activities.
- To provide a fun, healthy and safe sporting environment for individuals to participate and enjoy the sport of mounted archery.
- To minimize potential club liability as a result of poorly managed mounted archery activities.

All outdoor and indoor Ground Archery Ranges and Mounted Archery Tracks, as well as surrounding areas, should be made as safe as possible. The participants have a duty to practice mounted archery in a responsible and safety-oriented manner, and the horses must be well-trained for this sport.

Mounted Archery is riding and shooting in rhythm and balance with the horse. As Mounted Archery grew over the last few years, there has been a trend for riding ever faster with less equitation, and less harmony between horse and rider. Unsafe mounted archery habits and lack of good horsemanship often result in dangerous situations. There is no reason for this to be perpetuated. The Canadian Federation of Mounted Archery is not against speed, but against the lack of equitation. The CFMA wants to make sure both horse and rider are in equal partnership, to promote a safe and healthy growth of the sport and art.

Mounted Archery Clubs and club officials have a duty of care towards participants and spectators in mounted archery activities where there is a reasonably foreseeable risk of harm or injury to participants and spectators as a result of their actions, to reduce this risk. Hazards, risks, and harm can never be completely eliminated, but they can be reduced. In exercising this duty of care, officials must take reasonable steps to reduce the likelihood of injury to participants and spectators as a result of the risks which are foreseeable.

This is the rationale which underpins any risk management program – in this case, the process of identifying risks involved in conducting mounted archery activities, and then adopting strategies and actions designed to reduce these risks wherever possible.

The intention of this manual is to provide guidance on how to set up and operate ground practice and mounted archery track ranges in risk-reduced, and, therefore, as safe as reasonably possible, manner. Some portions of the text have been adopted verbatim or with small modifications from the listed sources, while other text has been adapted for suitability to mounted archery, and additional guidance is given. The Canadian Federation of Mounted Archery is grateful to these sources of information. It is understood that each mounted archery facility has unique circumstances in set-up, layout, needs, restrictions, possibilities, and desires, etc., and, therefore, requires a site-specific approach to safety. This diversity must be taken into account when assessing hazards, evaluating risks, and implementing appropriate safety measures. It is our intention that this manual will assist clubs in running their mounted archery activities in as safe a manner as possible.

Section A: General Risk Management

Definitions of Hazard, Exposure, and Risk:

HAZARD is something that can cause harm (an inherent danger).

EXPOSURE is the likelihood of the hazard occurring.

RISK is the combination of hazard and exposure. Risk is the chance, high or low, that any hazard will become dangerous and actually cause harm. So, risk is the likelihood of harm based on both hazard and exposure. Risk is the possibility of a harm arising, while hazard refers to the inherent properties that make something able to cause harm and make it a risk.

RISK ASSESSMENT is the process of evaluating the likelihood of harm occurring from the combination of the inherent hazard and its likelihood of happening. Please see tables in appendix A.

Therefore, in order to make an activity safer, i.e. to reduce the risk of harm from occurring, it is essential to identify the hazard and the likelihood of it occurring, followed by measures to reduce the severity of the hazard and the likelihood of occurrence. Thereby, the risk of the activity to cause harm is reduced, and sometimes even eliminated.

Duty of Care

A Mounted Archery Club and its club officials have a duty of care to participants and spectators in mounted archery activities (classes, events, clinics, competitions, etc.). This means, where there is a reasonably foreseeable risk of harm or injury to participants and spectators as a result of their actions or inactions, reasonable efforts must be made to manage and reduce this risk.

Objectives

- To reduce the incidents of injury to participants, officials, spectators and other persons associated with mounted archery activities.
- To provide a fun, healthy and safe sporting environment for individuals to participate and enjoy the sport of mounted archery.
- To minimize potential club liability due to poorly managed mounted archery activities.

What are Risk Reduction and Risk Management?

Risk management is the process of systematically eliminating or minimizing the adverse impact of all activities, which may give rise to injurious or dangerous situations. This requires the development of a framework within which risk can be monitored and controlled. Risk management is a tool by which persons involved in sport can seek to meet their duty and thus avoid liability.

Risks, which can be covered by a risk management program, include:

- Legal risks – losses and costs arising from legal actions for breach of a common law or statutory duty of care;
- Physical risks – injuries to participants, officials and the public;
- Financial risks – increased insurance premiums, costs associated with injuries for business reasons, loss of financial stability and asset value, replacement costs and earning capacity and increased external administrative costs;
- Moral and ethical risks – loss of quality of participants’ experience and confidence, adverse publicity and damage to image and reputation.

This document has been developed to manage the physical risks of mounted archery club activities. As such, it does not address risk management considerations for other elements of archery club operations such as governance, administration, finance, insurance, planning, etc. This manual is not a “be-all-and-end-all” resource, which will make a club litigation proof or completely fail-safe, however if followed, it may serve as a useful defense to claims for breach of duty of care.

Which risks need to be managed?

It is important to recognize, that a club is not required (nor able to) to provide a completely risk free environment. By agreeing to participate in mounted archery activities, participants will be taken to have consented to those risks, which form an inevitable aspect of the activity. Clubs will not be required to take steps to counter risk where it would be unreasonable to expect a club to do so in the circumstances. Clubs will, however, be expected to adopt reasonable precautions against risk which may result in injuries or damages which are reasonably foreseeable.

Risks will vary from club to club depending upon the circumstances and the ways in which each club operates. It is up to the key people in the club (officials, instructors, coaches, safety officers, etc.) when using this resource to manage and mitigate the risks mentioned here, but also to think about other risks not identified in this document, and plan for their treatment accordingly.

Who should be involved in the risk management process?

It is important that all key people (from the committee to event officials and volunteers), are involved in each step of the risk management process. Key people such as instructors and coaches, and senior event officials have the training and knowledge that is required when risk questions regarding archery events and activities are asked. Other people within the organization may also have valuable contributions to make, and should be involved.

The Risk Management Process

Risk management entails the following steps:

1. Hazard and Exposure Identification
2. Hazard and Exposure Assessment
3. Hazard and Exposure Treatment (action plan = risk reduction)
4. Monitoring and Review
5. Communication

Step 1. Hazard and Exposure Identification

The first step in the risk management process is to do a “safety sweep” to identify what hazards and associated exposures exist (or may exist in the future) within the archery programs on the ground and when mounted. This is best done by creating a list or table where all hazards and exposures pertinent to the particular club are recorded. It is important that everyone who is regularly involved in the sport is participating in identifying risk areas. Officials, instructors, coaches, safety officers, and even participants should be consulted. There is no substitute for actual practical experience in working out why accidents occur, or what presents a potential problem.

There are a number of things that must be considered in identifying hazards and associated exposures, for example:

- The qualifications and experience level of the instructor/coach;
- The age of the archers;
- The training and experience level of the archers;
- The ability level of the archer;
- The training and experience level of the horses;
- The type of activities conducted (regular “simple” ground archery, different/unusual targets (Qabaq, moving and flying targets; specialized mounted archery training, ..)
- The physical layout of the site (ground archery range, mounted archery track, other areas);
- Injury history (including type and cause);
- How operational procedures are conducted, and whether there have been any previous problems.

Step 2. Hazard and Exposure/Risk Assessment

Having identified the hazards and exposures involved in the archery activities, they now need to be assessed in terms of their likelihood to occur and the seriousness of the consequences arising from their occurrence. This then leads to the priority of actions required to make the activity safer.

Each identified hazard and exposure must be rated. These ratings describe:

1. The likelihood of the hazard and/or exposure occurring (likelihood); and
2. The loss or damage impact if the exposure occurred (severity);
3. The priority, or degree of urgency required to address the hazard or risk.

In order to systematically assess the hazards and exposures in the first stage of the process, the risk rating scales (Likelihood of Exposure, Severity of Hazard, Risk Priority) set out tables 1 – 3 in Appendix A (Hazard and Risk Rating Scales) are applied. This will allow for rating the identified hazards and risks and then identify management priorities. At the end of this process, the club has a prioritized list of hazards and risks to guide in the next steps to take in order to reduce and mitigate them.

Step 3. Action Plan - Hazards and Risk Treatment

This stage is all about identifying and testing strategies to mitigate or manage the hazards and exposures that have been identified (Step 1) and subsequently evaluated (Step 2) as posing a real danger to participants. Ideally officials will work together to brainstorm a variety of treatment strategies and then consider each strategy in terms of its effectiveness and implications. This will necessarily involve some reality testing of risk treatment strategies as officials determine what reasonable steps they must take to reduce the impact of the risk arising.

If the club has assessed a high-risk activity, the club will need to carefully consider necessary policies, procedures, and strategies to treat the risk. These will include what is needed to reduce the risk, who has the responsibility, and what the time frame for the risk management is. These elements will comprise the action plan.

Step 4. Monitor and Review

It is very important that officials review the risk management plan at the end of the season, after a significant event, or competition. The risk management plan should be an organic (“evergreen”) document, which is regularly updated to take account of changes within the club.

The keeping of records, and the continued evaluation of the risk management plan in the light of such records is crucial. The risk management procedures should include documentation of any accidents, as well as information on the effectiveness of the plan. Statistics on continuing injuries or accidents should be used to determine whether there are specific activities that require either increased precautions, supervision, or elimination.

The risk management plan cannot remain static. Hazards and risk can change according to changes in the law, development of safe practices and techniques, and developing technology in the sport of archery and mounted archery. Changes in conditions and set-up within the club (number of participants/club members, teaching level, horses involved, and their training level, number and certification level of trained officials (safety officers, instructors, coaches, etc.) must also be taken into consideration.

Constant evaluation and updating must be done to take account of developing trends and the organisation’s own experience.

Step 5. Communication

It is essential that all club members and participants in club programs are aware of the risk management program and are consulted in its development, implementation, and evaluation. Membership of mounted archery clubs is constantly changing and as such, the clubs should ensure that new members are introduced to the risk management policy and obligations as part of their introduction into club life. Similarly, entrants in competitions and events who are not members of the club should also be aware of the club’s risk management procedures and any rules to which they must comply.

Section B: CFMA Safety Recommendations and Requirements

Mounted Archery Club Officials

The Canadian Federation of Mounted Archery requires that each recognized mounted archery club has certain CFMA-certified officials to ensure the safe running of activities in the club:

- Safety Officer (SO)
- Mounted Archery Instructor (MAI)
- Mounted Archery Coach (MAC)

Each of these officials has certain tasks, duties, and responsibilities, outlined below.

Safety Officer - SO

The Safety Officer (SO) is responsible for maintaining a safe and well-ordered shooting environment, for either ground or mounted archery.

“The prime duty of the Safety Officer is to help keep archers and their mounts safe!”

A Safety Officer (SO) can:

- complete a mental or written risk assessment (as required by a given situation)
- evaluate an archery range and mounted archery track for safety
- set up an archery range; including setting an appropriate perimeter with danger warnings
- supervise a ground archery training session (i.e., conduct the safety assessment, open and close the range, and give the appropriate range commands). However, the SO is not a teacher (instructor/coach) of archery or mounted archery, but can assist a CFMA-certified mounted archery instructor or coach
- on the mounted archery track, supervise a mounted archery practice session (i.e., conduct the safety assessment, open and close the track, and give the appropriate track commands
- the SO in Charge may remove archers and horse archers exhibiting unsafe behavior from the range. Examples of situations considered to be safety related include but are not limited to:
 - Failure to address safety issues relating to archery or riding equipment.
 - Failure to abide by the directions of the SO, instructor, or coach.
 - Horse’s behaviour is disruptive or posing a safety risk.
- assist in the inspection of archery and mounted archery equipment (See Appendix B - Advice on Inspecting Archery Equipment)
- advise on appropriate mounted archery etiquette, as necessary (See Appendix C – Mounted Archery Etiquette)

In a CFMA-affiliated club or school, shooting must not take place unless an SO is present. In a small and experienced group it is possible for the SO to participate, but a larger or less experienced group would require an SO who is not shooting, so that their full attention is on checking for safety issues. There may be more than one person present with the SO qualification; in this case, it should be understood who is acting as SO in Charge. If two or more SOs are present, they may share the role, each taking a turn as SO in Charge to allow the other to shoot.

Mounted Archery Instructor (MAI)

The Mounted Archery Instructor (MAI) is responsible for teaching ground archers, mounted archers, and horses the required skills and knowledge to safely start, learn, practice, and advance in mounted archery. In order to become a CFMA-certified MAI, the SO-certification is one of the necessary requirements.

Mounted Archery Coach (MAC)

The Mounted Archery Coach (MAC) is responsible for training horse archers and horses the required skills and knowledge to safely participate in mounted archery competitions. In order to become a CFMA-certified MAC, the SO- and MAI-certifications are two of the necessary requirements.

Guidance on the Layout of Archery Areas

Archery areas need to be set up with targets that have a safe backstop, and/or a safety area for stray arrows. They should be well marked and the access controlled so that spectators and nonparticipants cannot enter the range or come in contact with horses.

If spectators are allowed, there must be a well-marked area(s) and a lane for them to get to the viewing area safely. There needs to be a barrier that is clearly visible and physical so that spectators are separated from participants, competitors, and horses. A mounted archery track requires a return lane for the mounted archers to travel back safely to the start. Since horses are herd animals they can react to close proximity of one another, or to other distractions (spectators, score keepers, judges, and photographers). As such, it is important that, while the mounted archer is running the course, all personnel and animals maintain a safe distance (at least two meters) from the track.

Outdoor Facilities

A. Ground Training Archery Range Layout

The Ground Training Archery Range (GTAR) layout should follow as much as possible the essence of the safe layout requirements stipulated in the Archery Canada Safety Regulations Manual (the relevant text section is given below), but must also be adapted to allow meaningful and appropriate training for particular mounted archery requirements.

The ground training shooting area should be smooth/flat and free of unnecessary objects, but should also follow the requirements of a particular track in use at the facility. The layout of the mounted archery shooting range, i.e., the track, is determined by the specific requirements of the particular track in use. It must be free of unnecessary objects.

On the shooting line, each archer must be given appropriate lateral space to keep the training safe. For regular target practice, 90 cm lateral space is often sufficient, but may have to be enlarged if additional training aids (to practice for mounted archery conditions) are employed.

Archery Canada stipulates that “when the public has the right of access or the range is in a residential area, suitable barriers must be erected around the range to keep spectators back. These barriers will be at least 20 meters away from the ends of the target line set at 90 meters and may, if desired, reduce in a straight line to a minimum of 10 meters away from the ends of the shooting line. This will maintain a side margin of approximately 13 meters from the target line when the targets are moved forward to 30 meters. The barriers will be at least at 50 meters beyond the 90 meters target line. The safety distance of 50 meters may be reduced if an adequate backstop (e.g., efficient netting, a bank or similar device) is erected (not a Hedge or penetrable fence).”

CFMA has adopted these stipulations from Archery Canada and recommends the same safety zones.

In summary, the outdoor target range should have a safety zone around it where no person should be during shooting. The safety zone depth should be at least 10 m to the sides of the shooting line and 20 m to the side at the target line, and extend at least another 50 m behind the target line at 90 m. The safety zone to the sides should give sufficient room for side-drifting arrows under most circumstances. If the target line is moved, then the side safety zone depth should be adjusted accordingly (i.e., at 30 m it is approx. 13.3 m, at 50 m it is approx. 15.6 m, at 120 m it is approx. 23.3 m, and at 150 m it is approx. 26.7 m according to Archery Canada requirements). The minimum safety zone depth of 50 m behind the target line must be maintained, regardless of the distance to the target. In fact, depending on the type and height of target used, the safety zone depth may be increased in order to account for elevated arcing shots occurring when archers aim for higher and/or farther away targets.

When the ideal safety zone is not possible, it may be necessary to reduce the safety zones to the side and behind the archery range by introducing physical barriers. For these to be effective, they must be high enough, and arrows must not be able to pass through these barriers. The materials used must be capable of withstanding the elements and an arrow strike. These must be well maintained.

The backstop must be high enough to stop arrows that have missed the top of the butts at 90 meters, while considering the maximum range of the bows used in mounted archery. While these range requirements from Archery Canada provide a reasonably safe shooting environment for regular target archery, mounted archery-specific training may require or allow for modifications of the above safety distances, taking the sport-specific training regimen and equipment into account.

Considerations should also be given to any distractions caused to the archers by movement of people, etc. behind the butts.

A target range situated near a residential zone must be marked off by a warning tape 1m from the ground.

If there are roads or paths within the safety zone or range, they should be blocked off to traffic at both ends during shooting. A clearly labelled sign, indicating «Danger, archery zone, No traffic allowed» (or similar) must be placed at all public access paths and behind the targets.

There must be a safety zone of at least 3 m behind the shooting line. This safety zone may have to be increased when mounted archery specific training exercises or equipment is being used.

When appropriate for mounted archery ground training exercises, the shooting line should be marked clearly. The demarcation lines should then be visible. They should cross the shooting area's length and width, and outline the shooting lanes. As the mounted archery ground training is done at varying distances to the target(s), and often changes throughout a training session, the demarcation is best achieved by a rope or ribbon placed on the ground. Attention must be given that this does not become a trip hazard.

When setting up an outdoor shooting range or mounted archery track, it is suggested that targets be placed north north-west of the shooting line and the shooting line should be situated south-south east, in order for the archers to have the sun in the back or side, depending on the time of the day.

For long-distance shooting or clout, use a large, vacant, and isolated area.

When moving targets are used, (suspended or otherwise devised, rolling, thrown), a large enough backstop must be created to catch deflected arrows as much as possible. The size and location of the backstops are determined by the nature, size, and position of the moving target.

When rolling or throwing targets are used, ensure that the arc of shooting is well away from the person throwing (this is particularly relevant for the arc of the archer who is furthest away from the thrower and so may be tempted to shoot across the group rather than waiting for the target to reach them). Consider also where any arrows that miss the target will end up. This is less of a problem with rolling targets, although missing arrows can easily be lost in long grass or may skid over hard ground, ending up a long way away. The arc of arrows shot into the air can be 100m+ for normal fletchings and 50m for flufus, depending on the angle of elevation of the shot, the arrow's weight, the bow's strength, and whether the archer remembers to come to full draw. Ensure that it is safe to shoot into this area and that there is no potential for people or animals to enter your shooting area. Bear in mind that arrows

can be deflected if they hit the flying target or another arrow in mid-air. Ensure that there is a sufficiently wide safety zone to allow for this eventuality. Some people shoot sharp arrows at flying foam discs. Safety zones are even more important here. If doing this inside a building (e.g., riding arena, barn), be aware that arrows which miss the target and hit a wall may be damaged. Similarly, there is a risk of damage to the arrow when the disc/arrow land. Check arrows carefully before shooting them again, especially carbon arrows.

When using a raised shooting platform, e.g., for practicing downward Jarmaki shoots, the platform must be secured, as well as access to and from the platform. The raised platform must be enclosed with a guard rail. The guard rail must be at least 1.06m tall (42"; 3.5').

Qabaq Training – Ground training for the Qabaq shoot will most likely take place on the actual Qabaq competition track. Only blunt-tipped flufu arrows are to be used for the Qabaq target. Ground archers must be cognizant of the falling arrow. The arrow will come down faster than commonly expected, and can be deflected in any direction. Appropriate safety distances must be set up for spectators.

B - Mounted Archery Tracks and Ranges

It is required that all events, demonstrations, or trainings have a physical barrier between spectators and shooting/running lanes. Only individuals who are active participants are allowed in an area where they can come in contact with a horse or archery equipment.

The exact dimensions and layout of competition tracks are set out in the rules. In general, tracks should be 2-4 m wide. The boundaries of the track must be clearly delineated, usually by a rope barrier or raised earth. If a rope barrier is used, it should be suspended in a way that should not present a hazard to horse or rider. Any posts used for this purpose must not present a significant risk of injury to a horse or rider (e.g., if they fall on to them). It is recommended that the ropes have multiple break points at reasonable intervals (i.e., every post, or at least every second post) to allow the horse to go through it without getting entangled and pulling the barrier down and with him.

A mounted archery track requires a return lane for the mounted archers to travel back safely to the start. Since horses are herd animals, they can react to close proximity of one another or to other distractions (spectators, score keepers, judges and photographers). As such, it is important that, while the mounted archer is running the course, all personnel and animals maintain a safe distance (at least two meters) from the track.

If photographers, judges or score keepers need to be in the target area they must stay 15 meters from any target and not behind one.

Waiting Area

A mounted archery track or course, no matter where it is or how it is set up, should have a safe waiting area that is clear from spectators and safe from stray arrows.

The horse needs space to start at the beginning of the line and to run out at the end of the line. The horse needs space to either side if they should spook at any time.

There should be a place for the rider who is ready in the start position, and also an on-deck area for the next rider in line.

Indoor Facilities

A - Ground Training Archery Range Layout

The indoor Ground Training Archery Range (GTAR) layout should follow as much as possible the essence of the safe layout requirements stipulated in the Archery Canada Safety Regulations Manual, but must also be adapted to allow meaningful and appropriate training for particular mounted archery requirements.

The ground training shooting area should be smooth/flat and free of unnecessary objects. On the shooting line, each archer must be given appropriate lateral space to keep the particular training safe. For regular target practice, 90 cm lateral space is often sufficient, but may have to be enlarged if additional training aids (to practice for mounted archery conditions) are employed.

The wall behind the target(s) must be of a material that safely stops and catches the arrows (e.g., dense foam), or alternatively a backstop net should be hung behind the targets. To be effective, the backstop net must be hung according to the manufacturer's instructions (commonly: free-hanging, in a loose, undulating fashion), and must be at least 1m in front of the wall.

There must be a safety zone of at least 3 m behind the shooting line. This safety zone may have to be increased when mounted archery specific training exercises or equipment is being used.

When appropriate for mounted archery training exercises, the shooting line should be marked clearly. The demarcation lines should then be visible. They should cross the shooting area's length and width, and outline the shooting lanes.

Archery Canada stipulates that the height of the shooting area must be at least:

- 3m when shooting up to 35m
- 4m when shooting between 40 and 45m
- 5m when shooting between 50 and 55m
- 6m when shooting 60m and more

These height requirements may have to be increased when mounted archery specific training exercises or equipment is being used.

Practice should take place in a well-ventilated area.

To prevent unsafe access to the indoor shooting range, any doors or windows situated in front of or beside the shooting line, and behind the target line must be bolted shut. Non-lockable entrances situated in front or beside the shooting line, and behind the target line must be controlled during shooting. Also, a screen should be installed to protect anyone entering the range.

When using a raised shooting platform, e.g., for practicing downward Jarmaki shoots, the platform must be secured, as well as access to and from the platform. The raised platform must be enclosed with a guard rail. The guard rail must be at least 1.06m tall (42"; 3.5').

Using Indoor or Outdoor Riding Arenas:

When shooting in an arena it is important to be mindful of the position of the target(s) in regards to spectators or other animals. Appropriate safety zones must be delineated. Arena targets should be set low to the ground so that, from horseback, missed shots land in the sand. The targets used in arenas should be set up so that the center of the target is never higher than 1 meter off the ground. It may be required to clear a section of the arena so that spectators are not in line with the shooting direction.

When setting up targets for such a venue it is important to imagine where stray arrows may land, and to practice and make sure the location of the targets is safe when no one is present. Extra caution must be observed when practicing in a dome or tarp-type arena, as stray arrows can cause significant damage to the arena construction material, and may even penetrate and fly for a considerable distance outside the arena. When shooting in indoor arenas or venues where the spectator areas are not elevated, it may be necessary to require Flu Flu arrows. It is also possible to use net type targets that catch the arrow and in this instance blunted Flu Flu's are needed. Knock-down targets or loud gong type targets also work well in confined spaces and seeing targets fall or hearing the loud report of an arrow striking the target is very satisfying to both archers and witnesses. However, training is needed so that the horses are accustomed to the sound and movement in these events so the equines are not frightened.

Range Commands

One person must be identified as the Safety Officer "in Charge of the Range" during a shooting session. This person gives the range commands. It is important to acknowledge that range commands vary between regions, associations, and individual ranges. Therefore, when having new archers in a group, the SO in Charge must communicate to all new participants the exact words and their meaning used by the club. The following are examples of simple range commands commonly used:

- i) "To the Line"; given to prepare archers to assemble on the line to await the next command which will be to start shooting. Used by SO in Charge ONLY.
- ii) "Commence", "Commence Shooting", "Range Open", "Bows Up"; given after observation/inspection that the range is deemed safe to start shooting. Used by SO in Charge ONLY.
- iii) "Cease shooting", "Range Closed", "Bows Down", "Clear"; given upon completion of a shooting round, no more shooting is allowed, while archers retrieve arrows . Used by SO in Charge ONLY.
- iv) "Retrieve (or Collect) Arrows": given after shooting has stopped and after observation/inspection that range is safe to enter, arrows can be retrieved. The SO in Charge should look up and down the shooting line to confirm that everybody has finished shooting before giving this command. If necessary, a verbal check (e.g., "has everybody finished?") should be carried out. Used by SO in Charge ONLY. At times (especially with new, and/or young students), the SO in Charge should remind the archers that when moving to the targets to retrieve arrows, to first pick up any of the arrows lying short of the targets.

The following commands are used less regularly or during irregular/unsafe situations during training and competition:

- i) "STOP", "FAST", "HOLD": used during an unexpected (usually unsafe) situation to stop all shooting activity immediately (even if archer is about to loose arrow). This Call should be followed with a clarification, e.g., "Stop, person/animal/horse on the range", "Stop, rider down", "Stop, horse loose", etc. All riders must halt their horse, an active horse archer on the track must halt, then make a decision to stay or continue up the track at walk without shooting. All archers should remove arrows from the string. USED BY ANYONE WHO NOTICES AN UNSAFE SITUATION.
- ii) "Arrow on the Track"- If a rider drops an arrow (or bow, or other item) while on the track, ANYONE can (and should) shout "Arrow on the Track" and once it is safe, the arrow (or other item) can be retrieved. The next rider must not start until the arrow has been picked up.
- iii) "End of Shooting/Session" (or similar command); given to end the session. Used by SO in Charge ONLY. There should be no further shooting once this command has been given. All archers should participate in the closing and cleaning-up of the range and/or track (e.g., clearing away targets, equipment, horse manure, etc.).

NOTE A: While range commands vary widely, there is no room for confusion for what they mean. It is the SOs responsibility to ensure that all archers understand clearly the terminology prior to the start of any shooting activity/session.

NOTE B: While the command "STOP" is in wide use, some archers who have been trained in other archery disciplines (e.g., FITA/WAF [target] archery; bow hunting, Society for Creative Anachronism target and mounted archery) will have been taught the command "FAST" or "HOLD", respectively, and may use it instinctively instead of "STOP". Similarly, the command "Clear" is used with directly opposing meaning across Canada ["cease shooting" versus "range is safe to shoot"]. Therefore, when new club

members with prior archery experience from elsewhere join, the SO in Charge should explain the club's range commands.

If there is more than one detail (group of archers), the appropriate commands are:

"Detail one, Shoot", followed by "Detail two, Shoot" etc., then, "Range Closed" and "Retrieve/Collect Arrows" (or similar) once the last detail has finished shooting and range has been closed.

Equipment and Additional Considerations

Target Butts and Stands

Buttresses should prevent rebounds while stopping the arrow and allowing retrieval. Target stands may be made of wood and should stand securely (if moveable) or be dug securely into the ground.

Distance Markers

As the mounted archery ground training is done at varying distances to the target(s), and often changes throughout a training session, it is advised to place distance markers along the training range to facilitate the placement of the shooting line.

Bow Stands

Bow stands, tackle and other accessories must be kept behind the shooting line or outside the marked range area. When located near the mounted archery track, bow stands must stand securely or be anchored to the ground to avoid falling over and spooking a horse.

Flag

In competition, a small flag (wind indicator) should be placed on each target during outdoor tournaments. Such a flag is also recommended during training.

First Aid Kit

A First Aid kit for humans should be accessible near the ground archery training area, and a First Aid kit for humans and a First Aid kit for horses should be accessible near the mounted archery training area (see Appendix D – First Aid Kits for recommended contents).

Telephone and emergency phone numbers

A telephone must be accessible at all times in the training or competition area.

Spectator Area

Spectator areas must be clearly marked and at safe locations in relation to the ground practice area(s) and the mounted archery track(s).

Parking

A safe area should be provided for cars. Good signage, and safe passage ways for participants and spectators should be set up between the different areas. In cases where there will be visiting horses trailered to and from the location, a separate parking area should be set up for the horse trailers and tow vehicles, to allow for safe loading/unloading of the horses. Horses and spectators must be separated as much as possible to ensure the safety of both.

Signs

Signs indicating the locations and proximity of the archery ranges should be clearly visible.

Adverse Weather Conditions

During extreme heat, heavy rain, strong wind, hail, and lightning, all ground and mounted archery activities must be cancelled or postponed.

Inspection

The Canadian Federation of Mounted Archery strongly recommends, that at the beginning of a season and before holding an event or competition, at least two certified Safety Officers independently evaluate the site for hazards and safety set-up, and that any issues and/or short-comings are addressed appropriately.

STANDARDS FOR PARTICIPATION

Affiliation

New archers who are affiliated with a CFMA-recognized club automatically become a member of the Canadian Federation of Mounted Archery.

All active riding members must also be members of their respective provincial/territorial horse association.

Running a teaching or practice session

Supervision

A CFMA-certified Safety Officer (SO) must be present during shooting sessions. While an SO is not a teacher or instructor/coach, an SO is able to oversee practice and training sessions for safety purposes without a certified MAI/MAC present. At events where large numbers of archers are shooting, the SO in Charge should be easily recognizable.

The coach/instructor and/or SO in Charge shall not allow more archers on a shooting line or mounted archery track than can reasonably and safely be supervised. While every CFMA-certified MAI/MAC is by default also an SO, the presence of additional SOs is recommended during teaching sessions.

The recommended minimum ratio of certified mounted archery coach(es)/instructor(s) and additional Safety Officer(s) to number of archers participating during the shooting sessions (i.e., lessons and classes with MAI/MAC present; versus training and practice without teaching) is listed below: (this does not apply to clinics or competitions)

- i. In Mounted Archery Lessons:
 - a. One mounted archery instructor/coach and one SO for the first six (6) mounted archers (horse/rider pairs).
 - b. One additional SO for every three (3) additional mounted archers (horse/rider pairs).
 - c. It is highly recommended that if there are inexperienced horses, or several very young and/or very inexperienced archery students present, the number of SOs be increased.
 - d. For safety, teaching, and practice efficiency reasons, it is recommended to limit the number of mounted archers (horse/rider pairs) to nine (9) participants during a class.
- ii. In Mounted Archery Training:
 - a. One SO for the first six (6) mounted archers (horse/rider pairs).
 - b. One additional SO for every three (3) additional mounted archers (horse/rider pairs).
- iii. In Ground Archery Lessons:
 - a. One mounted archery instructor/coach and one SO for the first ten (10) ground archery students
 - b. One additional SO for every ten (10) additional ground archery students
 - c. It is recommended that if there are several very young and/or very inexperienced archery students present, the number of SOs be increased.
 - d. It is up to the discretion of the club and instructor/coach to reduce the ratio of SOs to ground archers, if the experience level of the participating archery students is high enough to allow for a safe environment with less or no SOs present. Note: Archery Canada suggests a ratio of one Instructor/coach for every ten beginner students or for every twenty experienced students. However, it must also be recognized that the

shooting style, conditions, and practice exercises for mounted archery are different, and inherently more risky, compared to Archery Canada target archery.

iv. In Ground Archery Training:

- a. One SO for the first ten (10) ground archers
- b. One additional SO for every ten (10) additional ground archers.
- c. It is recommended that if there are several very young and/or very inexperienced archers present, the number of SOs be increased.
- d. It is up to the discretion of the club and instructor/coach to reduce the ratio of SOs to ground archers, if the experience level of the participating archers is high enough to allow for a safe environment with less SOs present.

When preparing for shooting, the following information will be useful.

For Ground Archery Training:

Ground archers do not approach the shooting line until signalled to do so by the instructor/coach or SO in charge. Signalling can be done by voice (see Range Commands), a whistle, light, or flag system.

When there are several shooting lanes set up with different distances to the target, the shooting line should not be staggered but rather the target butts should be placed at the different required distances instead. All archers shoot from the same line, no archer may stand behind or in front of the others.

Diagonal shooting across lanes should not be done, unless it is under direct supervision of the instructor or coach. The angle of shooting should not be less than 60 degrees relative to the shooting line. The lateral safety areas may have to be widened depending on the circumstance, shooting position, and target distance.

For Mounted Archery Training

The mounted archer must be aware that the horse can spook and take off (bolt) at any time. If at any point the rider and horse are out of control, then an appropriate course of action is to hold the bow and/or arrows out to the side, held flat, and drop them or throw them slightly away from the horse. Avoid dropping the bow vertically onto its point (bow tip) which could allow it to fall flat or spring back towards the horse. Without the bow and arrows, the rider will then be able to take hold of both reins and regain control of the horse without the risk of knocking him with a bow or arrows and spooking him further.

When at risk of falling off the horse, do not hold on to the bow and/or arrows, drop them or throw them away as described above, as falling with them can lead to more injuries.

Mounted Archery Range Management

When teaching, competing, or training for Mounted Archery, it is important that the required number of SOs is present at the range, and the SO in Charge is appointed. The SO in Charge is responsible for making sure that each rider only starts their run when it is safe to do so. This is especially necessary when both right-handed and left-handed shooters are training together to keep them from starting runs at the same time.

The Whistle Method

The SO in Charge has several ways to signal the next rider when to start their run: verbally (see the Range Commands), with flags, lights, or by whistle. The Whistle Method is used in many competitions. With this method, it is best if the SO is on foot somewhere so that they can see both ends of the mounted track. It is possible to do so from horseback as well. However when the SO in Charge is riding with the rest of those training, they will need to be the first or the last rider in order that they can be in position to direct the rest. (Keep in mind each rider should know in which order they will take their runs).

Two Whistle Blasts: means to go to the waiting area

One Whistle Blast: means the rider up can start the run. The SO will make eye contact with the rider and point in their direction. A flag, bright baton, or even a flu flu arrow can be used to point at the rider who is to begin the run. If the SO is not pointing at the rider, they know that the signal is for another competitor, possibly coming from another direction. Riders should never start on the course without making eye contact with the SO.

Multiple Whistle Blasts: when four or more whistle blasts are sounded in rapid succession, the horse archer on the track must cease shooting immediately and bring their horse to a walk or stop.

All the riders should know their order, and be in position so as not hold up the rhythm, the training, or the event.

On some Mounted Archery courses, the archer is allowed to enter the track with an arrow nocked and ready to shoot. When ready and waiting to go, some internationally accepted positions are to have the arrow parallel to the leg and the tip pointed to the ground next to the ankle, to rest the bottom limb of the bow on the leg with the arrow pointing out 90 degrees from the horse, or to hold the bow in front of the chest with the arrow pointing straight up.

Do not leave an area with your horse while someone else is still mounting. In this situation, it is recommended to face your horse to the individual who is mounting, so that their mount does not feel the panic of being left behind.

Never trot or canter your horse up to, or by a group with horses waiting.

Archers' Equipment

Clothing

Clothing should reflect the essence of the sport. For safety reasons, beginner mounted archers should refrain from wearing embellishments (cloaks, flowing garments, jewelry, garb, etc.).

Ground archers must wear closed-toed footwear during archery sessions.

Where required by provincial/territorial law, while mounted, horse archers must wear the appropriate safety attire. It is strongly recommended that all horse archers wear ASTM-approved (or equivalent) riding helmets and riding-appropriate footwear (hard soled, enclosed footwear with a heel of no less than 1.5 centimetres) when mounted. It is recommended to replace the riding helmet after each fall where the helmet has hit the ground or a hard object, and within the manufacturer's recommended replacement interval.

It is recommended that all participants sign waivers prior to participation, including an equipment release waiver, if they choose not to wear a recommended piece of safety equipment (unless required by law).

All archers should not wear jewelry, or anything else that might get tangled in, or impede the movement of the bow or arrow.

Long hair should be tied up.

Armguards are recommended for beginner archers.

Arrows

Only arrows with field or target tips can be used, hunting tips must never be used on ground archery range(s) or mounted archery track(s).

Arrows should be held in the bow hand or in a safe quiver. Safe quivers are those attached to the back, waist, thigh, or saddle. Quivers attached to arms or lower legs are not permitted.

Arrows must be inspected for flaws or damage before each shoot. The archer must not use arrows that are cracked or damaged, or too short for the archer's draw length. For mounted archery, it is recommended that the arrow is at least 1" to 1.5" longer than the regular draw length to avoid accidental overdraw while mounted.

Arrows should be of proper spine for the bow being used.

When shooting overhead such as in the Qabaq, blunted flu flu arrows are required.

Most injuries in archery happen not during shooting but while retrieving arrows, therefore, when retrieving arrows at the butt (target), only one archer at a time should remove arrows from the buttress. The other archers stand to the side of the buttress waiting their turn. Pulling the arrow should be done with one hand on the target, and gripping the arrow shaft as close as possible to the point of entry with the other hand. The use of an arrow puller is recommended. Attention must be paid to avoid stabbing another archer with the nock-end of the pulled arrow. Therefore, when pulling a hard-to-remove arrow, one should look behind to make sure no one is close, should a stubbornly-lodged shaft come suddenly free.

When retrieving arrows, archers should never run towards the targets, as arrows shot short of the target can become a trip and impalement hazards. Archers should first pick up arrows on the ground, before proceeding to remove arrows from the targets.

While 30 to 40 pound bows typically are used in horseback archery, the targets need to be adequate to stop arrows from higher-poundage bows (80 -100 pounds).

There should not be more than four (4) archers using the same target butt at the same time.

The archer may only draw the bow on the shooting line in the direction of the target butts, whether with or without an arrow on the string.

Any arrows that fall in front of the shooting line must only be retrieved once range is closed.

Any arrows that are dropped in the mounted archery track must only be retrieved once the rider has finished the run and has left the track.

Bows

Bows must be inspected for flaws or damage before each shoot. The archer must not use a bow that is twisted, cracked, or damaged.

A Bow used in mounted archery must meet certain requirements:

- 1) It must be shot off the hand, therefore, it must have no rest, shelf, or cut-out for the arrow to sit on or pass through.
- 2) It must have no sights, weights, stabilisers, clickers or other aids.
- 3) It must not be a compound bow or a crossbow.

Personal Safety and Responsibilities of Archers

During practice sessions or competitions, archers should:

- Ø Advise a club member if their present health condition could adversely affect their ability to shoot.
- Ø Advise a club member if they are using medication that could affect the safety of others.
- Ø Advise a club-member if they have consumed, or are under the influence of alcohol or drugs.

When there is open practice for more than one archer, there must be an agreement on shooting and collection of arrows. One SO should be designated to be in charge.

List of safety considerations for a horse archer:

Each horse archer has the ultimate responsibility for the proper care, inspection, and safe use of their own equipment (bow, arrows, quiver, tack), and for knowing and following the CFMA archery rules. If an archer is unsure of the safety of the equipment, they should request the assistance of an SO in inspecting the equipment prior to engaging in any equestrian/ground archery activities. Advice on how to inspect the mounted archery equipment is provided in Appendix B. The SO assisting in the inspection will make a reasonable attempt to locate any unsafe conditions and inform the horse archer of what is found and how to correct it. However, inspection by the SO may not find all equipment faults and is conducted as a service to all the horse archers. It does not remove the archers' primary responsibility for the safe condition of their own equipment. Any equipment observed by an SO to be unsafe must not be used until it is made safe and is re-inspected by an SO.

In order to participate in mounted archery activities, each horse archer must accept responsibility for the following:

- a) Taking reasonable and prudent steps to ensure the well-being of any horses over which they have control.
- b) Determining if a mount is suitable for their intended activities and riding ability. They should consult the owner of, or person familiar with, any equine that they are not already familiar with prior to mounting/driving.
- c) Determining if tack or equipment is suitable for their intended activities and riding ability.
- d) Limiting their participation to those activities in which they can maintain control of their equine.
- e) Exercising discretion when engaging in equestrian activities, recognizing a need to avoid situations that create dangerous conditions. This includes maintaining an appropriate safety zone around the equine.
- f) Following the instructions of any SO and instructor/coach.

- An archer shall not knowingly use unsafe equipment.
- When arriving late, ask the SO in Charge for permission before stepping up to the shooting line.
- Only point the bow and arrow in a safe direction.
- Only nock an arrow when it is safe to shoot. No arrows should be nocked when anyone is in front of the shooting line.
- No archer should discharge a bow when anyone is downrange.
- Be sure of your target and what is in front of it, immediately behind it, and beyond it.
- Never shoot over a ridge.
- Only shoot when you have a safe range or shooting area, and a safe backstop or background.
- When "STOP!" is called, lower your bow, remove your arrow and follow the instructions.
- When finished shooting, step back from the line if it does not interfere with other archers.
- Avoid dry-firing a bow (releasing the bowstring without a nocked arrow). It may cause serious damage to the bow and can injure the archer.
- No archer should shoot while under the influence of drugs or alcohol.
- In the case of overshoots of the targets, place an arrow (or flag, if provided) upright in the target (whenever possible) before going behind the targets to search for the overshoot arrows. By corollary, if an arrow is standing upright in the target, it may be assumed that someone is behind the targets and the range is not clear. In some archery clubs, it is custom to place a flag in front of the target, or lean a bow against the target, instead of the arrow. Always investigate and verify before clearing the shooting line to commence shooting.
- Never reach in front of the line to retrieve an arrow while the range is open for shooting.
- Do not shoot an arrow straight up in the air, it will come straight back down to you!.(refer to Qabaq).
- When necessary, wear an armguard and finger protection while shooting bows and arrows.
- Handle arrows carefully. Protect yourself and the arrow points by storing and transporting them in a quiver.
- Do not use defective equipment (bows, arrows, tack):
 - Prior to each use, check bow for cracks, dents, breaks, separating laminates, peeling glass, and defects in mechanical parts. Ensure bow limbs are not twisted.
 - Check the bowstring regularly, and replace it if it becomes worn or frayed. Frequent use of bowstring wax greatly extends the life of a bowstring.
 - Check brace height and position of nock point.
 - Check arrows for cracks, dents, or bends; discard any that have permanent flaws.
- Check all equestrian tack prior to use. Ensure equipment is properly fitted, and girth or cinch is secure.
- Store your bows in bow cases—preferably hard cases—and store recurves and longbows unstrung.
- Store arrows in quivers and accessories in a sturdy box or padded bag.
- Keep your emotions under control, and think about safety first.
- It is the rider's responsibility to be able to handle the bow safely while on the horse – the rider must ensure the horse is happy with the noise and action of a bow prior to the archery activity.
- It is the rider's responsibility to ensure that the horse is sound and fit to participate.
- The arrow must be kept aimed in a safe direction when nocked.
- The archer should check for signs of wear on the string (for example separation of the string serving), and replace it immediately – do not wait for it to become completely non-operational.
- The archer should finish each shooting session by un-stringing their bow.

- The archer should never dry fire their bow (pulling and releasing the string without an arrow seated), as this can cause injury to both the archer and the bow.
- The archer should never approach the shooting line if they have not inspected their bow/arrows/string for any damage.
- The archer must ensure no one is standing immediately behind them when pulling out an arrow from the target.

Also see Appendix C for some good points on proper mounted archery etiquette.

Report

Should an accident or injury occur during a shooting session, the victim should file an incident report and send it to the club secretary within 48 hours after the incident occurred.

Should an accident or injury occur during an organised event or clinic sanctioned by the Canadian Federation of Mounted Archery, the person in charge must file an incident report to the CFMA secretary, using the accident report form supplied with the CFMA insurance papers, within 48 hours after the incident occurred.

Emergency Action Plan

All CFMA-affiliated clubs should have an emergency action plan. It should be posted where every club member can find it. Clubs should appoint a “charge person” and/or “call person” (see below). It is strongly recommended that the club officials (i.e., site owner, instructor, coach, SOs, and other relevant persons) hold regular safety meetings. A Safety Meeting should be held at the beginning of the archery/mounted archery season, and before any major event (clinic, competition, etc.).

Purpose of Safety Meeting:

- Establish the club’s Emergency Action Plan. Take the site location and layout into account.
- Confirm required qualifications and certifications (instructor, coach, SO, First Aid, etc.) are up-to-date.
- Clarify emergency phone numbers (911; EMT [ambulance]/Fire/Police, veterinary, farrier). Get overview of availability of mobile phones.
- Create Emergency Response Cards:
 - Wallet sized, laminated
 - Relevant phone numbers

- Message to be read over phone to emergency dispatcher, including location of site, access directions, other relevant information
- Evaluate proximity of emergency services and eventual response times.
- Create / update a site map.
- Conduct a Safety Sweep and a Hazard and Risk Assessment of the site. See Appendix E (Safety Sweep Considerations) for suggestions.
- Identify location(s) of First Aid Kit(s) for humans and horses. Depending on the layout and size of the site, having several First Aid Kits is advisable.
- Verify content of First Aid Kit(s) for humans and horses. See Appendix D for recommended content.
- Clarify actions and steps in case of an emergency/accident. This should include clarifying ambulance and/or veterinary access routes to various potential accident locations on the site/property, especially from the parking lot to the archery training range(s) and mounted archery track(s). Plan for a “worst case scenario”. Assess the access of the archery training range(s) and the mounted archery track(s). Recognize that an ambulance vehicle has limited off-road driving capability, especially under adverse conditions (snow, rain, muddy terrain, etc.). Plan for alternatives. Consider helicopter emergency option, potential landing site.
- Establish procedure for horse handling and care in emergency situations. What should happen to non-involved horse-rider pairs? Where to go, and what to do? Who will look after this?

Purpose of Charge Person and Call Person: Get professional care to the injured member ASAP.

Charge Person Responsibilities: (should have First Aid training and/or specific training in the care of injuries)

- 1) Clear the risk of further harm to the injured person by securing the area and shelter the injured person from the elements
- 2) Designate who is in charge of the other participants
- 3) Protect yourself (wear gloves if you are in contact with body fluids such as blood)
- 4) Assess ABCs (checks that airway is clear, breathing is present, a pulse is present, and there is no major bleeding)
- 5) Wait by the injured person until Emergency Measures unit arrives and the injured person is transported
- 6) Fill in an accident report form

Call Person Responsibilities:

- 1) Call for emergency help
- 2) Provide all necessary information to dispatch (e.g. facility location, nature of injury, what, if any, first aid has been done)
- 3) Clear any traffic from the entrance/access road before ambulance arrives

- 4) Wait by the driveway entrance to the facility to direct the ambulance when it arrives.
Depending on the layout and size of the site, additional helpers may be needed in directing the ambulance.
- 5) Call the emergency contact person listed on the injured person's medical profile

Appendix A – Risk Rating Scales

Having identified the hazards and exposures involved in archery activities, they need to be assessed in terms of their likelihood to occur and the seriousness of the consequences arising from their occurrences, thereby determining the priority of action(s) required to make the activity safer.

These assessments describe:

1. The likelihood of the hazard occurring (likelihood of exposure);
2. The loss or damage impact if the hazard occurred (severity of hazard);
3. The risk rating (priority, or degree of urgency required to address the hazard and exposure).

Table 1: Likelihood of Exposure Scale

The likelihood is related to the potential for a risk to occur over an annual evaluation cycle.

The higher the number, the more likely to occur.

Rating	Likelihood of Exposure: The potential for occurrence in a year
5	ALMOST CERTAIN: will occur, could occur several times a year
4	LIKELY: High probability, likely to occur once per year
3	POSSIBLE: Reasonable likelihood that it may occur over a five year period
2	UNLIKELY: Plausible, could occur over a five year to ten year period
1	RARE: Very unlikely but not impossible, unlikely over a ten year period

Severity

Table 2 Severity of Hazard Scale

The higher the number, the more severe the impact.

Rating	Severity of Hazard (Potential Impact)
5	CATASTROPHIC: Death, system loss, devastating property damage, or environmental damage
4	MAJOR / CRITICAL: Severe injury, or occupational illness, major system or environmental damage
3	MODERATE: lesser injury, or occupational illness, major system or environmental damage
2	MINOR / MARGINAL: Minor injury, occupational injury, or system/environmental damage
1	NEGLIGABLE: Very small impact, rectified by normal processes

Having assessed each hazard and exposure, the risks can now be prioritised in order to assist in the decision making process of what action is warranted to manage the risks (where possible).

Risk Prioritization Scale

The risk priority scale determines the nature of the risk and the action required. They are indicators to assist in the decision making of what action is warranted for the risk.

Table 3: Risk Priority Scale

Exposure	Hazard				
	5	4	3	2	1
5	Extreme 10	Extreme 9	Major 8	Major 7	Medium 6
4	Extreme 9	Major 8	Major 7	Medium 6	Medium 5
3	Major 8	Major 7	Medium 6	Medium 5	Minor 4
2	Major 7	Medium 6	Medium 5	Minor 4	Minor 3
1	Medium 6	Medium 5	Minor 4	Minor 3	Minor 1

Key:

Points	KEY
9 to 10	Unacceptable: extreme risks that are likely to arise and have potentially serious consequences requiring urgent attention
7 to 8	Undesirable: major risks that are likely to arise and have potentially serious consequences requiring urgent attention or investigation
5 to 6	Unsatisfactory: medium risks that are likely to arise or have serious consequences requiring attention
3 to 4	Acceptable with Management Review: minor risks and low consequences that may be managed by routine procedures
1 to 2	Acceptable without Management Review: but action must be taken to further control the identified hazards

Once a risk priority has been determined the committee can consider the level of risk treatment and action required for each risk.

PLEASE NOTE:

This resource is a guide. There will always be circumstances where risks, which are particular to your club's archery activities, may not have been addressed. Space has been provided for you to identify and address these issues.

CHECK LIST

- Identify and report
- Assess priority
- Treatment
- Who is responsible
- Time frame
- Report when complete
- Monitor and review

Appendix B - Advice on Inspecting Archery Equipment

Note: It is not the responsibility of the SO to check each individual privately-owned piece of equipment for each (horse) archer, rather the personal equipment is the sole responsibility of the (horse) archer. The SO can assist in the safety check, but the inspection of the equipment used by the archer is the duty of the individual archer.

The SO should, however, check the club-owned equipment prior to use.

The following is guidance on how to check the equipment and what to look for during an inspection.

Inspecting Bows:

- Prior to each use, check bow for cracks, dents, breaks, separating laminates, peeling fiberglass, and defects visually and by feel (glide the fingers over the bow). Do it first on the unstrung bow, and then repeat when bow is strung.
- Check the brace height of the bow. Potential causes for a change in the brace height are
 - A worn string, ready to break (if brace height is lower than normal)
 - String twisted too much (if brace height is higher than normal)
 - String untwisted (if brace height is lower than normal)
 - One limb became weak (internal material fatigue, imminent break), and tiller of the bow is out of balance.
- Ensure that the string is sitting properly over the nocks and lies evenly along the siyahs, and in the string bridges or string grooves (if the bow has them). After checking this visually, half-draw the bow and gently return it to brace.
- Ensure bow limbs are not twisted. Hold the bow at one limb, with one tip pointing away from you. Look down the string and bow, verifying that the string is in line with the middle of the bow (Note, however: some bows purposely have the string offset from the centre line [e.g. Japanese Yumi]).
- Slowly pull the bow (without arrow) and have someone (i.e., the SO) observe the bending of the limbs while standing beside and then behind you. Any uneven bend can be an indication that one limb has weakened and is about to break. The view from behind can reveal limb twist during draw, resulting in string not properly seating back into the nock.
- Check the bowstring regularly, and replace it if it becomes worn or frayed. Check for broken individual strands in the string. Inspect the middle serving for excessive wear at the arrow nock

point and the two ear servings for excessive wear where they rub against the limb nock and siyah. Inspect all the serving ends for unravelling. Frequent use of bowstring wax greatly extends the life of a bowstring.

- If the bow has string bridges, ensure they are firmly attached and not broken.
- Check the proper position of arrow nock point.

Inspecting Arrows:

Arrows must be inspected for flaws or damage before each shoot. The archer must not use arrows that are cracked or damaged, or too short for the archer's draw length. For mounted archery, it is recommended that the arrow is at least 1" to 1.5" (better is 2" to 2.5") longer than the regular draw length to avoid accidental overdraw while mounted.

Arrow checks are, if anything, more important than checks of the bow and string. Carbon and wood arrows in particular must be carefully checked for cracks. If a damaged carbon or wood arrow is shot then the force applied by the string can cause it to splinter. The splinters will go into the bow hand, which is extremely painful and will require hospital treatment. If in doubt, do not shoot.

- Verify that the arrows are not "under-spined" for the draw weight of the bow used.
- Visually check every arrow before putting it into your quiver or similar. Look down the length of the shaft for any sign of cracking. This check can also be done with the fingers but care must be taken not to injure the fingers on any splinters etc. Even the smallest carbon splinter is extremely painful.
- Carbon shafts should be held with one hand at each end and gently flexed and twisted, while rotating the shaft in your fingers. Listening closely. There should be no sound of cracking.
- Wooden arrows should also be checked for cracks and splinters. This can be done with the fingers as significant splinters are usually very obvious. Wooden arrows should be flexed gently between the hands as described for carbon, to check that there are no cracks or splinters.
- Similarly, bamboo arrows should also be checked for cracks and splinters. Bamboo arrows should be flexed gently between the hands as described for carbon.
- Likewise, fiberglass arrows, though not too common anymore, can also crack and splay. Testing is done the same way as for carbon arrows.
- Aluminium shafts do not splinter and any cracks (which are rare) will be easily detected by running a hand along the length of the arrow.

Aluminium shafts should be checked for straightness, as bending is more common than breaking. This can be done simply by looking along the length of the shaft. Arrows with a mild bend are not especially dangerous but neither are they accurate!

- Wooden arrows rarely bend on impact but they can become warped, especially if improperly stored, so checking them for straightness is also recommended.

- When using a new set of wooden arrows, it is prudent to check that they have been made properly. The self-nock must be perpendicular to the growth rings of the wood. Examine each shaft to ensure that not too many growth rings exit the shaft, and that they exit the shaft to the front and top of the arrow – check the “flames” on the shaft. If a wood arrow breaks (shears) when shot, you want the broken back section to be deflected upwards (and not down into your bow hand), hence the “flame” should point up and forward.

- Check that the point is properly attached and that the shaft immediately behind it is undamaged. If arrows hit hard surfaces, it is usually the area behind the point that is stressed the most. Often, the impact drives the point into the shaft (carbon, aluminium, and fiberglass arrows), or the shaft breaks just behind the tip (wood and bamboo arrows).

- If the arrow is fitted with a screw-in point then check that it is fully screwed in.

- Check that the nock is properly attached and that it is still properly aligned with the feathers. Check also that the nock is undamaged, as the nock arms can become bent or damaged. If you splay your nock arms then check that the amount of splay is still correct and that it is symmetrical.

- Check that the feathers are still firmly fixed to the shaft and that any whipping, binding, or taping is secure. Check that the quill is not damaged and that the web is not becoming ragged or is otherwise damaged. The last is not a safety issue but arrows fletched with damaged webs will not fly as well and should be re-fletched as soon as possible.

Targets:

Inspect the targets for excessive wear, and replace when necessary. Ensure that the targets are placed solidly on (or in) the ground and are stable, and at the correct angle to the shooting line or track. Solid parts (stand, legs, frame) of the target should be padded to avoid damage to the arrows. Ensure that the area beside and behind the targets is properly marked and cordoned off (where necessary), and that the backstops are in good order (archery netting hung properly).

Inspecting Horse Tack:

- All riding equipment, tack etc. must be properly checked before riding.

Check that:

- Rider wears a properly fitting riding helmet (and the chin strap is done up)
- The billet straps are not worn and prone to break
- Stirrup leathers are not worn and prone to break
- Girth/cinch is properly tightened
- Reins are secured for riding hands-free
- Be sure that the horse has a free head carriage when the reins are released.
- Quiver (when used) is firmly attached and all straps are in good order
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Appendix C - Mounted Archery Etiquette

Considerate archers:

- Obey all safety rules and instructions from the Safety Officer (SO) and Mounted Archery Instructor/Coach (MAI/MAC).
 - Help to set up the range at the start of the shoot and put equipment away at the end.
 - Keep any spare equipment neatly placed away from the shooting line where it is not in the way.
 - Join any round in which they intend to shoot promptly.
 - Do not step onto or off the shooting line while others nearby are shooting. They wait until their movement will not distract others.
 - Always draw the bow pointed toward the target, with or without arrows.
 - In a practice session, if others are finishing shooting by the time they are ready to start, offer to let the others pull their arrows before they start.
 - Are quiet while others are shooting. In particular, considerate archers do not exclaim loudly at a good or bad shot, either their own or somebody else's.
 - While still being friendly, respect the fact that some people like to try to stay "in the zone" and prefer not to be distracted.
 - Do not touch anybody else's equipment without asking.
 - Immediately offer to pay if they break somebody else's equipment through their own negligence.
-
- At the target, considerate archers:
 - Pick up any arrows from the ground in front of the target as they reach them.
 - In a scored round, do not go behind the target to collect missed arrows until their arrows have been scored.
 - Do not touch any arrows until all arrows have been scored. In unscored shooting, they do not touch any arrows until all archers have had the chance to look at the target and see where their arrows hit.
 - Stand well back when others are pulling arrows.
 - Check that nobody is standing behind them before pulling arrows.
 - Pull arrows by grasping them with the hand touching the target and pulling smoothly straight backwards, without bending the arrow shafts.
 - If they break somebody's arrow by pulling carelessly, they immediately offer to pay for it.
 - Help to find lost arrows once scoring is complete.
 - Do not dawdle on the way to or from the target, or while finding arrows.

This guidance on archery etiquette should be extended to the horseback archery track where appropriate.

- Considerate horse archers help to clean manure from track and surrounding areas.

At a competition, considerate horseback archers:

- Help to set up the track and targets, then clear away after the event.
- Help the organisers with any judging or marshalling jobs that need filling.

At the end of any session, whether training or competition, considerate horseback archers thank the organisers, referees, instructors, coaches, and SOs.

Note:

Participants who are not pulling and scoring should look for missed arrows behind the targets. Once the scoring is completed, the archers should stop looking for lost arrows and quickly get to the waiting area to begin shooting. Lost arrows can be looked for in depth after the days' training is done or an event is over.

It is polite etiquette to clear the target area and track quickly and safely so that the archers can start their runs in a timely manner. This means that if tack needs to be adjusted or arrows need to be arranged that should be done in the waiting area, so that shooting may resume as soon as possible. It is bad form to make everyone wait to make adjustments that can be done out of the shooting area.

Appendix D – First Aid Kits for Humans and Horses

First Aid kits must be readily available near the ground archery range and mounted archery track. It should be stored in a dry place, and any missing, used up, or outdated contents must be replaced regularly.

Be cognizant of Provincial/Territorial requirements for the type of recommended first aid kits.

FIRST AID KITS for Humans

The recommended contents of a First Aid Kit are as follows:

1. First Aid manual (approved by a recognized first-aid organisation)
2. Mouth-mouth barriers
3. Scissors
4. Tweezers
5. 12 safety pins (assorted sizes)
6. Tourniquet
7. Flashlight
8. Flush Syringe
9. A sterile towel
10. Hand sanitizer
11. Soap
12. Disposable gloves
13. Sterile Saline Solution (0.9%)
14. Adhesive tape (e.g., HypaFix)
15. Sterile Swabs (alcohol or chlorhexidine wipes)
16. 3-4 rolls of adhesive stretch bandage [Vet Wrap]
17. 10-15 antiseptic pads, wrapped separately
18. the following dressings (or equivalent sizes):
 - a) 25 sterile adhesive dressings [Band-Aids; Curad] (25 mm X 75 mm) wrapped separately
 - b) 25 compresses of sterile gauze (101.6 mm X 101.6 mm) wrapped separately
 - c) 4 rolls of sterile gauze bandage (50 mm X 9 m) wrapped separately
 - d) 4 rolls of sterile gauze bandage (101.6 mm X 9 m) wrapped separately
 - e) triangular bandages;
 - f) sterile compress dressings (e.g., Tegaderm)

FIRST AID KIT for Horses

The recommended contents of a First Aid Kit are as follows:

- 1 roll of cotton wool (30 cm wide, 375 g in weight)
- 1 roll of cotton gauze or crepe bandage; (7.5 cm wide)
- 1 or 2 rolls of self-adhesive bandaging tape (10 cm wide)
- 1 or 2 multipurpose dressings
- 1 adhesive stretch bandage (7.5 cm wide)
- antiseptic spray
- antiseptic wash (Betadine or other antiseptic preparation may be used)
- some type of antiseptic soothing preparation
- jar of petroleum jelly (100 g)
- 1 pair of 15 cm curved, blunt-edged dressing scissors
- fly repellent
- pack of salt (can be mixed in water to form a saline cleaning solution for wounds)
- Epsom salts
- a bottle of sterile water (in case there is no water supply available)
- extra-thick leg bandages
- newborn infant diapers (to use as bandages)
- equine thermometer, or if not available, a human thermometer (with a string attached to prevent loss in the rectum)
- 1 small plastic bowl
- 1 used, clean worming syringe (for pressure-irrigating wounds)
- instant cool pack or some ice or cold gel packs kept in the freezer
- a halter and lead rope
- a twitch (in case restraint is needed)
- phone numbers for veterinarians
- a waterproof box for storage of all the items.

Appendix E – Safety Sweep Considerations

The following are examples and suggestions that should be considered, examined, and observed when doing a Risk Assessment or Safety Sweep:

How well are the horses trained for mounted archery?

Does the club have sufficient archery equipment for new students (loaner bows of different draw weights and sizes, sufficient arrows, arm guards, quivers, etc.). Is equipment well maintained and safe?

Has instructor/coach explained to the SOs what is expected of them during a class? When and where can they assist?

Have the respective roles and expectations of the SOs, MAI, MAC been explained by the club officials? Who is doing what, where, and when? Who is in charge of what? Etc.

How are the ranges set up? When traffic cones are used: are they tall enough (e.g. 24" or higher), are they soft enough and not brittle, so that upon impact they do not shatter and harm a horse or rider.

When PVC poles are used as barrier: are they thick enough (e.g., 1-1 1/2" diameter) and long enough (i.e., 6'; to be 2' buried) with a T-section on top.

Other options: Step-in poles with tennis ball on top

All barriers must have a sufficiently blunt (T or ball) top for protection of impalement. All ropes between 8'-12' set poles/cones should have a breakaway point between each pole/cone.

Targets stands: should be a wood or metal structure wrapped with rubber or anything that will stop arrows without breaking them.

Target Back-Drop: Archery netting or carpets are options. Is it high and wide enough to catch stray arrows, even when shot erratically? This is especially important on mounted archery tracks with long-distant shots.

Barrier rope/ribbon: what size, horse can see it?

It is a good idea to mark the first and last 15m of the track with a differently coloured rope.

Bow- and Arrow Stands near the mounted archery track: are they secured so that the wind does not blow them over? If designed to be accessed while mounted, could the horse or tack get entangled/caught?

Archery Range: is it clear of debris, bushes, logs, rocks, etc. Is the grass short enough to allow easy spotting of arrows?

How experienced are the archers / horse archers in the club? In the different training sessions? E.g., beginner class versus advanced class

What are the ages of the participating horse archers? How many youth?

What is the training level of the horses in the mounted archery class?

With respect to the ground archery range, what bows are being used? What is the draw weight of the bows – how far can the arrows fly? A 25# beginner fiberglass bow has a much shorter range than a 40# laminate bow, therefore, what safety zone is required behind the target line?

Is the club archery equipment accessible by unauthorized people?

Who is looking after the club archery equipment? Who is repairing it?

Who is looking after the First Aid Kits?

Who is assessing the soundness of the horses?

How far apart are the archery ranges? (ground – horse track) Are more First Aid Kits required?

How are spectators handled during classes and regular practice, versus during special events? Expected number of spectators?

Traffic flow and parking, during regular activity versus special event?

To be expanded upon by everyone ...!