Southern Minnesota Sportsman's Club

November 2022 Newsletter

There is an opening on the SMSC board of directors. If you are interested in helping out your club, please contact us for more information.

I'd Like More Information About SMSC Board

SMSC received a request from a Minnesota student pursuing her PhD in conservation science. She is conducting a study about the scavengers that feast on your hunting remains. If you would like more information about participating in this study, see the following flier.

Offal Wildlife Watching – "*Who eats your guts?*"

Camera-trap monitoring of hunter provided carrion

Who?	Deer hunters, or those that participate in deer camps, or know hunters and have access to deer gut piles immediately after the deer is harvested and field dressed.
What?	The purpose of this research is to better understand what and when species use deer gut piles provided by hunters across all of Minnesota. Minnesota offers a unique opportunity to look at this across four different biomes and a large metro area, different scavenger assemblages, and different human land use types. All of these likely affect what and when scavenger species visit gut piles.
When?	Minnesota white-tailed archery, firearms, and Muzzleloader deer hunting seasons. **Please refer to MN DNR hunting regulations to determine the legal hunting dates for your tag.**
Where?	Throughout Minnesota. We need hunters from every biome (Laurentian Mixed Forest, Prairie Parkland, Tallgrass Aspen Parkland, and Eastern Broadleaf Forest) and the metro area.
How?	You will be able to enjoy hunting as you normally would with the added opportunity to contribute valuable data to wildlife research. All you need to do is: 1. Clean your deer as you normally would 2. Set up your game camera (or borrow one) to record what uses the gut pile 3. Send us your camera location OR retrieve your camera and send us the images
Contact	**For more information, instructions, or to participate, contact Ellen Candler: belle130@umn.edu OR sign up here** →

PROJECT APPLESEED™

More Project Appleseed Events Coming To Rochester!

In 2023 we have two Appleseed marksmanship clinics scheduled at the SMSC range. They are both 2 day events with a lot of range time, instruction, training, and history. If you haven't been to

one of these, you owe it to yourself to try it out. The events are posted on the club calendar and on Project Appleseed's site (click the logo to see the schedule). Dates for the SMSC events are April 22, 2023 - April 23, 2023 and September 16, 2023 - September 17, 2023.

Important Safety Reminders

- We wholeheartedly encourage you to bring guests to the range. Remember though that when you do, you are responsible for for their safety and their actions.
- Except at the falling plate range, your are limited to a firing rate of no more than 3 shots in 5 seconds.

Elements Of Range Safety That Aren't Discussed As Frequently As They Should Be.

We all know that there are inherent risks involved in shooting sports and for that matter any activity. But as with anything, the more knowledge and awareness you have, the better you are at predicting, preventing and handling any problems that may arise. With that in mind, this article is not intended to scare you, but educate you so that you are better equipped to safely enjoy the shooting sports that we all enjoy at the Southern Minnesota Sportsman's Club.

Eye Protection

You will notice as you enter our ranges that there are notices stating that you must have eye and ear protection before you enter the range. As a convenience to our members, we have a box just inside the gate with safety glasses that can be borrowed. Please return them if you take some.

The eye protection part is pretty obvious. Any time you are in an area where there is a potential for flying objects, you should wear eye protection. For example: when you shoot, or are just at the range, mowing the lawn, and especially when you use a string trimmer. I wear prescription safety glasses all the time but based on my own bad experiences, I now wear goggles when I 'wack weeds'. I also make sure nobody, especially my dogs, are around when I perform this task. When you are shooting you want to be sure that anyone in the vicinity is wearing eye protection. Even something as 'harmless' as ejected casings can find their way to your face. When you are shooting a gun you have what should be a controlled explosion going off inches from your face. Unlike heroes in the movies, you cannot outrun an explosion. I have personally experienced an uncontrolled event that could have been much worse. I purchased and installed a trigger and sear upgrade for my target pistol from a well known and reputable company. I fired a shot and the sear malfunctioned and my semi-auto .22 pistol briefly and dangerously became a full auto…sort of. The second shot fired with the cartridge mostly in battery. The third one was almost completely out of battery. Brass fragments flew from the ejection port and on the other side of the receiver, they had enough force to break the 'loaded chamber' indicator. This was on an indoor range with a barrier between lanes, the brass fragments bounced off the barrier and hit me, some of them bouncing off my safety glasses. These things can and do happen and you cannot predict when so you must be prepared for it any time you are at a firing range.

Ear Protection

The hearing protection may not seem so obvious because hearing loss is cumulative. The more you are exposed to loud sounds, the more damage is done. By the time people notice a

difference, it is too late to do much about it. Consider how much hearing protection you really need. I frequently 'double up' wearing earplugs and earmuffs together. The firing range isn't a place to hold a conversation so unless someone is yelling 'cease fire', I really don't care if I miss someone's comments while I'm shooting. For those cases where you might want to carry on a conversation or hear what is going on around you, there are electronic headphones that will amplify ambient sound but cut off at a certain decibel level so that you can both hear and have protection.

The following gets a bit technical, you might want to skip ahead if you aren't interested in the science of sound measurement. Sound levels are rated in decibels (dB) which is like many things in nature a logarithmic scale rather than linear. Each 3dB increase is a doubling of the sound level and a 10dB increase is 10 times louder and a 20dB increase is 100 times louder. Some example sound levels: a normal conversation volume is about 60dB and an unsuppressed .22 caliber Ruger 10/22 firing CCI standard velocity rounds puts out a sound level of 140dB. 140dB is also the accepted 'threshold of pain' for sound levels. At the end of this article are some links to sources that rate the sound level of various firearms.

Hearing protection devices such as earplugs and muffs rate their effectiveness using a standard known as Noise Reduction Rating (NRR). The way to calculate the effective sound level you are exposed to is not quite as simple as subtracting the NRR level from the sound level. In fact this can be rather complicated, see the link **Methods for Estimating the Adequacy of Hearing Protector Attenuation** if you want to get into the math. **Tactical Ear Safety** provides the following simplified general method:
For example, if you are on a shooting range with a decibel level of 156 (12 gauge shotgun), and you are only wearing ear protection rated NRR 33, this does not simply decrease what you hear to 126 decibels (156 – 33 = 126).
To calculate this correctly, you need to:

1. Locate your NRR number (in this case = 33)
2. Subtract seven (33 – 7 = 26)
3. Divide by two (26/2 = 13)
4. Going back to the example: (156 – 13 (new NRR) = 143)

From this example, it is clear that an NRR level of 33 would not be adequate, you would need an NRR level of at least 40 to bring the effective sound level below the 140dB threshold.

There are many great sources and types of hearing protection available today and you can also 'double up' by wearing muffs and earplugs at the same time.

There are other factors that come into play as well, if you are shooting in an open field, the sound will disperse in all directions without reflection (sound engineers call it reverberation). But sound will reflect off of any solid surface it encounters so shooting in an enclosed range will increase the effect of the sound levels you experience. If you have a smartphone, there are several decent sound level measurement apps available so that you can accurately measure what the actual sound level of your environment is. I recently had the opportunity to test the 'dB Meter Pro' app on my iPhone against a professional (and very expensive) sound level meter and it stacked up very well (to the chagrin of the owner of the expensive meter).

Hearing loss, like losing an eye, is forever. Once you lose it you cannot get it back. But hearing aids can improve the hearing you have left. To get more mileage out of my subscription cost, rather than shilling for anyone, I will share that Consumer Reports just rated Costco as the best place to get hearing aids. As of October 17, 2022 the Over The Counter hearing aids act went into effect allowing consumers to get hearing aids without an exam, prescription, or fitting. But I encourage you to keep the hearing you have, hearing protection is far cheaper than hearing aids.

Lead Exposure

Lead exposure is one of the less obvious hazards. It is more or less invisible, and the effects are somewhat cumulative. Lead is an element that has no useful purpose in the human body. High levels of lead in the body can lead to anemia, weakness, kidney and brain damage. Its ill effects pose a much greater risk to children than adults as well. It has been proven to lead to developmental impairment. It is flushed from the body over time but frequent exposures to lead can result in serious problems.

Direct lead contact can come from direct contact with uncoated or unjacketed bullets. This is a hazard for reloaders like myself and measures can be taken including using coated or jacketed rounds, wearing disposable gloves, good ventilation and wearing an N100 mask. Shooting ranges are an area where a lot of lead will accumulate. The main source for this is the firing of lead bullets. When a lead bullet is fired, about 1% of its mass is burned into a fine powder or 'smoke' as it is fired from the barrel of a gun. This powder is so fine that you aren't likely to see it, it can float wherever the breeze takes it and it settles everywhere. Smelting or melting lead (the process of melting it for uses like casting bullets) also creates a lot of airborne lead smoke and gas. It should never be done indoors nor anywhere near open windows. Lead dust can be inhaled and also absorbed through your pores. Keep in mind that this dust is likely on anything that you touch in a gun range.

Exposure to lead is one of the hazards that unlike hearing and vision risks, you can bring it home and unwittingly share it with others. If your clothing is contaminated with lead and it is washed with other's clothing, it is actually possible for that lead to be transferred to the other clothes in the wash. No washing machine is going to remove all of the contaminants on your clothes so some of it could stay in that clothing. There are special laundry detergents that are specifically made to remove lead. D-Lead is a popular brand that makes many items in this category.

A 'best practice' after a day at the range is to remove that clothing and wash it separately, shower and wash your hair. The following in-depth article ran in the Seattle Times: **The Seattle Times "Loaded With Lead" 5 part series** and it explains how an area shooting team tackled this issue.

One of the great things on the market now are cleansers specifically made to attract and remove lead. These work by using a negatively charged solvent which attracts the positively charged lead oxide particles. They have been tested by NIOSH and shown to be 98% effective at removing lead from surfaces. Normal soap and water cannot come close to this. These products are available in many forms including liquid soaps (which we have in our clubhouse restrooms), foams, gels, and wipes. D-Lead, D-Wipes, LeadOff and Lead B Gone are some of the popular brands. You can get the wipes in individual use foil packets that you can carry right in your range bag.

When shooting, especially indoors, a particulate filter mask is always a good idea. These prevent the accidental inhalation of small particulates like the lead dust created when shooting. N100 masks are rated to provide 99.97% filtration efficiency for dust such as lead. These masks are readily available from companies such as 3M at a low cost. The SMSC Bullseye League has them available for sale on-site.

References

National Gun Trust, **Relative Sound Pressure Levels in Decibels (dB) of Firearms**

E.A.R **Gunfire Noise Level Reference Chart**

Ear Plug Store **How Loud are Different Guns?**

OSHA **"Methods for Estimating the Adequacy of Hearing Protector Attenuation"**

The Seattle Times "Loaded With Lead" 5 part series

CDC, NIOS, OSHA “Reducing Exposure to Lead and Noise at Outdoor Firing Ranges”