



# NORTHERN VIRGINIA GUN CLUB

Affiliated with National Rifle Association of America

Newsletter for May, 2005 - Volume 46, No 7

## **Notes from the President:**

At the April club meeting, the membership voted to authorize the new budget as proposed for the coming fiscal year 1 July 2005 to 30 June 2006.

There was a very good turnout for the April work party. There is much to be done in preparation for the Boy Scouts Memorial Day weekend and upcoming club functions and matches, along with the continued construction of the new tractor/storage garage. I would like to remind members that many volunteers are needed to participate in helping out on the firing line for both Saturday and Sunday (both morning and afternoon sessions) of Memorial Day weekend to ensure the proper handling and instructions of firearms. Members can receive a full workday credit for each half-day session. This is a good way to get your work credits in.

Many thanks to all who contribute their volunteer efforts month after month and without naming individuals specifically, they know who they are. I would like to remind those members who may have forgotten to put in their required workdays for the first year of their membership. Failure to register the required minimum workdays, could lead to not receiving a membership renewal notice. I would also like to remind everyone that our organization depends on volunteers to step forward in-order to function for the benefit of all. Our club has been growing, but the number of volunteers necessary to operate has been lean. Without more members coming forward to volunteer on a continuous basis, the present group of volunteers will become burnt-out with the over burdensome tasks and services necessary to operate the facility. The result will be reduced services available along with diminished conditions of the ranges. There are no magical elves in the forest that come out at night to accomplish the work and members putting in the bare minimum work requirements for membership status does not keep the club and facility operating properly. In the end, both the organization and all members suffer. Therefore, I ask the majority of the membership to take a few moments to think about what you can do help your club and maintain its quality of services. The membership owes many thanks to both the current and previous core group of folks who are responsible for the quality of services that have been provided for your enjoyment. I hope we can continue with that tradition and quality in the future, but without your help, it may not happen. So, I'm making this plea asking that more members step forward to help volunteer. Thank you for your consideration.

Jerry Arel has turned over the Membership Secretary duties to Darryl Breitenstein. Jerry had to relinquish the position due to moving out of the area. A couple of members did come forward interested in the position, but were not available to make meetings. I thank those members for volunteering and will keep them in mind for other situations and projects. Therefore, the EC is still searching for a volunteer to either take over the duties as the Membership Secretary or as Treasurer. An important criteria for either position is the ability to attend both the monthly EC meetings and the regular club membership meetings.

The club is looking for a new Hi-Power Chairman. If anyone is interested, please contact me.

The club is also in need of someone to take over the duties of Club Promotional Items. Mary Ann Patterson has had to resign from the duties for personal health reasons. I hope she is able to return to enjoying the club activities as swiftly as possible.

The club has a new official website site at: [northernvirginiagunclub.org](http://northernvirginiagunclub.org). Anthony Gimmellie is the webmaster of the newly created website. Please visit and register at your convenience.

Gene Hodgson is in charge of tractor garage project. We have received the building permit and Gene has begun the construction phase. If anyone is interested in helping with this project, please contact Gene at (540) 663-3816 or e-mail at [ehodgson@verizon.com](mailto:ehodgson@verizon.com).

The EC is currently looking for a volunteer to coordinate and begin to make arrangements for next year's annual club dinner. Please contact an EC member if you are interested.

The archery range has 9 stations in working condition and will soon have a 10<sup>th</sup> fully operational.

As always, I would like to stress the importance of safety by all members and their guests while on the facility property.

John LoBuglio  
President

### **Club Logo Promotional Items:**

Club logo promotional items will be on sale at the monthly meeting. There are Polo shirts, T-shirts and hats with the new club logo. Polo shirts (with pockets) are \$27; T-shirts (with pockets) are \$15; and hats are \$9. Orders for special sizes and items on a future order will be taken.

John LoBuglio  
President

### **Work Day Efforts:**

In addition to work day a lot of work is going on with the tractor shed and Gene would like more help. Also there has been work done on the food plots, but John could still use some help. We would like at least 2, but possibly 3 picnic tables for the pavilion. (Talk to Mark Varney since he just built one for the skeet shelter.) So there are lots of opportunities for work credits besides the third Saturday of the month.

Rifle/pistol range:

I'd like for folks with an interest to meet me here so we can come up with a plan to make this easier to use. Also we need to make some target backers. Some of the frames need repair (already)

We will also move NVGC sign closer to the road.

We need members to bring post hole diggers, mattocks & axes(for any roots) and cordless drills. Also, weedwhackers and polesaws to trim brush and branches. If someone had stencil materials, it would be nice to add the wording "Main Entrance" to the sign when we move it (but we could always do that at a later date if no one has any).

Archery range:

The archery range work will consist of putting in 10 bow holder posts behind the shooting positions at each station. Rebuilding station #6 which has all materials necessary in place, and refurbishing station #2 with a new pallet and bale cover which are broken.

Joe Primerano  
Executive Officer

### **Benchrest News:**

We had a very good turnout for the April match. Our little cub events are attracting some skillful shooters and are lot of fun. We are currently building two more shooting benches and need to modify the 50 yd. target frames to accommodate a few more entries. Hopefully, a total of 12 shooting positions will be available by the May match. (May 21<sup>st</sup>) at 1:00 PM after the club meeting.

Hope to see everyone in May. As a note, there are quite a few shooters that want to join us.. Don't be shy, come on out and see what's going on at your club... Match results are at <http://www.splitstudios.com/matchresults.html>

Perry Fridley  
Benchrest Chairman..

### **Shotgun News:**

ATA Big 50 Program. Great news just came in from ATA! To promote trapshooting nation wide, ATA has instituted their new big 50 program. They waive the ATA daily fee for registered targets on Tuesday, Wednesday, and Thursday, and allow non ATA shooters to shoot with the ATA shooters. Shooters can register 50 16 yd singles, 50 handicap, and 50 pairs of doubles for free. VTA still wants \$2.50 a day, so you can shoot registered trap any Tuesday, Wednesday, or Thursday for \$4/50 plus \$2.50/day for VTA. ATA shooters will be there each day if the weather permits. It takes three ATA shooters for the scores to count. You can join the ATA on the range. If the weather is questionable, call Jon Yagla at 540-653-7748, Rich Toothman at 540-644-6306.

Sammy Huffstickler and Phil Bushong posted a pair of nice 25 straights on the skeet field. Sammy, a junior shooter from Stafford, whipped a bunch of seasoned competitors, winning a nice combination compass-watch-keychain in informal competition. Dr. Bushong, a new member, is getting back into a shotgun practice and competition routine, and provides carpentry experience at the Saturday work sessions. Rich Toothman just ran 100 straight doubles at practice. Bob King ran 25 skeet targets with a 28 gauge. If you want to learn to shoot come on out. If you want to be a competitor, we will give you a work out.

Shotgun Club Championships and Outing. There will be a shotgun outing and matches for the club championships on Memorial Day starting at noon. There will be nice prizes for each champ in trap and skeet, a NSSA Club Champion patch, and lots of good shooting. There will be a junior championship match for the "Bumbry's Boy" traveling trophy.

Regular Practice. The regular shotgun practice is now Wednesdays at 4 pm. This will continue through October. There will be plenty of shooting on Sundays, but no promise as to the gate being open, key issue, and fields operational.

Jon Yagla  
Shotgun Chairman

### **Stock Registrar's Notice:**

After two complete billing cycles we have received stock purchase checks from all but a very few members who are now presumed to be dropping out. I thought I had most of the shares ready for distribution at the last club meeting, but Gene detected some errors, so we held them back. We will have them at the May meeting, and mail out any that aren't picked up. If you want to purchase additional shares, please do so now, so they can be added to your tally in time for the facility elections.

Jon Yagla  
NVSF Registrar

### **May Membership Report:**

There are 2 prospective members:

Mike Arthur sponsored by Phil Bushong and Gary Smoller –no sponsor.

If anyone has any issues with any of this prospective member please contact the membership chairman or any club officer with your concerns.

Join me in welcoming the newest Club members: Clifton A. Byrum, Roy Van Horn, Michael Thompson, Thomas Hudson, Ray Burke, Richard Boyce, Melvin Amos, William Boland.

Darryl Breitenstein  
Acting Membership Secretary

### **Clay Delay System:**

For those that have bought into the Clay Delay system, I have upgraded the system to the wireless version. This will save setup and take down time, and also means you won't be dragging a cord around. I have found that the system works fine on the straight voice mode, and no extra delay is needed.

For those that have not bought into the system, the Clay Delay allows one to shoot a round of Skeet with no puller. It is useful if no one else is available when you want to shoot a round, or if you want to work on a specific station. The kit is easy to use and I've not seen where it interferes with normal mount and swing. The control box clips to your belt, and you must press either the high, both, or low house button before every shot. After you press the button, the system is armed for about seven seconds. Say "PULL" and the bird(s) will launch. The only thing out of the ordinary is that you may have to say "puulll" or "birrd" (stretching it out a bit) since the unit has a filter that passes over short sounds like the closing of the shotgun action. There are adjustments for the length of delay before the bird launches so the system can be set to react much like a person was pulling. You can also set the control box for instantaneous voice activation, and activation with a set delay after a button push if you don't want the voice mode. There are connection plugs for both Skeet Fields One and Two, and for the Trap field. (It is a bit simpler to set up for Trap instead of the full voice system the club provides.) The kit is stored in a locked box in the high house of Skeet Field One, and you can buy into the use of this kit for \$40. See Bob King to get a key.

### 2005 NVGC Calendar

14 May	ATA Trap Match	1000-
21 May	9:00am / 12 noon	Work Party/Club meeting / Smallbore Benchrest Match (IR50 - .22 rimfire)
22 May	9:00am – 4:00pm	Cowboy Action Shooting – Match (Register 9-10am)
27-30 May	Fri pm -Mon 1pm	Boy Scout Troop 875 (Jim Morgan)
4 June	ATA Trap Match	1000-
4 -5 June	ATA Trap Match	9:00 am
10-12 June	All Weekend	Boy Scout Troup 77 (Joe Primerano)
18 June	9:00am /12 noon	Work Party/Club meeting / Annual Club picnic after meeting
25 June	8:30am – 12 noon	Smallbore Benchrest Match (IR50 - .22 rimfire)
25, 26 June	9:00	Skeet
26 June	9:00am – 4:00pm	Cowboy Action Shooting – Match (Register 9-10am)
16 July	9:00am / 12 noon	Work Party/Club meeting
23 July	8:30am – 12 noon	Smallbore Benchrest Match (IR50 - .22 rimfire)
24 July	9:00am – 4:00pm	Cowboy Action Shooting – Match (Register 9-10am)
20 August	9:00am / 12 noon	Work Party/Club meeting
27 August	8:30am – 12 noon	Smallbore Benchrest Match (IR50 - .22 rimfire)
28 August	9:00am – 4:00pm	Cowboy Action Shooting – Match (Register 9-10am)
17 September	9:00am / 12 noon	Work Party/Club meeting
17 September	After NVGC mtg	NVSF Annual Stockholders Meeting
24 September	All day	NVGC OPEN HOUSE (Nat'l Hunting & Fishing Day)
24 September	8:30am – 12 noon	Smallbore Benchrest Match (IR50 - .22 rimfire) *TBD*
25 September	9:00am – 4:00pm	Cowboy Action Shooting – Match (Register 9-10am)
2 October	12:00- 4:00 pm	Caledon Black Powder Qualification
15 October	9:00am / 12 noon	Work Party/Club meeting
22 October	8:30am – 12 noon	Smallbore Benchrest Match (IR50 - .22 rimfire)
23 October	9:00am – 4:00pm	Cowboy Action Shooting – Match (Register 9-10am)
19 November	TBD	Club meeting (TBD)
27 November	10:00am-4:00pm	Cowboy Action Shooting – Match (Register 9-10am)
17 December	TBD	Club meeting (TBD)

Notes:

- 1) All events are held at the Club unless specifically stated otherwise.



# NORTHERN VIRGINIA GUN CLUB

Affiliated with the NRA, ATA, NSSA, SASS, and VSSA

**NVGC June Invitational NSSA Skeet Match – June 25-26, 2005**

**12 Gauge Championship (Saturday 25<sup>th</sup>)**

**Flight Times: 10:00, 11:30, 1:00**

**20 Gauge Championship (Saturday 25<sup>th</sup>/Sunday 26<sup>th</sup>)**

Flight Times: 2:30, 4:00, 10:00 (Sunday)

**28 Gauge, .410 Bore Championships (Sunday 26<sup>th</sup>)**

**Flight Times: 11:30, 1:30, 3:00**

**100 targets in each gun. \$10 Class Options Each Gun**

*20 Gauge, 28 Gauge, and .410 Bore Championship Flights may be advanced if competitor turnout does not require all 12 Gauge Flights.*

**High Over All Big Jackpot (\$5)**

Entry fees are \$18 for the first gun, \$15 for additional guns

*Free Authentic New Orleans Red Beans & Rice lunch for contestants*

**Option Awards:** Gun Champ gets \$1 per shooter & class first money.

Cash payout of remaining money to class, for 1 to 5 in class is  
100% to class champ, 6 or more in class 60/40 split.

Advance reservations will be accepted via e-mail to [The\\_Kings@netscape.com](mailto:The_Kings@netscape.com) or US Mail to NVGC,  
11272 Dixie Dr, King George, VA 22485

This is our third match of our second year sponsoring Skeet matches. In trying to control costs, we may need volunteers to help! We will start on time. The club has two fields with new and very reliable Beomat traps. The fields are lighted. There is no clubhouse, but there is a large picnic shelter with electrical outlets and picnic tables. There are shooter pavilions for shooters and spectators behind each range. Camper hookups may be available.

## Officers and Committee Chairmen:

NVGC President	John LoBuglio	<a href="mailto:John.LoBuglio@navy.mil">John.LoBuglio@navy.mil</a>	540-644-9999
NVGC VP	Tim Neel	<a href="mailto:tneel1999@netzero.net">tneel1999@netzero.net</a>	540-775-5203
NVGC Executive Officer	Joe Primerano	<a href="mailto:joesprim@yahoo.com">joesprim@yahoo.com</a>	540-775-2308
NVGC Treasurer	Darryl Breitenstein	<a href="mailto:Darryl.Breitenstein@ieee.org">Darryl.Breitenstein@ieee.org</a>	540-775-0210
NVGC Corresponding Sec'y	Joseph Comfort	<a href="mailto:superposed@aol.com">superposed@aol.com</a>	540-840-3687
NVGC Membership Sec'y	Darryl Breitenstein	<a href="mailto:Darryl.Breitenstein@ieee.org">Darryl.Breitenstein@ieee.org</a>	540-775-0210
NVGC Chief RSO	Bob King	<a href="mailto:The_Kings@netscape.com">The_Kings@netscape.com</a>	540-775-5651
Archery Chairman	John LoBuglio	<a href="mailto:John.LoBuglio@navy.mil">John.LoBuglio@navy.mil</a>	540-644-9999
Benchrest Chairman	Perry Fridley	<a href="mailto:pfridley@hotmail.com">pfridley@hotmail.com</a>	540-775-4472
Cowboy Action Shooting	Slip Hammer Spiv	<a href="mailto:spivak@worldskyline.com">spivak@worldskyline.com</a>	540-775-4561
HiPower Chairman	VACANT		
Hunting Chairman	John Klochak	<a href="mailto:johnnyklo@hotmail.com">johnnyklo@hotmail.com</a>	540-891-1070
Pistol Chairman	Tim Spivak	<a href="mailto:tspivak@nswc.navy.mil">tspivak@nswc.navy.mil</a>	540-775-4561
Shotgun Chairman	Jon Yagla	<a href="mailto:Yaglajj@nswc.navy.mil">Yaglajj@nswc.navy.mil</a>	540-775-7029
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Club Supply Officer	Ed Budzynski	<a href="mailto:Ed-Budzynski@msn.com">Ed-Budzynski@msn.com</a>	
Club Promotional Items	VACANT		
NVSF President	Tom Ciarula	<a href="mailto:THOMAS.A.CIARULA@saic.com">THOMAS.A.CIARULA@saic.com</a>	703-250-0947
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NVSF Secretary	Jim Riedinger	<a href="mailto:rifleshtr@cox.net">rifleshtr@cox.net</a>	703-830-3705
NVSF Treasurer	Gene Hodgson	<a href="mailto:ehodgso@verizon.com">ehodgso@verizon.com</a>	540-663-3816
King George Sheriff	Clarence 'Moose' Dobson		540-775-2049

Email List: [NVGC-subscribe@yahoogroups.com](mailto:NVGC-subscribe@yahoogroups.com) Web Page: [www.nvgc.org](http://www.nvgc.org)

### Lead Poisoning

The purpose of this article is not to suggest curtailing shooting or reloading activities in any way. Rather, it is to make shooters and instructors aware of the possibility of lead poisoning and how to protect yourself from toxic lead contamination.

#### A Firearms Safety Hazard

The U.S. Environmental Protection Agency (EPA) classifies lead as a heavy metal with no beneficial biological use in the body. When a person inhales or ingests lead, it is absorbed into the bloodstream. Once in the body it becomes very difficult to remove. Continual exposure results in the accumulation of lead in the body, and measurable amounts of lead indicate cumulative exposure over a lifetime.

The EPA has determined that lead poses a serious health hazard to everyone. Unfortunately, individuals working with and around firearms often overlook the harmful effects of lead. Therefore, firearms range personnel must take precautions to control all unnecessary exposure to this toxic element. For firearms range personnel, knowing the hazards of lead is a primary responsibility. Taking the necessary precautions to minimize exposure is a duty of all firearms instructors.

#### Effects of Lead on the Body

Approximately 6 percent of all lead ingested or inhaled is deposited in the blood or soft body tissues, such as the kidneys, brain, or other vital organs. The remaining 94 percent is deposited in the bone. Because the body mistakes lead for calcium, it presumes that, once deposited, the lead needs to be stored. However, the body does break down lead so that it can be removed. The time required for this process is measured by the term "half-life", which means the amount of time the body needs to excrete one-half of that lead. The half-life of lead is approximately 20 years. This means one-half of the lead dosage absorbed by the body through only one exposure and deposited in the bone would still be present after 20 years.

#### Health Concern

For decades, the presence of lead in the environment has been widespread, beginning with smelting factories and continuing with the manufacture of glazed pottery, batteries, and lead gasoline. It has only recently been acknowledged as a serious threat to public health that warrants government control.

In 1971, the EPA began enforcing the Lead Based Paint Poisoning Prevention Act, which restricts the amount of lead used in paints. Seven years later, the agency set the National Ambient Air Quality Standards, which serves as the primary mechanism to reduce lead in gasoline. However, even with these standards and controls, the residue of lead in food, water, and dirt can elevate the lead level in a person's blood.

Firearms and exposure to lead, typically the exposure to lead on the firing line occurs as soon as the shooter pulls the trigger and the hammer falls. This action causes the primer of the cartridge to explode, in the chamber, which then ignites the main powder charge. At this point, a breathable cloud of lead particles is expelled into the air, with lead dust spraying the shooter's hands.

Lead particles also shear off as the bullet travels through the barrel. When the bullet leaves the barrel, a second cloud of contaminants, in the form of the muzzle blast, blasts into the air. Then, as the bullet strikes the impact area, another contaminated cloud rises.

When shooters inhale these clouds of contaminants, lead particles go directly into their lungs and are quickly absorbed into the bloodstream. The blood then transfers the lead to soft body tissue and bone. Heat from smoking, sweating, or physical activity accelerates this process.

Lead can also settle on the skin and hair, and in turn, can be absorbed through the pores of the skin. If lead particles reach the mouth, they can be ingested into the digestive system.

Exposure increases at clean-up time. Handling empty casings can result in lead being transferred to the skin. The weapon cleaning process also removes much of the remaining lead in the barrel and transfers it to the cleaner's hands. Oils and solvents used to clean and lubricate weapons cause the natural oils in the skin to evaporate, leaving dry skin and open pores through which the lead can pass.

### **Symptoms of Lead Poisoning**

The numerous symptoms of lead poisoning mimic various diseases, often making diagnosis difficult. Most commonly, individuals experience abdominal pain, fatigue, nausea, subtle mood changes, headaches, constipation, irritability, and depression. Muscle pain, muscle weakness, weight loss, impotence, convulsions, anemia, and renal failure may occur with increased lead levels in the body.

### **Testing for Lead**

Testing for lead can be performed in several ways. The blood lead level (BLL) test detects recent exposure to lead but does not provide information regarding long term or past exposure. The BLL measures the quantity of lead in micrograms per deciliter of blood, written as ug/100 dl, that is micrograms of lead per 100 deciliters of blood.

The Occupational Safety and Health Administration (OSHA) Standards states that the median blood levels for adults should be about 15 ug/100 dL. For reproductive health, the blood level should stay below 30-ug/100 dL. OSHA recommends removal from the work place of any employee whose BLL measures 40 ug/100 dL or higher.

The zinc protoporphyrin (ZPP) test can be performed in conjunction with the BLL to determine longer exposure. Lead interferes with the absorption of iron into the blood, which is needed to transport oxygen, thereby allowing zinc to replace iron. The ZPP measures the amount of zinc in the blood, which remains elevated longer than the BLL. The normal range for the ZPP is 0-100 dl. An elevated ZPP indicates concentration in the bone marrow.

The only effective test used for bone lead levels is the disodium edentate (EDTA) chelating agent test. EDTA, a solution that is administered intravenously, bonds with the lead in bone, and clears it from body compartments so that it is excreted through the urine. EDTA both tests and treats an individual; however, medical personnel use it only in extreme cases of lead poisoning because of the potentially harmful side effects.

### **Special Risks**

In males, high levels of lead can decrease the sex drive and cause sterility. Lead can also alter the structure of sperm cells, thereby potentially causing birth defects.

Pregnant women are vulnerable to rapid absorption of lead, along with calcium, from the blood into the bone. This mobilization occurs due to hormonal changes caused by pregnancy. In pregnant women, lead passes unimpeded through the placenta to the fetus, potentially causing miscarriages of the fetus and birth defects.

Children are more vulnerable to lead toxicity than adults are. Children exposed to lead may manifest into slow learning, mental drifts, slight retardation in development, hypertension, and behavioral problems. Excessive blood levels in children can seriously and irreversibly damage a child's brain and nervous system. Because the symptoms mirror those of various childhood diseases, many doctors do not test for lead.

### **Precautions on the Range**

Precautions can be taken both on and off the range to protect shooters, instructors, and their families from lead poisoning. Administrative controls and good hygiene are two necessary tools. In addition, all shooters and instructors should practice the following dos and don'ts of range safety.

### **Do Not Smoke on the Range**

Smoking any type of tobacco products on the range should be prohibited to prevent acceleration of inhaled lead into the blood stream and ingestion of lead transferred from hands to the cigarette, cigar, etc.

### **Do Not Eat on the Range**

Lead dust on hands and face can be ingested through contact with food. Airborne lead expelled from the weapon can also contaminate food.

### **Don't Collect Fired Brass in Baseball Caps**

Many shooters use their baseball caps to collect spent brass, this contaminates the cap with lead particles, When the cap is placed back on the head, the lead is deposited into the hair and absorbed into the skin. Providing boxes for the brass prevents this practice.

### **Do Be Aware Face, Arms, and Hands Are Covered With Lead**

Shooters and instructors should wash thoroughly with cold water and plenty of soap. Cold water is preferred because warm water enhances the absorption of lead by opening the pores of the skin. If no water is available, shooters should consider carrying a box of wet hand wipes or a bottle of cool water and a washcloth for this purpose.

### **Do Be Aware That Hair and Clothes Are Still Contaminated**

Shooters and Firearms Instructors should wear an outer garment, such as a jumpsuit or coveralls, or change clothes before going home. Contaminated clothes should not be cleaned by blowing, shaking, or other means that disperse lead into the air. To prevent cross-contamination, range clothes should be washed separately from the family's regular laundry. Families with infants should be particularly careful, since infants are most vulnerable to lead contamination. Families with infants should be particularly careful since infants are most vulnerable to lead contamination. Changing to clean clothing before leaving the range prevents recontamination of the hands and any contamination of the family vehicle.

### **Do Change Shoes Before Entering the Residence**

Shoes can also transport lead into the home. Shoes should be left at the door to prevent tracking lead onto floors and carpets. Ordinary vacuuming does not remove lead from the home, but redistributes it by blowing it in to the air to be inhaled and/or resettled onto the carpet.

### **Do Avoid Physical Contact with Family Members until After Shower, Shampoo, and Change of Clothes**

Lead can be transferred by casual contact. Family and friends should not be hugged or kissed until after a shower and a change of clothes. Any physical contacts should be avoided while the shooter is still in range clothing.

## **Indoor Ranges**

Although NVGC does not have an indoor range, many of our members have access to commercial, military, and police indoor ranges. Most indoor ranges have a greater lead dust problem than outdoor ranges. However, range personnel can institute several controls to lower the amount of lead dust in these facilities.

The choice of ammunition is one such control. Nonjacketed ammunition produces the most lead dust and fumes, jacketed ammunition, the least. Shotgun shells produce more airborne lead dust than any handgun round. Currently, many ammunition manufacturers are developing lead-free ammunition.

Indoor ranges should not be carpeted, since lead dust settles and contaminates the rugs. A High Efficiency Particulate (HEPA) vacuum, which has a 3-stage particulate air filter is the best vacuum to use for lead.

Because water cannot be treated for lead contamination, personnel should use water sparingly to remove lead when cleaning ranges. If water is used for lead removal, minimizing the amount of water used will result in less pollution. Range maintenance employees should wear disposable coveralls and air purifying masks while cleaning and/or repairing indoor ranges.

## **What Does All This Mean To You?**

During the early years of firearms training, neither eye protection nor ear protection was provided or encouraged on the range. Today, ranges now require both types of protection on the line.

Currently we have learned that another health hazard, - Lead Poisoning, threatens the physical well being of shooters and instructors in firearms ranges. However, through administrative controls and education, shooters can reduce their own exposure and exposure of their families to lead.

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Postmaster: Address Service Requested