

Uision and Shooting Part 1

Edward C. Goding, O.D., FCOVD

Information contained within this article will give firearm instructors and marksmanship students a better understanding of how vision significantly contributes to shooting ability and success. Appreciating the dominant role vision plays in directing and monitoring most of the skills used during shooting will prove useful in updating training methodology. The ultimate result of incorporating useful scientific models and research into a training curriculum should result in shooting performance enhancement.

A comprehensive definition of vision goes beyond the classic 20/20 sight definition. A limited concept of vision is often defined as the ability to see a sharp, clear, 20/20 or better visual acuity image. However, defining vision as a dynamic, learned process of deriving meaning and directing action from light energy establishes a scientific model to better appreciate the importance of vision for accurate and safe shooting.

Visual skills provide intelligent information to shooters concerning where targets are located, and what details and characteristics constitute the target, as well as target speed and direction of movement. This type of spatial, temporal, and labeling information is used to make a decision whether to coordinate a response to shoot the target. Understanding how visual abilities dominate the process of shooting targets accurately and quickly will provide a framework to improve firearm instruction.

An overview of the basic anatomy and physiology of how the eye responds to



Dr. Goding specializes in behavioral optometry and has developed visual exercises to help marksman improve their shooting skills.

light to begin the visual process establishes a framework of reference. The amount and intensity of light entering the eye dictates what neurological information is sent via the optic nerve to the brain for processing and interpretation. Generally, basic vision function is divided into three levels of light intensity: daylight (*photopic*); twilight (*mesopic*); and low-light, night (*scotopic*) vision function.

Photopic vision functions during bright light levels. Specific neuroreceptors called cones dominate the eye's response to bright levels of light. The inner photosensitive part of the eye, called the *retina*, has approximately 7 million cones. Cones are concentrated in the area of the retina that corresponds to straight-ahead vision. This anatomical area of the retina is called the macula, and within the macula is a depression called the *fovea* consisting almost entirely of cones. Cones convert light energy into neural energy, sending information via the optic nerve to the brain. Reflected light from targets stimulates cones to send information to

the brain about forms, shapes, textures, colors, and high-contrast sensitivity detection of various line forms. This information is then combined and analyzed by the brain to form an impression of the target.

From a practical perspective, only in daylight vision can very precise detail and color of a target be seen. Also, precise 3-D depth perception (*stereopsis*) is only possible during cone-dominated daylight viewing conditions. The highest degree of depth perception occurs when the central, straight-ahead fixation point in each eye sends information to the brain in a highly coordinated fashion. During low light conditions, the cones are unable to send precise signals that the brain can use to process depth.

Daylight vision enables the eyes to maintain the highest degree and control of eye fixation -- the ability to maintain steady and accurate eye position upon a stationary target. Also, the ability to follow a moving target (called pursuit eye movements) functions optimally during photopic viewing conditions. A different type of eye movement which involves looking from one separated target to another target to another target, etc., (called saccadic eye movements) functions much better during bright light conditions than during low light conditions. The voluntary act of allowing the extraocular muscles of the eye to position the eye so that images fall on the retina where cone density is highest is an important component of establishing visual attention on targets.

Continued on page 2

The ability to maintain accurate focus (*accommodation*) on a target requires sufficient light to activate the eye focusing system. The accommodative response functions most efficiently when the target reflects sufficient light to stimulate accurate eye focus. Cones have the best ability to receive the refracted light that the lens inside the eye alters during the act of focusing clearly on a target. When light diminishes, the cone function is suppressed and the quality of the eye focusing ability declines.

Once bright light declines and darkness emerges, there is a period of light transition (seen during dusk) defined as *mesopia*. During mesopia, there is a shift from cone domination of vision

to rod domination. However, during mesopic vision, both rods and cones are partially active. The 120 million rods are located throughout the entire peripheral retina. The main functions of rods are to send visual information to the brain about movement detection, to organize spatial orientation of where targets may be located in space, and to respond to low levels of light that may be present in the environment.

During mesopia, there is a gradual loss of color perception, gradual loss of discerning target detail, gradual loss of the ability to maintain accurate eye focus upon target, contrast sensitivity losses, and a

diminishing ability to maintain accurate three-dimensional depth perception. From a practical viewpoint, mesopia is complete when color perception is eliminated. At this point, the visual system begins to function in scotopia.

When light levels fall into darkness, the human eye functions in a state of scotopia. Rod physiology does not allow for color vision nor the ability to discern detail. It is estimated that the best visual acuity during scotopia is 20/200. When you suddenly change from day vision to darkness, e.g., entering a dark room during the day, the dark adaptation of cones is complete in five minutes, while full rod adaptation takes about 30 minutes. However, rods are more sensitive than cones at the sevenminute mark. Complete dark adaptation requires about 30 minutes for the rods to reach their highest level of sensitivity while in darkness.

The ability to maintain accurate eye focus upon a target is greatly reduced during scotopic vision function. Other important visual changes that accompany scotopic vision include increased awareness of peripheral light and movement, increased pupil size resulting in less depth of field, reduction in contrast sensitivity, loss of texture perspective, altered target search strategies, and increased variability of eye focus control. It follows that detection of the fine details of an object of attention is greatly reduced. Unless there is added light source directed at a target, the human visual system is unable to judge accurately various target characteristics such as size, shape, contour, texture, and color.

Above and beyond the basic visual functions that are operational at various lighting conditions, there are specific visual changes that occur when a shooter is threatened by a dangerous situation. The *Body Alarm Reaction (BAR)* is the body's response to an unexpected and sudden change in the environment, most commonly initiated during the early stages of a life-threatening attack.

The BAR is often associated with combat or violent encounters. The most immediate visual change in response to the BAR is that the eye focusing system (*accommodation*) loses its ability to maintain clear focus on targets at close distances.

It is not possible during the first few seconds after entering into the BAR to clearly focus upon the front sights of a gun. A

shooter's visual focusing and attention is drawn to focus toward far distant viewing.

This focusing change toward far distant focus is a direct result of the change from *parasympathetic* nervous system control to *sympathetic* nervous system control. This shift in the *autonomic nervous system* balance is responsible for changing how the crystalline lens inside the eye changes its shape and optical power.

During the immediate stages of the BAR, the lens becomes less convex in shape, and this change results in an optical shift of focus resulting in clear focus

only while viewing distant targets.

The *autonomic nervous system* has two major branches: *sympathetic* and *parasympathetic*. Generally speaking, the sympathetic nervous system prepares the body for direct action and confrontation by increasing heart pulse rate and bringing blood supply to large muscle groups. Also, eye pupil diameter increases, and the *ciliary muscle* relaxes, forcing a shooter to focus the eyes at far distances, perhaps to be behaviorally better prepared for a perceived oncoming threat. There is a slight bulging of the eyes associated with sympathetic nervous system dominance.

The *parasympathetic* nervous system allows you to maintain a more relaxed, balanced state of readiness by slowing an accelerated heart rate, decreasing pupil size, and allowing the eye's accommodative system to focus at increasingly close distances of up to inches from your eyes. The parasympathetic nervous system aims to bring neural physiology back to a state of balance or relative homeostasis.

When the BAR is activated, along with the neural changes there are hormonal and other biochemical channels activated concurrently by a part of the brain called the *hypothalamus*. These chemical mediators are useful in helping maintain the influence of the autonomic nervous system response by either encouraging the body to stay in *high alert*, or by reversing this high intensity response to strong stimuli and resuming a more normal relaxed controlled state of neural balance. However, during the early stages of the BAR, adrenaline is released in the body to further enhance the excitatory component of the BAR.

Look for part 2 in the Summer 2002 L.E.A.D.





NRA-Hosted Law Enforcement Tuition-Free Schools E-Mail Address: LEAD@nrahq.org

Web site: *http://www.nrahq.org/law*



The NRA's Law Enforcement Activities Division (LEAD), in conjunction with Benelli U.S.A., Beretta U.S.A., Colt, Gunsite Academy, Heckler & Koch, O.F. Mossberg & Sons, Remington Arms Inc., SIGARMS Inc., Sturm, Ruger & Co., Smith & Wesson Academy, Blackwater Training Center, InSights Training Center, SureFire Institute, and Special Tactical Services will host the following complimentary armorer/ shooting schools and seminars for the year 2002.

These schools will be held at the NRA Headquarters in Fairfax, Virginia, or at the Fairfax County Police Firearms Training Facility in Chantilly, Virginia. Class sizes are limited and, of course, are **tuition-free**. Participants will be responsible for all other expenses.

Dates	Manufacturer / Company	Subject	Location	Entry Deadline
April 24	Smith & Wesson	SW99/Walther P99 Pistol Armorer	Fairfax, VA	March 8
May 20-24	Ruger	GP100 Revolver/ Mini-14 & Police Carbine Armorer	Fairfax, VA	April 12
June 18	Glock	Basic Pistol Armorer	Fairfax, VA	May 3
July 15-17	SIGARMS	Pistol Armorer/Tactical Shooting	Fairfax, VA	May 31
July 22-26	Blackwater Training Ctr.	Tactical Pistol/Shotgun	Fairfax, VA	June 7
July 30-31	Benelli	S-90 Shotgun Armorer	Fairfax, VA	June 14
August 12-16	SureFire Institute	Officer Survival in Low Light Instructor	Fairfax, VA	June 28
August 26-30	Beretta	92/96/1201 Shotgun Armorer/ Tactical Shooting	Fairfax, VA	July 12
September 9-13	Special Tactical Services	Tactical Pistol/ Urban Carbine	Fairfax, VA	August 2
September 16-20	Gunsite Academy	250 Police Defensive Pistol	Fairfax, VA	September 21
September 30 - Oct. 4	Colt	M16/AR15/1911 Series Pistol Armorer	Fairfax, VA	August 16
October 21-23	InSights Training Center	Intensive Handgun Skills	Fairfax, VA	September 6
November 5	Mossberg	500/590 Shotgun Armorer	Fairfax, VA	September 20
November 11-15	Heckler & Koch	UMP Subgun/G-36 Rifle USP USP Pistol/Fabarm FP6 & Tactical Shotgun Armorer	Fairfax, VA	September 27

These courses, seminars, and training schools are being donated by each of these companies as a way of showing appreciation for our law enforcement officers. Some of these events cost upwards of \$1,000. If you are selected to attend a class, and circumstances occur which prevent your attendance, please notify us as soon as possible so that we can make that slot available to someone else.

There are no official entry forms for this training. Participants will be selected by random drawing. You may register online at *www.nrahq.org/law*, or mail us a 3" x 5" card with your name, rank, assignment, agency name, agency address, telephone number, e-mail address, and a phone number where your law enforcement status can be verified. You must indicate on this card the school in which you are interested. Separate entries are required for each school, but you may mail all entries together in one envelope. **Only one entry per person per school will be accepted**. Mail all cards to: NRA Law Enforcement Activities Division, 11250 Waples Mill Road, Fairfax, Virginia 22030-9400, Attn: **Dave Gledhill**.

The drawing for each school will take place after the entry deadline, and winners will be notified by phone and/or mail. **Please note that NRA membership is** *not* **a requirement for participation in any of these schools**. If you have questions, please call the Law Enforcement Activities Division at (703) 267-1640.

Learning and Using the Proper Combat Grip

Fortunately, the vast majority of police officers in this country will never be thrust into a set of circumstances which will require a deadly force response to neutralize a dangerous situation. However, a small percentage of the law enforcement population will have that experience during their career. Since there is no way to predict who will or will not, the total group must possess the tools, tactics, and techniques needed to safely satisfy the requirements of that encounter.

For the most part, this threatening event will likely be a surprise to the defending officer, prompting a trained response to ensure survival. This amazement will be severely more shocking for some than others. Those lawmen applying the proper mindset to their duties will enjoy an additional element of lead-time to enable them to counter the assault. Those mentally occupied elsewhere will recognize the threat a bit later, and be additionally rushed and pressured to rise to the occasion.

After threat recognition has occurred, one of the initial responses is for the defending officer to acquire his or her authorized weapon. That tool will most likely be a handgun that is carried in a holster and attached to a belt surrounding the waist area, pre-positioned for extraction upon demand. *This physical skill of extraction can be viewed as the most important step of the weapon presentation prior to a shot being fired in defense of life.*

Breaking down the presentation into components, one may discover that the grip stage of extraction significantly influences the success or defeat of this life-saving exercise. Therefore, the grip must be done not only swiftly, but also correctly.

Initially, the practitioner may consider the attainment of the combat grip a no-brainer that merely requires the strong hand to grasp the stock of the handgun and have the support hand follow suit. To those in the know, this physical skill is more involved and is laced with a few idiosyncrasies that will support either success or failure.

In a perfect world, the *strong hand* will respond directly to the pistol, and the high end of the stock of the pistol will be placed in the center of the V of the skinned web that connects the index finger and the thumb. With the center of the V as a starting point, the alignment of the

Kenneth Vogel, M.S.

pistol must now take place. The front sight, rear sight, webbed V area, wrist, forearm, and elbow must all join in a straight line. The hand must be located as high up on the backstrap of the firearm as possible without interfering with the mechanical operation of the hammer, slide, or both.

Once hand placement has been accomplished, pressure in the form of a grasp is now performed to provide ownership and control. The solid grasp and mating of the strong hand to the pistol is a mandatory foundation and precursor to obtaining the two-handed combat grip. Once the strong grip is acquired and the pistol and person parts aligned, extraction from the holster may take place. Any attempt to remove the sidearm from the holster prior to satisfying a proper combat grip will result in presentation disaster.

Once the strong hand is in place and the handgun extracted from the holster, the support hand now participates in this grip endeavor. The support hand is placed so that the top of the index finger of that hand is in contact with the bottom of the trigger guard where the intersection of the bottom of the trigger guard and the middle finger of the strong hand resides. The support fingers now naturally wrap around the strong fingers and find a comfortable position inbetween the digits of the strong hand.

The meaty portion of both palms is affirmatively pressed into the stock of the pistol so that maximum contact is maintained. The pistol is now totally immobilized from unwanted shift or movement, and the officer has total control.

The only finger that is independent of this pressure system is the trigger finger. That digit is placed on the trigger only after a decision to shoot has been reached, and in a fashion that has the trigger located between the fingertip and the crease of the first joint. The other surfaces of the trigger finger must be free and clear of contact with the handgun in order to avoid interference with either the slide or the cylinder.

Often times, many students are confused as to how much squeeze they should place into the grip once it is established. This lack of knowledge results in students producing either too much pressure (which results in early fatigue and tremor) or too little pressure (which results in a loose grasp), both errors ultimately resulting in a lack of control in the firing mode. For the most part, the strength of the grip should be firm, similar to the pressure one might apply while grasping a hammer to strike a nail.

Officers who are alert and aware of their tactical surroundings will key in on subtle events and signals. This mental warning system will then prompt the sidearm to be extracted from the holster in preparation for a calculated armed encounter. Since this presentation is performed as a result of an *anticipated* recognized need early in the encounter, the stress level will be lower than that of a draw performed to solve a full-throttle emergency.

Under the circumstances of early recognition, more time can be taken to insure an ideal grip. The more time that one can devote to the grip process, the more the likelihood of an ideal draw.

Less-than-desirable draws in reaction to an emergent set of circumstances usually allow very little time to satisfy the critical requirement of obtaining a proper grip. When rushed and stressed, the grip results are often less than preferred, and a destitute presentation will most likely follow. The major causation between an excellent grip vs. a poor grip is the time available to the officer in which to acquire the proper purchase on the pistol.

However, regardless of the time available, a *proper grip is absolutely necessary*. We must strive to come as close to perfect as possible under any and all conditions. As firearm instructors, it is important for us to recognize that range work should reflect a considerable amount of time acquiring the combat grip while the pistol is in the holster because that is the reality of street duty.

Essentially, the shooting grip and the holster grip are the same, and, as such, should be considered only as *the combat grip*. Certain failure will result by obtaining what one may accept as a holster grip, and then with rushed effort attempting to upgrade to a desirable shooting grip during the midst of a presentation to address a deadly threat.

In essence, if the deadly force response does not begin with a solid combat grip at the onset, downfall is on the horizon. The proper combat grip provides for control which in turn allows for marksmanship. Since the purpose of shooting is hitting, the element of marksmanship then places the required hits in the desired locations to neutralize the threat. It is a logical sequence that produces success at a moment in time in which failure is not an acceptable option.

ABOUT THE AUTHOR: Kenneth Vogel is a retired captain (with 30 years of service) from a municipal police agency where he was the commanding officer of a regional SWAT team and a Police Training Bureau. He holds a Bachelors Degree in Criminal Justice and a Masters Degree

in Administration. During his career, he has successfully attended and completed over 50 Use of Force training schools presented by federal, state, and county police agencies, as well as by the private training sector. He was appointed as an Adjunct Instructor to L.E.A.D. in January 2000.

LAW ENFORCEMENT ENDOWMENT RECEIVES \$25,000 GRANT

The NRA Foundation's Law Enforcement Endowment received a generous \$25,000 grant from the Sayler-Hawkins Foundation, bringing this relatively new endowment to \$137,500.

"We are working very hard to bring the Law Enforcement Endowment to the \$500,000 level, a minimum required by board policy in order for it to begin funding programs," stated Allan D. Cors, NRA Foundation President. "We are most grateful to the Sayler-Hawkins Foundation for their leadership gift to this most important endowment."

The Law Enforcement Endowment is a permanent fund (or savings account) that is designed to produce annual investment income. Gifts received for the permanent fund are never touched -- only a portion of the fund's interest is used to support NRA's law enforcement programs. The balance is then reinvested to ensure the fund's growth, thus provid-

ing a growing source of income in perpetuity.

"The NRA has provided vital training to the nation's law enforcement agencies since the early 1900s," stated Craig D. Sandler, NRA's Executive Director of General Operations and former Nashua (New Hampshire) Chief of Police. "In 2001," Sandler continued, "the ranks of trained NRA Certified Law Enforcement Instructors rose to 11,700 – representing a 22% increase over 2000 figures. Endowing these programs permanently ensures their future operational stability and growth."

Individuals interested in contributing to the endowment through a taxdeductible current gift or estate bequest should contact Jaimee Partridge, of the NRA Foundation at 800-423-6894.

2002 NPSC - Schedule of Events

The 2002 NRA National Police Shooting Championships are scheduled for September 23-27 and will be fired in Jackson, Mississippi. Please take note of our new shooting schedule and schedule of events. For additional information please contact Patty Zollman at (703) 267-1632 or e-mail at *pzollman@nrahq.org*.

- * Awards: Over \$200,000 worth of prizes including over 100 firearms will be awarded. Recognition is given at all levels of expertise.
- * **New Headquarter Hotel:** We are delighted to announce that we will now be based out of the Clarion Hotel. Be sure to reference the "NPSC" when making hotel reservations. Call now to confirm your room at (601) 969-2141.
- * Industry Sponsored Side Events: The following firearm manufacturer's will be hosting side events: FNH USA, Glock and SIGARMS.
- * **Civilian Event:** The Annie Oakley/Kit Carson Match will be fired this year. This match is NOT a professional competition. Professional shooters or those with a classification of expert or higher in **any** shooting discipline WILL be disqualified.
- * New Shooting Schedule:

Saturday, Sept. 21:	The Pistol Warm-Up (Practice Day) has been moved FROM Sunday TO Saturday
Sunday, Sept. 22:	A Registered Tournament will be conducted to include two 60-round courses of fire (open revolver & open semi-auto) and SIGARMS will host a side event
Monday, Sept. 23:	Revolver 1500 - Shotgun Match - FNH USA side event - Armor Holdings/Safariland dinner
Tuesday, Sept. 24:	Revolver Dist Shotgun Match - Service Revolver Match - Off-Duty Revolver Match - Annie & Kit Match (dinner TBD)
Wednesday, Sept. 25:	Semi-Auto 1500 - Shotgun Match - Glock side event - NRA dinner
Thursday, Sept. 26:	Semi-Auto Dist Stock Semi-Auto Match - X-Team Challenge - Shotgun Match - Jackson Police Department Fish Fry
Friday, Sept. 27:	Revolver and Semi-Auto Team Matches - Shotgun Match - World Team Matches



2002 NRA Law Enforcement Instructor Development Schools

E-Mail Address: LEAD@nrahq.org Web site: http://www.nrahq.org/law



School tuition - \$450.00

HANDGUN / SHOTGUN INSTRUCTOR

Apr. 15-19	Las Vegas, NV
Apr. 15-19	Dallas/Ft. Worth, TX
Apr. 15-19	Fredericksburg, VA
Apr. 22-26	Pearl, MS
May 6-10	Lebanon, PA
May 20-24	Trinidad, CO
June 3-7	Allentown, PA
June 17-21	Russellville, KY
July 8-12	E. Brunswick, NJ
July 22-26	El Dorado, KS
Aug. 5-9	Trinidad, CO
Aug. 19-23	Vancouver, WA
Sept. 9-13	Boise, ID
Sept. 30-Oct. 4	Fredericksburg, VA
Sept. 30-Oct.4	Las Vegas, NV
Oct. 14-18	Evansville, IN
Oct. 21-25	Baton Rouge, LA
Oct. 21-25	St. Charles, MO
Nov. 4-8	Pearl, MS
Nov. 18-22	Pittsburgh, PA

TACTICAL HANDGUN INSTRUCTOR

Apr. 8-12 Apr. 8-12 Apr. 15-19 Apr. 22-26 May 13-17 May 13-17 June 10-14 July 15-19 July 15-19 July 15-19 Aug. 5-9	Kingman, AZ Bonners Ferry, ID Castle Rock, CO Fredericksburg, VA Sandusky, MI Ontario, CA Allentown, PA Vancouver, WA E. Brunswick, NJ Lebanon, PA Burbank, CA
May 13-17	Ontario, CA
June 10-14	Allentown, PA
July 15-19	Vancouver, WA
July 15-19	E. Brunswick, NJ
July 15-19	Lebanon, PA
Aug. 5-9	Burbank, CA
Aug. 12-16	Rochester, MN
Sep.30-Oct. 4	Pearl, MS
Sep.30-Oct. 4	Las Vegas, NV
Oct. 7-11	Fredericksburg, VA
Oct. 21-25	Las Vegas, NV
Nov. 4-8	Phoenix, AZ

HANDGUN	INSTRUCTOR

Apr. 8-12	Phoenix, AZ	
June 3-7	Castle Rock, CO	

TACTICAL SHOTGUN INSTRUCTOR

Apr. 15-19	Phoenix, AZ
May 6-10	Selma, AL
May 20-24	Ontario, CA
May 20-24	Ventura, CA
June 10-14	Castle Rock, CO
Sept. 9-13	Lebanon, PA
Nov. 18-22	Panama City, FL

PATROL RIFLE INSTRUCTOR

Apr. 22-26	Dallas/Ft. Worth, TX
May 27-31	Tupelo, MS
June 3-7	Pearl, MS
July 8-12	Fredericksburg, VA
July 22-26	Keene, NH
Aug. 5-9	Castle Rock, CO
Sept. 16-20	Kennedy Space Ctr., FL
Sept. 23-27	Kingman, AZ
Oct. 7-11	Lebanon, PA
Oct. 28-Nov. 1	Las Vegas, NV

PRECISION RIFLE INSTRUCTOR (SCOPED)

Apr. 8-12	Pearl, MS
May 6-10	Connersville, IN
July 15-19	Fredericksburg, VA
Aug. 12-16	Castle Rock, CO
Sept. 23-27	Kennedy Space Ctr., FL
Nov. 18-22	Las Vegas, NV

SELECT-FIRE INSTRUCTOR

May 6-10	Castle Rock, CO
Oct. 21-25	Phoenix, AZ
Dec. 9-13	E. Brunswick, NJ

Civilian Certification for NRA Law Enforcement Firearm Instructors

What a great response! As most of you know by now, the National Rifle Association has developed an easy way for officers who have received law enforcement training from NRA to use that training as a basis for becoming certified as a civilian instructor.

In just two weeks, over 200 such officers have taken advantage of the opportunity to request a validation form and application to become a civilian instructor.

The demand for civilian training is at an all time high because so many states have enacted right-to-carry legislation that requires formal training by a qualified instructor. Certain portions of the NRA's Personal Protection in the Home course, in fact, require a law enforcement officer or attorney to conduct that particular section.

Besides Personal Protection in the Home, courses are offered in Basic Rifle, Basic Pistol, Basic Shotgun, Reloading Metallic Cartridge, Reloading Shotgun Shells, Range Safety Officer, and Home Firearm Safety. Instructor certification is available in Rifle, Pistol, Shotgun, Personal Protection in the Home, and Home Firearm Safety.

So don't delay -- sign up today! It's easy. Just call NRA at (703) 267-1481 and ask for information on how NRA Certified Law Enforcement Instructors can validate to become civilian instructors as well. We appreciate your support and look forward to hearing from you.

Industry Discounts for NRA Instructor School Students

On the first day of our Firearm Instructor Development Schools, you are provided discount forms/coupons from various manufacturers in the shooting sports. We would like to thank the following organizations for participating in our law enforcement discount program:

AO Sight Systems Beretta, USA Corp. Crimson Trace Corp. Glock, Inc. Kahr Arms Life Jacket POLICE Magazine Sturm, Ruger & Company, Inc. SureFire WileyX

Check Out the New LEAD Web Site

NRA-Law Enforcement Activities Division

Address http://www.nrahq.org/taw

Check out the NRA Law Enforcement Activities Divisions' new Web site. Look what you can do there:

- Get the latest schedule of our instructor development and tuition-free schools.
- Register online for any of our classes, (paid and free).
- See where all of your PPC matches are being held, (Approved, Registered, Regionals, & State Championships).
- Get the latest information on this year's National Police Shooting Championships being held in Jackson, MS.
- Look up national records.
- Check your latest PPC classification.
- See what conferences and tradeshows we will be attending during the coming year.
- See what's new with the division and who is supporting us.
- Get information on the NRA Law Enforcement Officer of the Year program.
- Read current and back issues of this newsletter.
- Check out and receive information on the different benefits that are offered through us.
- View and order LEAD merchandise.
- Contact any of the staff for questions you need answered,
- Visit our Wob site, or call us at 703-267-1640.

NPSC Memorabilia

Mark your calendars! The 2002 National Police Shooting Championships (NPSC) have been scheduled for September 23-27, and will again be fired in Jackson, Mississippi. A number of new events are being planned, so be sure to call for information at (703) 267-1632,1635, or 1621. Sales items from last year's NPSC are still available for purchase. If you would like to purchase some of the items listed below, please contact Jen Cooper at (703) 267-1621, or e-mail her at *jcooper@nrahq.org*. Shipping and handling charges will be added to the total sales price.

ITEM/DESCRIPTION	ITEM#	PRICE
NPSC Short Sleeve Twill Shirt (M,L,XL,2XL,3XL)	00001	\$30 (add \$2 for 2&3XL)
NPSC Long Sleeve Denim Shirt (L,XL,2XL)	00002	\$30 (add \$2 for 2XL)
NPSC Long Sleeve White T-Shirt (L,XL,2XL)	00003	\$15 (add \$2 for 2XL)
NPSC Long Sleeve Black T-Shirt (2XL)	00004	\$15 (add \$2 for 2XL)
NPSC Kids Tee (L)	00005	\$8
NPSC Hat	00006	\$10
NPSC Knife (Beretta Airlight knife engraved)	00007	\$45
NPSC 2001 Silver/Gold Coin w/case	00008	\$25
NPSC 2000 Silver/Gold Coin w/case	00009	\$25
NPSC Plastic Mug	00010	\$9
NPSC Mouse Pad	00011	\$5.50
NPSC Decal	00012	\$3

NRA Officers

Charlton Heston President

Kayne B. Robinson First Vice President

Sandra S. Froman Second Vice President

Wayne R. LaPierre Executive Vice President

Edward J. Land, Jr. Secretary

Wilson H. Phillips, Jr. Treasurer

Craig D. Sandler Executive Director General Operations

> James Jay Baker Executive Director Institute for Legislative Action

For information on NRA programs or membership, please call (800) NRA-3888

Law Enforcement Web site: http://www.nrahq.org/law

