



MIXED CALIBERS

Official Publication of The
FLORIDA SPORT SHOOTING ASSOCIATION

Dedicated to defending the "Right to keep and bear arms" and the promotion of the shooting sports

Web Version

Issue 32

Annual Meeting 2008

BIG CHANGES FOR FSSA ANNUAL MEETING Saturday January 31, 2009

The annual meeting is a lot of fun great time to socialize and meet other members. Also at the swap meet you can trade some of your junk for other people's junk. So mark your calenders and take part in the fun and remember to vote..

NEW LOCATION : Central Florida Rifle & Pistol Club
14646 Wewahootee Road
Orlando, Fl 32862-1985

SWAP MEET: We are still having the Swap Meet

LUNCH: **New Caterer**
Bubbalou'.....Bodacious Bar.B.Que
Price still the same \$7.00

NEW EVENTS: No Speaker this year instead we will have
Fun Shooting Matches for the whole family

NO CHANGES: Great time to catch up on old friends & make new ones
Voting ends at 11:00 a.m.
General Meeting and Election Results
Board Directors Meeting

Does Weather Affect Outdoor Shooters?

By Mary Watkins

How much does the weather and conditions affect the outdoor shooter? This question has been debated and written about many times. As a smallbore shooter, I too was one of the many skeptical individuals about how the wind could possibly blow such a small fast moving bullet far enough off course in the split second that it takes to reach the target.

Having spent more than half my 35+ years in competitive shooting career using iron sights only the optical illusions of mirage did not really sink in until recently.

In order to look at these issues we should start by breaking down the main components involved in what is affected by weather.

- 1) **the shooter**... what they feel with regard to temperature, humidity and wind on them
- 2) **the bullet**... wind, rain, hail, snow and temperature
- 3) **the rifle**... humidity changes, winds
- 4) **the sight picture**... light and mirage (both dry and humid mirage)

While addressing each of these conditions separately, let's not forget that each one of them can also have an affect on the shooters mental condition and psyche. Often times any of the conditions or combinations of the conditions will produce many undesirable habits such and trigger snatching, anticipating the shot (pushing), which usually leads to a loss of confidence, thus a downward domino affect of the shooter at any given time.

The shooter can be affected by high winds, simply by being pushed and not being able to 'lean' into the wind with any consistency. While this is usually quite easily observed and can be overcome somewhat, it often has a very negative psychological reaction, that is frequently stronger than the affects of the wind itself.

Some of the less easily observed influences are temperature. If it is hot and the shooter dresses in heavy shooting clothing, the body temperature rises, and the ability to cool oneself naturally by evaporation is diminished by the extra clothing. This can cause the decision making and reflexes to suffer, thus an increased number of poor shots.

Extreme cold can also affect the shooter's ability to function. It is not unusual for muscles to tighten and occasionally spasm, particularly in areas that are exposed such as the neck and trigger hand. Having the neck tighten will cause the back to tighten as well and that makes it difficult to maintain a natural point of aim. When the hand is cold trigger control becomes more difficult and this can ruin a good shot.

There are several coping strategies that can be used for these problems.

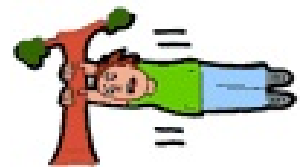
If it is windy, remind yourself that others are shooting in the same conditions, think positive about your abilities to deal with the wind and focus on that positive thought.

If the temperature is hot, stay cool prior to the match, dress in the shooting gear just prior to the actual firing, do minimal stretches before shooting, drink small amounts while shooting, either water or some fluids with electrolyte replacement, wipe your face and neck with damp cloth between targets.

If the temperature is cold, use thermals and hat to keep the body warm. Use hand warmers to keep trigger hand warm. Walk briskly and do moderate stretches to warm up, remember to breathe lightly, as heavy breaths will fog your glasses. Things not to do in extreme temperatures, too hot... avoid hot drinks, vigorous warm ups, over dressing too long before you start shooting. Too cold... sitting in warm room or car, the temperature change too fast can set yourself up for tough conditions to deal with.

The bullet is affected by a physical phenomenon known as the precessional effect, which is most noticeable with a side wind. The compression wave at the head of the bullet trails back, and is affected by the side winds buffeting the pressure points. When a spinning object is turned sideways the pressure push from the left (a right wind) will push the bullet higher, a push from the right (left wind) will drop the bullet lower. A front wind increases the resistance, again pushing the shot lower, where a tail wind on the bullet decreases the resistance so the shot will go higher.

All of these aforementioned affects assume you are shooting on an open range, there are many situations that occur commonly on silhouette ranges which is the placement of berms at the various distances and the common practice of firing the long distances over a shorter animal. There are many other obstacles that are commonly on ranges such as trees, shelters, drainage ditches etc. that can and do cause wind changes downrange. Rain and hail affect the bullet in similar ways to wind.



continued on page 3

Does Weather Affect Outdoor Shooters? Continued from page 2



The safest way to determine what to do in these conditions is to try to observe conditions by use of wind flags, grass, trees, dust movement of the shooter next to you after they have fired, and observation of range angles, and layout. If you can take the time, be sure to take opportunity to shoot rounds before actually firing a competition on any range. This will help greatly in your ability to learn the common conditions of a particular range. Another trick to help at an unknown range is to observe a local experienced shooter or squad with someone that knows the range and can spot or guide you on the conditions. Indoor ranges are usually ventilated and the source and direction of the fans moving the air can be a valuable thing to learn before competing inside.

The rifle can be affected by high winds when they are strong enough to blow the barrel around, also known as barrel buffeting. Many times tightening the hold will help some of this, or lowering the center of balance by moving the support arm forward a small amount. Be careful about tightening the hold too much as this tends to tighten the stomach and back muscles causing tension movement.

Humidity changes can affect rifles by causing wood stocks to shrink (drier air) or swell (wetter air), and may affect the bedding, causing a normally great rifle to have a larger group spread. Using an epoxy based bedding compound and sealing the wood stock with good polyurethane can help stabilize these issues.

Sight picture problems can be broken up into lighting (bright and low), mirage (highway and superior) concerns.

Low light conditions are usually caused by overcast/rainy weather or shooting early or late in the day. There are several things that can be done to help compensate for low lighting. If you are using a scope, reducing the power (when possible) will allow more light in, opening the rear aperture on to a slightly larger size on iron sights can help let in more light. Keep in mind that in opening the rear aperture size you will need to focus more on keeping the front sight centered in the rear sight. Additionally the use of yellow lenses in shooting glasses will help brighten the overall appearance.

Bright light can cause problems as well, as the iris of the eye naturally closes in brighter light. Frequently the appearance of too much light is caused by sunlight coming from downrange back at the shooters face, this can cause the targets to be shadowed as well as causing difficulties keeping the eyes open. To compensate for these the shooter should always have large brimmed hat available, sunshades for scopes, and if possible hang a towel or something similar forward of the shooter to provide shade on the sights and face. Wearing the darker colored glasses such as greens and blues will help reduce the amount of light the iris receives and thus help keep the eyes open.

Mirage is a naturally occurring optical phenomenon, which results in a displaced image of an object in the distance. Light refraction is the principal physical cause for mirage, despite the appearance of a mirror like reflection, in most cases. The cause of mirage can be described as a temperature differential between cold and warm air. The cold air is denser than warm, thus having a greater refractive index. Learning the direction of the temperature differential will help understand how to read the mirage. In cases where the light passes from the cold air to warmer air, the light will bend away from the temperature gradient. An example of this is *highway* or desert mirage, where the ground is much hotter than the air above it, frequently causing the illusion of water on the ground, and the image is seen below the object. This type of mirage is unstable, and often appears to be vibrating, when combined with very light winds, i.e. <4mph. Typically 4 to 7 mph wind combined with highway mirage will appear as though an object at 100 meters is 3 to 4 inches further in the direction that the wind is blowing. Usually mirage will disappear from the vision when the wind conditions reach to 10 to 11mph. The opposite type of mirage will occur when the light passes from the hotter to colder air, it will bend in the direction of the temperature gradient. This is known as *superior* mirage, and the image appears above where the object really is. This type of mirage is not as commonly observed as highway mirage, but due to the fact that cold air tends to stay down and hot air up, the superior mirage is usually much more stable.

Learning how to read mirage and the local weather conditions, will help any shooter improve their scores. Picking up all the contributing factors of weather the first time on a new range is usually very difficult, but with practice, learning to observe the local shooters will help you pick up on some the smaller but extremely important details towards improving your score away from your home range.



Why You Should Vote For Me

My name is Joe Waldron and I'm running for the vacant position of Legislative Director of the FSSA.

Upon retiring from the Marine Corps in 1992, I spent some time searching for a second vocation. A lifelong gun owner, former FFL (and current C&R licensee) and former California-certified Hunter Safety Instructor, I found that vocation as a gun rights activist. Over the past 15 years I have been blessed with several opportunities, almost all overlapping, to serve in positions to preserve the Second Amendment and state constitutional protections to keep and bear arms. In 1994 I was appointed the registered lobbyist for GOAL of WA, that state's only dedicated pro-gun PAC. I was elected to the board of the WA State Rifle & Pistol Association and the WA Arms Collectors, serving that last organization as a director, as president, and now as past president.

I was fortunate in 1995 to be employed by the Second Amendment Foundation, the organization that successfully sued the City of San Francisco TWICE to overturn unconstitutional gun bans, and later the City of New Orleans over its unconstitutional gun seizures. In 1998 I was appointed the executive director of SAF's sister lobbying organization, the Citizens Committee for the Right to Keep and Bear Arms, where I remained until my move to Florida 16 months ago.

June 2007 I shifted my flag to Pensacola to be a little closer to my Naval Aviator son, but my heart remains a gun rights advocate, no matter where I get my mail. I am a member of USF as well as of FSSA. While a lobbyist in Washington I worked closely with that state's NRA-ILA state liaison. We may be facing the worst environment for gun owners in U.S. history. If elected to the Legislative Director position, I pledge that same close cooperation with USF for the benefit of all Florida gun owners.





FSSA ANNUAL MEETING

Saturday, January 31, 2009

TO: *All Members of the Florida Sport Shooting Association*

This is your official notice of the annual meeting of the Florida Sport Shooting Association. If you are eligible to vote your ballot is enclosed for the FSSA elections. Please return your ballot as soon as possible or bring to the meeting.

WHEN: Saturday, January 31, 2008

LOCATION: Central Florida Rifle Pistol Club - 14646 Wewahootee Road- Orlando, Fl 32862-1985

Directions to Meeting - Central Florida Rifle & Pistol Club is located approximately 3 miles east & .5 miles S of the Orlando International Airport see our website(www.flssa.org) for detail directions to meeting.

SCHEDULE FOR ANNUAL MEEETING

9:00 a.m. to 11:00 a.m.	Swap Meet
9:00 a.m. to 11:00 a.m.	Voting Ballots must be in the ballot box by 11:00 a.m.
9:00 a.m to 11:45 a.m.	Outdoor Air Gun Shooting Challenges- (Ed Hess Chairman)
Noon to 1:00 p.m.	Catered Lunch - \$7.00
1:00 p.m. to 2:30 p.m.	General Meeting and Voting Results
2:30 p.m. to 4:00 p.m.	Board of Directors Meeting

THE END OF ANNUAL MEETING

General Information for the Annual Meeting

- If you are eating lunch with us please let the Vice-President Mike McCord know how many are attending by January 15, 2009 - vice-president2008@flssa.org
- If you like to have item to be discussed at the General Meeting please send the item to our President Ernie Myers by January 15, 2009 - president2008@flssa.org