Developing an Effective Firing Strategy

Developing an effective firing strategy means nothing more than knowing how/when to fire your shots in order that they all strike center. Although easier said than done, one must have a positive mental attitude when they approach any existing range conditions. Look upon conditions as something to overcome and conquer. If the conditions beat you, take what you learn from that experience and lock it away for future reference. Why did you get beat up and what would you do differently under similar circumstances? This information is invaluable and will help you grow as a long-range shooter. Do not fear conditions! Remember, everyone else that you compete with must shoot in those exact same conditions. The one that comes out on top will not always be the better "Holder". It could simply be a matter of the winner having developed and implemented a more effective shooting strategy!

To develop an effective firing strategy, one must be fully aware of the force that alters the course of the bullet to the target…THE WIND! Wind is not the thing we must concern ourselves with, however. **It is those changes in wind velocity/direction that we are most concerned with**. Wind is invisible to the eye, but there are things that can be used to determine these "CHANGES" in the wind. These include: Flags, grass, vegetation, dust, mirage, smoke, etc…anything that the wind sets in motion.

More importantly still are the indicators of wind velocity changes that are HONEST in relation to the actual effect on the lateral movement of the bullet. These indicators will be seen on the upwind side of the line between you and your target…and the further upwind, the better!! These are indicators of "Impending Change" and give you the most advanced warning. You will always want to identify the indicators that show an honest value of the wind and keep a wary eye on them before each shot is fired.

Primarily, for this exercise, we will concern ourselves with indicators that will exist on most ranges you are likely to fire on: MIRAGE and WIND FLAGS.

MIRAGE: Mirage is nothing more than varying densities of air that rise as the ground is heated. Through your spotting scope, mirage will appear as waves, like water, that drift across your target. It can best be seen by focusing your spotting scope somewhere between 50% to 90% of the distance between your position and the target. When viewed through a spotting scope, mirage displays wind velocity AND lateral direction (left/right). Interestingly, a wind coming from the 7:30 clock position at 10 mph will look EXACTLY like a 5 mph wind coming from dead broadside at 9 o'clock regarding mirage seen in your scope. AND…it will have the same effect on your bullet drift-wise.

Mirage is best seen on days of high humidity and bright sunlight. As the humidity or light diminish, the mirage will diminish also. The place to actually watch for mirage velocity is not on the target or at ground level. Mirage is like a river. It slows the closer to the bottom you get. The water closer to the bottom of a river is always slower than the water at the top. (That's why the fish tend to hang lower as they move upstream). Since your bullet is many feet above the target in its' trajectory, the mirage velocity down low doesn't help you much. Look for the mirage velocity up high…where the bullet is! This should make sense if given a little thought.

Remember, mirage is a reliable indicator of wind (as perceived laterally) to only about 15mph. Once the mirage gets to a higher velocity, it appears flat and minute changes cannot be readily seen.

FLAGS: Try to select a flag (or flags) on the upwind side that accurately depicts what the mirage is doing. If you see a flag or flags drop off, what happens to the mirage? Does it drop off too? If so, THAT is your indicator **of what is to be!** You need to have a correlation of an upwind indicator to be consistently successful.

Be very cautious of the relativity between flag position and wind direction! Select a flag that the wind is blowing straight away from you or at you to determine actual wind direction. This **may** end up being a flag on the downwind side of your firing point. Granted, this flag actually tells you "What Has Been", but it's still the best and only directional indicator at your disposal. Wind direction is actually a very important issue. When the wind is blowing 20mph and you get a 30 degree change in wind direction, you're in for a real nasty surprise on the target. So, in high wind conditions or when mirage is not apparent, watch flag **lift** and **direction** intently.

FIRING STRATEGY: Conditions can be nasty as hell in some matches. I've been beat up many times, but I've learned from each of those experiences. The idea here is to determine the "Predominant" condition that exists immediately prior to your relay. This means getting up on the line and looking over your prime indicators. It may mean watching the flags only or both the mirage and the flags together. Analyze the topography of the range and the wind currents relative to lay of the range. Recognize that winds of equal force **"closer to the firing point"** will drift your bullet further then those winds downrange. In other words, a range where the wind only effects your bullet for the first 500 yds on a 1K range will drift the bullet further than the same winds that effect your bullet **only** in the last 500 yds.

Once you are able to determine the most prominent existing condition, make a determination to **only fire in that condition when it exists…period.** My best scores have come when I have made the least amount of horizontal sight movement possible…even when it was blowing a gale. In these rare instances, it was a matter of getting on target, lifting my head from the stock and watching the flags. I'd imagine in my mind how long it would take for that **perfect** condition to get to my firing point once the flags showed me the predominant and I'd quickly bust the shot.

Once you determine the predominant, you must also ask yourself "Can I shoot all of my shots waiting for this condition within the constraints of the clock"? That will determine exactly how fast you must shoot your shots. If the condition exists for long periods of time, can I lay there and line up Center X's? Or, does that window exist so shortly that I must come off the scope, breathe the sight up, lift my head to quick check the flags and then bust what looks like a solid 10? I'll accept sloppy 10's and a possible 9 if it keeps me from lining up center-X's and blowing a 7 out the side…or worse.

In this game, patience is a virtue. Be ready to wait and wait and wait some more if need be. If the wind/mirage has been L-R at 800 yds. and predominantly the same at 900 yds. But you see an occasional reversal once you get to 1000 yds. The predominant is **most likely** still L-R. Don't waste your sighters shooting in a R-L condition just because the command to fire has been given. Wait for the predominant to return and then, go to town. If it again reverses during your string, simply **have patience.** It WILL come back to the predominant. Let the others guys shoot in the

reversal. Again, the strategy is to stack the odds in your favor and let the other guy get caught shooting in what is not the predominant.

One thing that I have learned regarding shooting 1000 yd matches and Palma matches encountered in the Midwest (including Perry) is that if you crank your sight, you're generally going to lose. So once you're centered in the condition you want, leave that knob alone!! One-Half minute corrections **total** will be used **at the most** and then, only if you want to get better centered for X-Count.

Another point I'd like to make is regarding firing parameters. If you have an intimate knowledge of the ballistic capability of your ammo at 1000 yds, you then know how much leeway you have firing in a given condition. If your "Hold" and rifle/ammo capability are ½ MOA, you can miss the wind by a fair amount and still stay in the 10-Ring. If your hold/rifle/ammo capability is 1-1/2 MOA, your "Firing Parameter" must me that much better than the other guy to shoot the similar score. This means that you must be able to dope **minute changes** in wind just that much closer. That's what separates the Tom Whitaker's and Nancy Gallagher's from the rest of the world. Not only are their holding abilities so good and their equipment so finely tuned, but they can decipher **very** minute changes in wind from their established predominant condition. Technically, their firing parameter (that which will keep them in the 10-Ring due to wind drift) is very small, but it is in reality much greater than most folks. As a result, they get caught for point loss due to wind less often and have subsequently higher X-Counts.