

# Technical Track Outdoor Range Design

## Designing Sporting Clays Ranges With Reclaiming in Mind

*By Marty Fischer, President  
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*My expertise is in shotgun sports, specifically sporting clays course design. I got involved in that particular industry 10 years ago and have been in it full time ever since. I don't have another job. I represent shotgun sports on the Entertainment and Sports Programming Network (ESPN), The Nashville Network (TNN) and the Outdoor Life Network. I also do videos on shotgunning. My day-in, day-out job is clay course design and marketing management to the shooting industry, working with shooting preserves and shooting facilities to help them make money and stay in business.*

*Our world is changing daily. In no business is it changing more than in the shooting industry. I see this each and every day. There is more regulation on our products and services than ever. A lot of that's coming from small groups with an agenda they need to force. Because of the microscope our shooting industry is under, we need to do a better job of policing ourselves and our business.*

*My presentation focuses on how to design a clays range with lead reclaiming in mind. In the past, most ranges were thrown out in the woods or open fields. Shooters put shots anywhere they wanted, and they shot over water. It really didn't make any difference what people did on their ranges.*

*Shooters were trying to replicate game bird shooting. In order to do that, they used fields, woods, lakes, streams and rivers. As a result, we not only threw targets into waters and wetlands, we also put lead shot there.*

*Sporting clays came to America about 10 years ago, and it took this country by storm in terms of clay target sports. In the beginning, there was no concern for where lead pellets went. Trap and skeet ranges, on the other hand, have been reclaiming lead for many years. In sporting clays, that hasn't been the case.*

*We've got to do a better job of designing sporting clays ranges with reclamation in mind. Lead management, marketing, management and design of the overall facility go hand-in-hand. If we don't consider reclamation, we're going to find ourselves in trouble.*

*We've got to be careful about what we do because we're being watched. If you don't believe me, take a look at what happened in the golf course industry some years ago. For years, golf course designers mowed down trees to put in holes. They'd cover wetlands to put in*

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holes. If they endangered species of plants or wildlife, it didn't make any difference. Putting in holes meant monetary gain. As people became more environmentally aware, designers and owners had heads handed to them on a platter. It cost them a lot of money to fix the environmental problems they created. In my professional opinion, we're almost there now with the shooting industry. There are hundreds of sporting ranges around this country, and that's a lot of lead in the air.

As much as we like water shots, we've got to be careful. The most important thing when you design a clays course is picking the right piece of property. You can't think, I own this 50 acres; it would make a great sporting clays range. There's more to it than that.

Obviously, you have to look at it from a business aspect, whether you can draw customers. Let's face it, you can't dump lead and clay targets all over the place if you don't know how to handle environmental issues and contain lead.

Let's consider characteristics you want in a piece of property. You want a lack of surface water. You don't want wetlands on the site. The land needs to be relatively flat, so you don't have storm water runoff or drainage that moves lead. You need a sufficient distance between your range and human habitation for environmental and sound reasons. Sound buffering is critical, especially on flatlands, because the sound travels well. You also need to hold spent lead using berms or buffering. Groundwater needs to be about 10 feet below the surface. You don't want a shallow water, because lead solubility in acidic soil conditions poses problems. It's not necessary for a site to have all of these factors, but the more of them, the better.

It's important to note that problems in shotgun shooting regarding spent lead deposits are primarily in wetland areas—shooting into water and streams. White Flyer is producing a new biodegradable target. They are testing a sporting model that flies 90 yards. Such innovations are a big help.

A lot of ranges require non-toxic loads for water shots. All major manufacturers have non-toxic loads for clay target applications. Your shooters may be resistant, but we were resistant to steel shot too, and we've learned to shoot it.

Some years ago I heard a question posed at an advisory meeting directly to Federal Cartridge, Winchester and Remington: "Are you guys ready to offer non-toxic loads?" Four years ago, they all said yes. Non-toxic loads will really help us.

In my course designs, I try to make a large circle and actually deposit the shot in it. You've got to have a big enough piece of property to handle shotfall distances. Nine-hundred feet is recommended. We're shooting some high velocity shells these days, but shotfall extends to 750 feet. When pushing pellets at 1,500 feet per second, designs should include extra space for pellets to travel farther than we think they will.

A major part of any reclamation effort is proper soil composition. A lot of soil in the East is particularly acidic. Soil should be as neutral as possible, and soil testing should be done. Get the soil as neutral as it can be. You can neutralize by adding lime and phosphate. Lead is less mobile and less soluble in neutralized soil. I want to know where wetlands are. Be aware of what is around you and any potential pitfalls.

*As far as shooting shot to the middle, I sometimes recommend vegetation removal. We plant back something low growth, manageable and that will help contain soil erosion. It's money well spent in the long run. During reclamation, it is virtually impossible to take huge machinery onto a heavily treed area.*

*I'm in this business, and the more I read about range concerns, the more frightened I get. Every clays course that I design is done with overkill in mind. I understand exactly what I'm dealing with, and in some instances, I've had to tell people, "Sorry, I'm not your guy. I don't think you should put a range here. Here's why. If you're adamant about it, you're on your own. I told you so." I'll do that in writing for them.*

*There are some legislative issues of concern. The Clean Water Act covers literally every body of water in this country, whether it be public or private. I don't want you to be alarmed by that, but frankly, you need to pay very close attention. Clay targets and lead are potential pitfalls as defined in the Clean Water Act as administered by various states. The states enforce their own legislation, so know your state's laws.*

*Contact the National Shooting Sports Foundation at (203) 426-1320 for information on range design with lead reclamation in mind. Designing a sporting clays range to manage lead is not rocket science. It's common sense coupled with doing things right the first time. If you do, you're going to ensure the longevity of your range. It could be cost effective early on, as opposed to very costly in hindsight.*

*I'll tell you this, range owners: We really need your help. You're the cog that turns the wheel that builds shooting sports in this country. You can also be the wheel that helps destroy it. Let's make sure we do it right. Make sure that you're prepared for any environmental battle that might come your way. If you take the right steps, you won't have a problem. The shooters need you. We all need you.*