

Environmental Regulations

AFFECTING OUTDOOR
SHOOTING RANGE OWNERS
AND OPERATORS



The Michigan Department of Environmental Quality (DEQ) recognizes the importance of ranges to the shooting sports and in fostering Michigan's proud outdoor recreational heritage. This Guide explains how state laws regarding environmental contamination and waste management may apply to shooting range operations. Good range management, in compliance with the laws and regulations described here, will help assure that ranges are operated with minimal impact on the environment and in a manner that protects the health and safety of everyone involved.



Range owners and operators are encouraged to become familiar with all environmental regulations that apply to their operations. Since most environmental problems at ranges result in areas where lead shot or bullets are used, this Guide focuses on steps that should be taken to manage those activities.

You are encouraged to contact the DEQ for more information about the recommendations described in this Guide before conducting any major on-site renovations or activities such as lead recovery and recycling. DEQ contact information is provided at the end of the document.

Best Management Practices for Shooting Ranges

The best way to minimize adverse impacts and help assure compliance with state law is to institute Best Management Practices (BMP's) at your shooting range. Humans, wildlife and the environment all benefit when shooting ranges adopt BMP's. Detailed information on BMP's is available in shooting range management guidebooks published by the National Shooting Sports Foundation and the U.S. Environmental Protection Agency. Examples of BMP's include managing soil acidity and surface water run-off to lessen the potential for lead leaching. Periodic lead recovery, recycling, and prohibiting shooting of lead over or into open waters are also examples. By employing appropriate site specific measures, future liabilities and costs relating to clean-up and site mitigation will be significantly lessened. These measures should be well documented and periodically updated in a shooting range stewardship plan. This plan provides a written record of all the proactive measures employed at your range.

Shooting Ranges and Lead Contamination

Although lead has long been the preferred material for shot and bullets, it also poses potentially significant environmental hazards. Spent lead shot and bullets weather and erode, resulting in soil and water contamination. Lead and lead compounds are toxic to humans and wildlife at very low levels. As a result, even under normal operations at a typical outdoor shooting range (where lead shot or bullets are used) lead may accumulate on the ground to where portions of the site are contaminated.

If levels of lead contamination exceed state cleanup standards, the state's cleanup law known as Part 201 (Environmental Remediation) of the Natural Resources and Environmental Protection Act (NREPA), 1994 PA 451, as amended, comes into effect and some form of site management will be needed. Even in instances where your shooting range may become contaminated, with proper planning and care, environmental issues can be managed in a way that allows continued range operation, while protecting human health and the environment.

Knowledge that your site is contaminated usually arises through the performance of a Baseline Environmental Assessment (BEA) in conjunction with a property transaction, or as a result of a site investigation by DEQ personnel or an environmental consultant. Shooting range owners or operators that know that a hazardous substance (such as lead) is present at the site at levels that exceed state cleanup standards have an obligation to address the contamination. The owner or operator also must exercise "Due Care" in their day-to-day operations of the site.

The key "Due Care" requirement is to assure that there is no exposure to lead at levels that would pose an unacceptable risk to workers or people who use the range. Potential risks to trespassers and other visitors must also be taken into consideration. At some ranges lead reclamation and recycling or further cleanup actions may be necessary during the range's operational life, to assure that risks are properly managed.



When a shooting range ceases operation owners/operators are required to take action to assure that residual contamination does not harm public health or the environment. The state's cleanup law provides a number of options for eliminating or properly controlling risks associated with lead contamination. These options are dependant on the intended future use(s) of the site.

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Environmental Assistance Center
1-800-662-9278

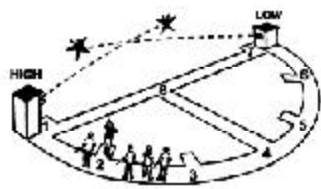




Protecting Water Resources

Shooting lead over or into open water (lakes, ponds, streams, rivers) or wetlands should be avoided because of the damage that lead shot or bullets can cause to water resources and to wildlife. The systematic deposition of lead into these areas would likely contaminate the water and sediments, and even impact fish and wildlife in the area. This of course is contrary to State Law and must be prevented. Shotgun ranges can avoid this problem by reconfiguring station(s) so as not to shoot over or into any areas of open water or wetlands. Alternatively, the station(s) could require the use of lead-free shot (such as steel, bismuth-tin, tungsten polymer, or other non-toxic shot) that has been approved by the U.S. Fish and Wildlife Service.

Designing a New Shooting Range



Design elements that prevent adverse impacts to water resources and help facilitate the periodic recovery of lead are essential when planning a new range or reconfiguring an existing operation. Environmental cleanup

activities can be simply and cost-effectively performed at well-designed ranges. State and national shooting sports organizations provide training and referrals to help construct properly designed ranges. Note that state and/or local permits may be required for construction or modification(s) of a range.

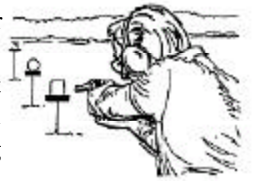
Shooting Range Stewardship

Shooting ranges play an important role for everyone that appreciates the shooting sports, hunter safety programs, and firearms education. They also enjoy a rich, proud tradition of fostering Michigan's outdoor recreational heritage.

Although lead has long been the preferred material for shot and bullets, lead and lead compounds can be toxic to humans and wildlife. This is of special concern to shooting ranges where spent shot and bullets may weather and erode resulting in soil and water contamination. This situation can be properly managed through the use of Best Management Practices (BMP's) for ranges.

Managing Waste Generated from Reclamation and Cleanup Activities

When considering lead reclamation or other cleanup activities, special attention should be paid to the legal requirements that control the management of waste generated from those activities. To avoid making expensive mistakes, proper planning, coordination and communication with the DEQ are essential, prior to project startup. For instance, it is highly recommended that during the lead recovery process, lead contaminated soils be contained within the original 'zone of contamination'. (DEQ can help you determine these boundaries). This is important because under RCRA and Part 111, the act of digging up contaminated soils constitutes the "generation" of waste and the regulatory obligation to manage it as either solid or hazardous waste (depending upon characterization). Characterization is the process that defines what type of waste it is, using the Toxic Characteristic Leaching Procedure (TCLP). Once waste has been generated, it is your responsibility as generator, to properly characterize (identify) it and ensure it is handled in the appropriate manner. Bullets and lead shot fragments reclaimed for recycling are exempt from these requirements.



Both solid and hazardous waste require 'specialized' handling and disposal under Part 115 (Solid Waste Management) and Part 111 (Hazardous Waste Management) of the NREPA. These regulations govern the storage, handling, labeling and transport of solid and hazardous waste. For specific details visit the Regulatory Reference Web Sites listed at the end of this document or contact DEQ's, Waste Management Division.

Contacts:

For general information on environmental regulations and best management practices applicable to shooting ranges:

Environmental Assistance Center
(800) 662-9278
www.deq.state.mi.us/ead/tasect/eac.html

Michigan United Conservation Clubs
(517) 371-1041
www.mucc.org

National Shooting Sports Foundation
(203) 426-1320
www.rangeinfo.org

For information about environmental remediation and "Due Care" requirements:

Environmental Response Division
(517) 373-9837

www.deq.state.mi.us/erd

For information about waste management requirements:

Waste Management Division
(517) 373-2730

www.deq.state.mi.us/wmd

Or visit DEQ's Regulatory Reference Websites:

Part 31 Water Resources Protection:

www.dnr.state.mi.us/law_book/statutes/code/part031.html

Part 111 Hazardous Waste Management:

www.dnr.state.mi.us/law_book/statutes/code/part111.html

Part 115 Solid Waste Management:

www.deq.state.mi.us/wmd/pub/solidwst/part115.pdf

Part 201 Environmental Remediation:

www.deq.state.mi.us/pub/erd/law/part201.pdf

We Want to Help

This guide provides only a simple overview of some of the key laws and concerns that apply to shooting ranges. DEQ staff is available to answer questions and provide assistance. Please contact us early in the planning process regarding any construction, redesign, lead reclamation or cleanup so that we may provide details about specific issues you may need to address.