



# Marine Corps Recruiting Depot (MCRD) Parris Island Parris Island, South Carolina

Range Environmental Vulnerability Assessment (REVA) Factsheet

February 2021

## Background

DoD uses and manages operational ranges to support national security objectives and maintain the high state of operational readiness essential to its mission requirements.

DoD conducts non-regulatory, proactive, and comprehensive operational range assessments (ORAs) to support the long-term sustainability of these ranges while protecting human health and the environment.

The purpose of an ORA is to determine if there is a release or substantial threat of a release of munitions constituents (MC) from an operational range to an off-range area that exceeds an applicable regulatory standard or creates a potential unacceptable risk to human health or the environment.

The Range Environmental Vulnerability Assessment (REVA) Program is the U.S. Marine Corps (USMC) program implemented to meet the DoD ORA requirements.

## ORA Findings (01/2021)

The MCRD Parris Island REVA Periodic Review concluded that there is a potential pathway for MC to leave the range. There is a viable MC source, a an identifiable migration pathway, and off-site receptors are present. This means that it is possible for MC interaction with an off-range receptor through an off-range exposure media. Sampling conducted during the current review period indicates that MC concentrations at or near the off-range boundary are below human and ecological screening criteria. There is no known off-range migration of MC that presents a potential unacceptable risk to human health or the environment.

## Next Steps

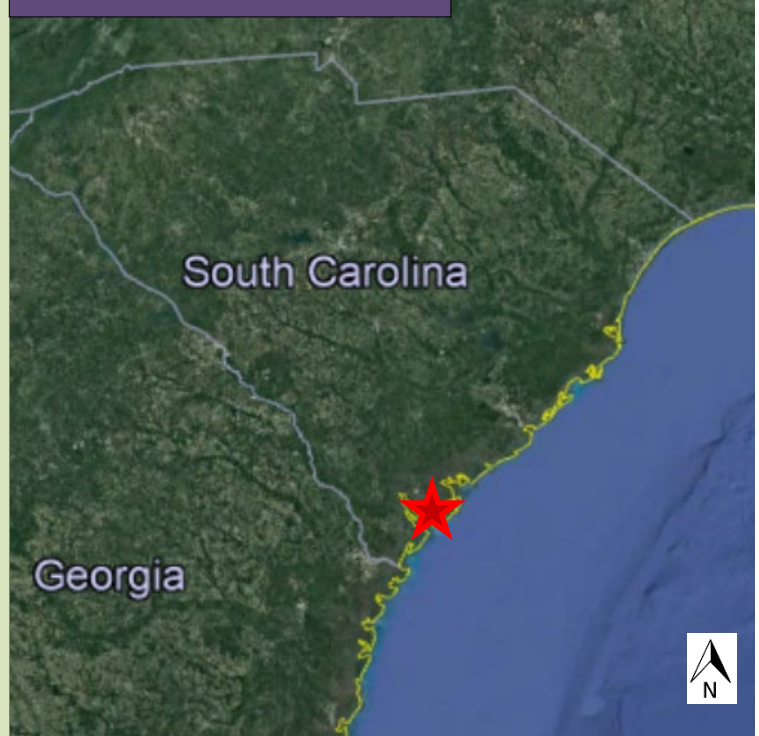
The operational ranges will be reassessed during the next REVA Periodic Review (5 years), or sooner if there are changes to site conditions or training.

## Operational Ranges Overview

MCRD Parris Island occupies more than 8,000 acres in Beaufort County, South Carolina. Since the installation opened, the primary mission at Parris Island has been the training of Marine recruits. Operational ranges include several small arms ranges and a non-live fire training area.

Operational ranges at MCRD Parris Island during the current periodic Review period (2012-2018) are used for small arms training as well as a non-live fire training area where pyrotechnics are used. For small arms ranges, REVA focuses on lead as the MC indicator because lead is primarily associated with small arms range munitions and is the most prevalent metal found in soils on operational ranges.

## Location of MCRD Parris Island



### Range Assessment Overview

**Scope:** This REVA Periodic Review for MCRD Parris Island covers munitions used from 2012 through 2018. The previous REVA study at MCRD Parris Island (for the years 2006 through 2011) concluded that there was no immediate threat to identified off-range receptors.

**Approach:** REVA uses a conceptual site model (CSM) to inform decision making. A complete CSM pathway consists of a source of MC, transport mechanisms of MC to an off-range exposure media, and receptor interaction with the off-range exposure media. For this REVA Periodic Review, data were collected to update the CSM in 2014. This included a review of the operational ranges (e.g., range inventory and changes in design), changes in range use (e.g., amounts and types of munitions expenditure), changes in migration pathways, and changes to receptors (e.g., ecological, off limits areas).

**Results:** At MCRD Parris Island, the CSM pathway is complete for MC migration from the operational ranges to off-range receptors in sediment. However, analytical sampling results indicated that MC concentrations at or near the off-range boundaries are below human and ecological screening criteria.

**Source:** Small arms present the largest MC source at the installation, with munitions expenditures from the previous to current review periods being comparable. Some small arms are deposited in on-range surface water bodies. In 2019, expansion and construction with a best management practice was completed on one range. Construction has started on a second range and the remaining two highest use ranges are in the planning and design phase. Implementation of best management practices mitigate migration of lead.



Map of Range Complex

**Transport Mechanisms:** The transport mechanism for small arms from on-range to off-range is via hydraulic connection, current, or flow. The remaining transport mechanism is MC in surface soil traveling off-range via stormwater runoff (overland flow).

**Off Range Receptors:** No critical habitats have been designated at MCRD Parris Island, but several threatened and/or endangered species may be present. Recreational use occurs within off-range areas; however, the installation has posted a sign to prohibit shellfish harvesting in the area. Groundwater at MCRD Parris Island contains high chloride levels and is not used as a drinking water source.

**Conclusion:** The REVA Periodic Review of MCRD Parris Island concludes that there is no known off-range migration of MC that presents a potential unacceptable risk to human health or the environment. The operational ranges will be reassessed during the next REVA Periodic Review.

For more information on this range/range complex/installation contact Jennifer Simmons (jennifer.simmons@usmc.mil).  
For more information on the DoD Operational Range Assessment Program visit <http://www.denix.osd.mil/sri/home/>