U.S. Army Garrison Hawai'i Combined Oahu Installations, Hawai'i

November 2022

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. The Department 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 Army ORA effort was developed to address DoD requirements detailed in DoD Directive 4715.11 (10 May 2004) and DoD Instruction 4715.14 (15 November 2018). The overall objective of the ORA is to assess operational ranges/range complexes to determine if an off-range MC release or substantial threat of an off-range MC release exists; if an off-range MC release exists, does it exceed an applicable regulatory reporting standard; and if an MC release or substantial threat of a release exists, determine whether it creates a potentially unacceptable risk to off-range human health or the environment. Army ORAs assess potential off-range migration of MC along surface water system and groundwater migration pathways.

Installation Overview

Dillingham Military Reservation

Dillingham Military Reservation is located approximately five miles west of the town of Waialua, Hawai'i, on the northwestern coast of Oahu. The installation lies at the foot of the Waiana'e Range and is paralleled by the Farrington Highway.

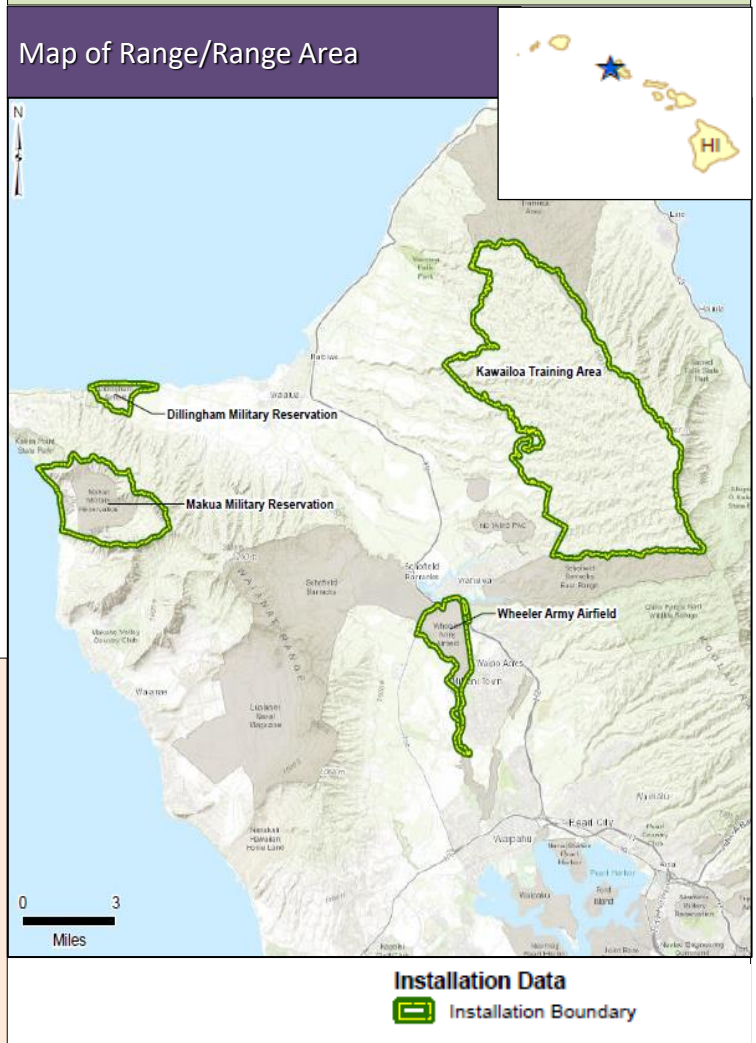
Operational Range Assessment Findings (11/2022)

Based on the updated data, no off-range MC release or substantial threat of an off-range MC release currently exists. The operational ranges remain categorized as Unlikely.

Next Steps

The installation's operational ranges should be included in the FY23-27 cycle of ORAs to meet DoD Policy (DoDI 4715.14) re-assessment requirements.

Map of Range/Range Area



Installation Overview (continued)

Wheeler Army Airfield

Wheeler Army Airfield is located in central Oahu, southwest of the town of Wahiawa. The installation is situated on the Schofield Plateau between the Ko'olau Mountain Range and the Wai'anae Mountain Range. Bordering Wheeler Army Airfield to the northwest is Schofield Barracks Main Post and to the northeast is the town of Wahiawa. Mililani Town is southeast and Schofield Barracks East Range is east of the installation. To the south is Lualualei Naval Reservation; Kunia Military Reservation and pineapple and sugar cane fields are located to the west.

Kawailoa Training Area

Kawailoa Training Area is located in the north-central portion of Oahu, Hawai'i. Kawailoa is on the leeward (western) slope of the Ko'olau Mountain Range, directly south of Kahuku Training Area. The installation is bordered to the south by the SBMR East Range; to the east by private land on the crest of the Ko'olau Mountains, the Kaipapa'u Forest Reserve, Hau'ula Forest Reserve, and Sacred Falls State Park; and to the west by private agricultural lands.

Makua Military Reservation

Makua Military Reservation is located approximately 38 miles northwest of Honolulu, Hawai'i on the northwest shore of the island of Oahu, near Ka'ena Point. It occupies approximately 4,268 acres within the adjoining Makua and Kahanahaiki valleys formed by the surrounding Wai'anae mountain range. The Wai'anae mountain range borders the installation to the north, south, and east sides, with the installation sloping down into the valley toward the western boundary along Farrington Highway. Makua Beach and the Pacific Ocean lie west of the highway across from the installation. The town of Makaha is the nearest township and is located approximately five miles south of the installation.

Previous Assessments

The qualitative assessments consisted of collecting, evaluating, and presenting available data to establish if there was an interaction between the on-range sources of munitions constituents of concern (MCOC) and off-range receptors (source/receptor interaction).

Dillingham Military Reservation

During the Phase I assessment, Dillingham Military Reservation included a total of four operational ranges totaling 599.64 acres including one airstrip the three training areas.

The Phase I determined there was no evidence that live-fire munitions have been expended at the four ranges at Dillingham Military Reservation since it was established. While non-live fire munitions permitted for use, they were of limited quantity, and it was determined that no MCOC are present. Additionally, a limited amount of surface water was found on-range that was either stationary or contained by on-site development. Therefore, there was limited erosion and runoff to off-range areas. The installation was categorized as Unlikely to have a source/receptor interaction because no live-fire munitions had ever been used on the site.

During the 2013 Periodic Review, the operational range count decreased from four to two ranges due to reconfigured range boundaries; however, the overall operational and non-operational areas remained the same. The usage of the airfield remained the same and no live-fire or non-live-fire munitions had been used. There had been no change in potential migration pathways and there were no new human or ecological receptors identified. As such, the ranges were determined Unlikely and placed into a periodic review cycle.

Wheeler Army Airfield

During the Phase I assessment, Wheeler Army Airfield included a total of one operational range (rotary wing runway) totaling 568.02 acres. The one operational range was found to have no known source of MCOC. The installation was categorized as Unlikely to have a source/receptor interaction because no live-fire munitions had ever been used on the site.

During the 2013 Periodic Review, the operational range count remained one range; however, the operational range area had increased by 137.56 acres due to the southwestern boundary being re-drawn. The airfield acreage was reduced from 568.02 to 152.69 acres; however, the airfield usage remained unchanged. There had been no change in potential migration

Previous Assessments (continued)
pathways and there were no new human or ecological receptors identified. As such, the ranges were determined Unlikely and placed into a periodic review cycle.

Kawailoa Training Area
During the Phase I assessment, Kawailoa Training Area included a total of 20 operational ranges (7 maneuver training areas and 13 rotary wing runways) totaling 23,455 acres. All 20 operational ranges at Kawailoa Training Area were found to have no source of MCOC. The installation was categorized as Unlikely to have a source/receptor interaction because no live-fire munitions had ever been used on the site.

During the 2013 Periodic Review, the operational range count remained 20 ranges; however, the overall acreage had been reduced by 149.68 acres. There was no change in usage, and no live-fire munitions use had occurred at the installation. There had been no change in source/receptor interactions. As such, the ranges were determined Unlikely and placed into a periodic review cycle.

Makua Military Reservation
During the Phase I assessment, Makua Military Reservation included a total of three operational ranges (two maneuver training areas and one impact area) totaling 4,223 acres.

The three operational ranges at Makua Military Reservation were found to have a known source of MCOC and identified surface water and groundwater migration pathways to both human and ecological receptors from current and/or historical activities. However, existing sediment sampling results indicated that MCOC were not present above screening criteria in sediment transported from the installation and deposited in off-range estuarine wetlands, that are known as muliwai. Additionally, surface water sampling results identified only one off-range sample out of 81 total samples collected during three separate flow events, which contained MCOC above U.S. Environmental Protection Agency (USEPA) Region 9 Tap Water Preliminary Remediation Goals (PRGs). Supplementary sampling events did not identify any MCOC above USEPA Region 9 Tap Water PRGs in surface water. The marine resources study completed

Basic Assessment (continued)
in 2009 determined that recreational and subsistence fishermen using the muliwai and Pacific Ocean had not been and would not be adversely affected by the migration of low levels of potential MCOC. The study also determined that the muliwai are inhabited by minimal quantities of fish, incapable of supporting subsistence fishermen. Furthermore, the study indicated that muliwai act as sinks, trapping potential MCOC and filtering them from surface water prior to discharging into the Pacific Ocean. Therefore, the installation was categorized as Unlikely to have a source/receptor interaction.

During the 2013 Periodic Review, the operational range count remained three range and the operational range area and installation boundaries had remained consistent. No additional source loading of MCOC had occurred and based on interviews with the Range Officer, there had been no munitions use on the installation since 2004. Based on interviews with the Acting Environmental Division Chief and the Environmental Division's hydrologist, UXO clearance activities for ongoing work had uncovered improved conventional munitions (ICMs) in an on-range area where they had previously not been identified. Although the ICMs were identified in a new area, the overall source component of the CSM has not changed because the entire operational range area was determined to have a source of MCOC during the Phase I. Additionally, it was determined that no flow from the streams was exiting the installation, and the muliwai were stagnant and contained little water. There were no new human or ecological receptors identified. As such, the ranges were determined Unlikely and placed into a periodic review cycle.

Basic Assessment
The Basic Assessment is a periodic re-assessment of operational ranges to determine whether there are releases or substantial threat of releases of MC to off-range areas and whether MC migration poses an unacceptable risk to human health or the environment. This Basic Assessment was performed to collect new data generated since the prior ORA, evaluate that data, review and evaluate the prior ORA, refine the conceptual site model (CSM) and identify whether migration and/or unacceptable risk exists while also either confirming or disproving the previous ORA

Basic Assessment (continued)
conclusion.

At the completion of the site visit and subsequent data collection efforts during the Basic Assessment, all new data and information obtained was evaluated to update the CSMs.

Dillingham Military Reservation
Information gathered during this assessment cycle confirms that there have been no known military munitions expended at the installation and the source-pathway-receptor interaction remains incomplete. Although there has been a slight increase in acreage of the installation boundary, range layout and operations have remained unchanged since the previous assessment. Additionally, there continues to be no munitions expended within the operational area. Based on the data gathered during the Basic Assessment, the two operational ranges at Dillingham Military Reservation remain Unlikely to have potential MCOC migrate off range and adversely affect human or ecological receptors.

Wheeler Army Airfield
Information gathered during this assessment cycle Confirms that there have been no known military munitions expended at the installation and the source-pathway-receptor interaction remains incomplete. Range layout and operations have remained unchanged since the previous assessment and there continues to be no munitions expended within the operational area. Based on the data gathered during the Basic Assessment, the one operational range at Wheeler Army Airfield remains Unlikely to have potential MCOC migrate off range and adversely affect human or ecological receptors.

Kawailoa Training Area
Information gathered during this assessment cycle confirms that there have been no known live-fire military munitions expended at the installation and the source-pathway-receptor interaction remains incomplete. Kawailoa Training Area has been reduced to to approximately 500 acres therefore there has been

Basic Assessment (continued)
a significant decrease in acreage since the prior assessment. Based on the data gathered during the Basic Assessment, the four operational ranges identified at Kawailoa Training Area remain Unlikely to have potential MCOC migrate off range and adversely affect human or ecological receptors.

Makua Military Reservation
New information gathered during this assessment cycle indicates that the range count has decreased to two operational ranges, including one Company Combined Arms Assault Course (CCAAC) and a dudded impact area. This change occurred as one of the previously identified maneuver training areas merged with the existing dudded impact area. There have been no changes to munitions use since the prior ORA and it was confirmed that no depleted uranium (DU)-containing munitions have been expended at Makua Military Reservation. Additionally, the results of historic sampling have remained valid and there has been no additional source loading. Therefore, there is no reason to expect that concentrations off range have increased. Based on the data gathered during the Basic Assessment, the two operational ranges at Makua Military Reservation remain Unlikely to have potential MCOC migrate off range and adversely affect human or ecological receptors.