

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
LAHONTAN REGION**

**MEETING OF NOVEMBER 5, 2025  
BARSTOW**

<b>ITEM 6</b>
<b>MARINE CORPS LOGISTICS BASE, BARSTOW ENVIRONMENTAL RESTORATION PROGRAM OVERVIEW</b>

<b>CHRONOLOGY</b>	
December 1942	The Marine Corps Depot of Supplies was established.
October 1946	Approximately 2000 acres east of Nebo Main Base was annexed establishing Yermo Annex.
November 1978	The base was renamed Marine Corps Logistics Base (MCLB), Barstow.
December 1980	Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), was enacted by Congress. This law provided broad Federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. CERCLA established the National Priorities List (NPL).
November 1989	Marine Corps Logistics Base, Barstow added to the NPL.
October 1990	Federal Facility Agreements (FFA) signed for MCLB, Barstow
May 1997	A Record of Decision (ROD) was signed for Operable Units 3 and 4.
December 1997	A ROD was signed for Operable Units 5 and 6.
March 1998	A ROD was signed for Operable Units 1 and 2.
October 2014	A ROD was signed for Operable Unit 7.
2019	A per- and polyfluoroalkyl substances (PFAS) preliminary assessment was conducted at MCLB, Barstow.
2022- present	A PFAS remedial investigation is being conducted at MCLB, Barstow.

<b>BACKGROUND</b>
<p>The Navy’s Environmental Restoration Program at MCLB, Barstow is a comprehensive program addressing various environmental issues including contamination of groundwater, soil and soil-vapor. The purpose of this presentation is to provide the Board members with a short history of MCLB, Barstow, an overview of its Environmental Restoration Program, and an initial update on the Base’s current PFAS investigation. For reference, an acronym list is included as Enclosure 1.</p>

## ISSUES

This is an informational item to provide an overview of the MCLB, Barstow's environmental cleanup program.

## DISCUSSION

The presentation provides a short history of MCLB, Barstow, an overview of its Environmental Restoration Program, and an initial update on the Base's current PFAS investigation.

MCLB, Barstow has been in use since the 1940's, when it supported the Fleet Marine Forces in the Pacific Theater. Since then, it has continued to be a logistical hub for the U.S. Marine Corps.

The base is comprised of three principal sites: Nebo Main Base, which functions as base headquarters and is the main facility for administration, storage, recreational activities, shopping, and housing functions for Base personnel. Yermo Annex is primarily a storage and industrial complex and the rifle range which is 2438 acres south of Nebo Maine Base used for rifle and pistol qualifications.

MCLB, Barstow's Environmental Restoration Program is a comprehensive program addressing various environmental issues, including groundwater and soil contamination, as well as the cleanup of munitions and other hazardous substances utilizing the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) process. MCLB is listed on the National Priorities List (NPL). MCLB receives oversight from the United States Environmental Protection Agency (USEPA), Department of Toxic Substances Control (DTSC) and the Lahontan Regional Water Quality Control Board.

MCLB, Barstow was added to the NPL in 1989, and a Federal Facilities Agreement was signed between the Department of the Navy (the Navy"), the Lahontan Water Board, the USEPA, and California's DTSC. The FFA details the roles and responsibilities between the Navy, USEPA, and the State of California.

MCLB, Barstow's Environmental Restoration Program is divided into operable units (OUs) based on affected media: groundwater, soil, or soil-vapor. OUs 1 and 2 consist of groundwater contamination beneath Yermo Annex and Nebo Main Base, respectively. OUs 3 and 5 consists of soil contamination at Yermo Annex. OUs 4 and 6 consists of soil contamination at Nebo Main Base and OU7 primarily addresses the soil vapor contamination at Nebo Main Base. Records of Decision (RODs) document the selected remedies addressing contamination within an OU. All seven OUs at MCLB, Barstow have signed RODs. Below is a summary of the major remedy components for each OU:

- OUs 1 & 2: Remedies included groundwater extraction, air sparging and soil vapor extraction (AS/SVE).

**DISCUSSION**

- OUs 3 through 6: Remedies included excavation, land use and institutional controls, and no further action designations following risk assessments.
- OU 7: Remedies included AS/SVE, monitored natural attenuation, soils excavations and land use and institutional controls

Highlights of the Environmental Restoration Program at MCLB, Barstow include the remediation of the North Yermo groundwater plume and the North Nebo Main Base groundwater plume. Both plumes have significantly reduced their footprint and contaminant concentrations via remediation and Water Board staff commend the Navy for their continued dedication to improving groundwater conditions at MCLB, Barstow.

Currently, the Navy is conducting a base wide PFAS remedial investigation. The preliminary assessment was conducted in 2019. There is another PFAS sampling event scheduled for December 2025 as the Navy assesses the nature and extent of PFAS contamination on base. PFAS contamination at MCLB and many of our other DOD facilities are generally being handled separately from legacy contaminants. There is no ROD that addresses PFAS.

Soil and groundwater on base have been impacted with PFAS. Currently, the highest recorded concentration of PFAS on base is 1,500 nanograms per liter of perfluorooctanoic acid (PFOA). The sample was taken near the former firefighting training area where Aqueous Film-Forming Foam (AFFF), a known PFAS source, was used during training events. Water Board staff will continue to update the Board as the PFAS investigation continues at MCLB, Barstow.

**PRESENTER**

Mark Allen – Engineering Geologist.

**PUBLIC OUTREACH/INPUT**

No public outreach was conducted for this item.

**RECOMMENDATION**

This is an informational item, and no formal action is requested, though Water Board members may provide input and direction to staff.

ENCLOSURE	ITEM	BATES NUMBER
1	Acronym List ( <a href="#">Enclosure 1- Acronym List.docx</a> )	6 – 5
2	CERCLA Process Graphic ( <a href="#">CERCLA process graphic (enclosure 2).docx</a> )	6 - 9



# **ENCLOSURE 1**



# Acronyms List

- GETS = groundwater extraction and treatment system
- NPL = National Priorities List
- OU = Operable Unit
- RI = Remedial Investigation
- ROD = Record of Decision
- RRSE = Relative Risk Site Evaluation
- SI = Site Inspection
- SVE = soil vapor extraction
- PCE = tetrachloroethene
- TCE = trichloroethene
- TS = Treatability Study
- VI = vapor intrusion
- PFAS = per- and polyfluoroalkyl substances
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# **ENCLOSURE 2**



