



EXECUTIVE OFFICER’S REPORT
August 1, 2023 – August 31, 2023

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1. Personnel Report – *Sandra Lopez*

Promotions

- Alonzo Poach, Senior Engineering Geologist, Department of Defense Unit, Victorville. This position will assign and direct the work of the unit, supervise staff performing tasks related to department of defense and site cleanup program sites, prepare annual work plans, and track budget expenditures.

New Hires

- Reginald Tan, Senior Water Resource Control Engineer, Wastewater & Agricultural Unit, Victorville. This position will assign and direct the work of the unit, provide daily supervision, review work products, prepare annual work plans, and track budget expenditures.
- Jose Valle De Leon, Water Resource Control Engineer, Wastewater & Agricultural Unit, Victorville. This position provides regulatory oversight of projects involving discharges to groundwater or surface waters and projects

intended to restore and/or enhance water quality in the Waste Discharge Requirements (WDRs), National Pollutant Discharge Elimination System (NPDES), and Site Cleanup Programs.

Vacancies

- Engineering Geologist, Land Disposal Unit, Victorville. This position will oversee waste discharges to land and site investigation/cleanup at various types of regulated and unregulated facilities including landfills, mines, composting facilities, cement plants, and site clean-up sites.
- Engineering Geologist, Department of Defense Unit, Victorville. This position will oversee site investigations and cleanups at Department of Defense sites in the South Lahontan area and respond to spills and complaints, as necessary.

2. Crashed plane remains at the bottom of Lake Tahoe, Rubicon Bay – Kerri O’Keefe



Figures 2.1 and 2.2 - A Piper PA-28-140 two-person fixed wing aircraft (Figure 2.1) crashed into Rubicon Bay of Lake Tahoe on July 1, 2023 (Figure 2.2). Source: <https://airplaneusa.com>

The following article summarizes Lahontan Regional Water Quality Control Board staff activities related to the attempted recovery of a crashed plane in Lake Tahoe. CalOES Spill Report Control #23-4253 reported to staff that at approximately 10AM on July 1, 2023, a Piper PA-28-140 two-person fixed wing aircraft crashed into Rubicon Bay of Lake Tahoe. There were no reported fatalities from the crash. Staff initially responded due to concern of potential contaminants (e.g., petroleum products) or navigation hazards.

After the incident, a salvage crew was contacted to obtain the status of the recovery efforts. According to a statement provided to staff by North Coast Divers, a salvage crew searched at a depth of approximately 600 feet underwater for a period of 4 days with an underwater remote operated vehicle (ROV) using a camera, sonar, and observation boat. The plane was unfortunately not recovered during the search. The lead salvage diver

stated, “the problem is that when a plane enters the water, the plane starts to fly again so the plane may actually be hundreds or thousands of feet away from the known location”.

During the search, the salvage crew noted that no floating debris, petroleum sheen or petroleum odors were observed. Although North Coast Divers was unable to recover the plane, the crew is still searching for the plane with the assistance of a local group of people who regularly search for debris in Lake Tahoe to remove sunken items.

North Coast Divers was instructed to notify the staff if the plane is found and before they begin removal actions. Staff are periodically contacting the insurance company and National Transportation Safety Board for updates. Based on the observations of the North Coast Divers and the fact that the plane likely exceeds 600 feet below lake level, staff determined the plane does not pose a threat to water quality or a navigation hazard.

3. Fifth Five-Year Review Finalization in Progress for Marine Corps Logistics Base Barstow, San Bernardino County, California – *Molina Hauv*

Marine Corps Logistics Base Barstow submitted the draft final fifth five-year review which summarizes the sites statuses and remedial actions for Operable Units (OUs) 1 through 7. The purpose of the five-year review is to determine whether the remedial actions selected in the record of decisions (RODs) for OUs 1 through 7 are protective of human health and the environment. Figures showing the locations of the various OUs are included below. A summary of the protectiveness statements for the OUs are listed below.

OU 1

OU 1 consists of groundwater contaminated with volatile organic carbons (VOCs), primarily tetrachloroethene (PCE) and trichloroethene (TCE) at Yermo Annex. The remedies for OU 1 were established in the 1998 ROD for OUs 1 and 2 which included:

- groundwater extraction and treatment,
- air sparging/soil vapor extraction systems (AS/SVE),
- land use controls (LUCs), and
- long-term monitoring of groundwater and soil vapor.

The remedies at OU 1 were deemed as currently protective because LUCs are in effect which prevent the use of untreated groundwater where contaminants of concern (COCs) exceed drinking water standards and there are no receptors that have been exposed to the contaminated groundwater.

OU 2

OU 2 consists of groundwater contaminated with VOCs, primarily PCE and TCE with 1,2-DCA and benzene. The remedy for the Nebo North plume was established in the ROD for OUs 1 and 2 and for the Nebo South plume in the OU 2 ROD which included:

- AS/SVE,
- pump and treat,
- natural attenuation, and
- groundwater use LUC.

The remedies at OU 2 were deemed as currently protective due to the fact that the remedy is functioning as intended and is protective of human health and the environment.

OUs 3 through 6

OUs 3 through 6 encompass the soil sites between both the Yermo and Nebo annexes. The remedies for the soil sites vary and includes, but is not limited to:

- LUCs for soil and to prevent groundwater use,
- best management practices (BMPs),
- long term monitoring, and
- monitored natural attenuation.

The remedies at OUs 3 through 6 were deemed protective with LUCs in place that are functioning and prevent the exposure to soil.

OU 7

OU 7 includes miscellaneous sites that are not covered by OUs 1 through 6. This includes soil and groundwater sites within both the Yermo and Nebo annexes. The remedy for these sites includes, but is not limited to:

- Various LUCs for soil and to prevent groundwater use, and
- SVE of TCE from soils.

The groundwater remedies at OU 7 involve monitored natural attenuation and LUCs, which are deemed protective by preventing the use of contaminated groundwater.

Summary

Overall, the remedies at MCLB Barstow for the five-year review period were determined to be protective of human health and the environment with various remedies in place including LUCs, prevention of exposure to contaminated soil and groundwater, groundwater extraction systems and soil vapor extraction systems, and continuous monitoring of existing groundwater plumes to delineate the plumes and evaluate the effectiveness of the remedies.

The Fifth Five-Year Review also addressed multiple agency comments and concerns from the previous Five-Year Review with various work implemented during this review period. Examples of this work include new wells installed to further delineate Yermo

North plumes to address data gaps in OU 1, and additional nested vapor and groundwater monitoring wells installed to address data gaps in OU 7.

The final version of the Fifth Five-Year Review is currently in progress, with the next five-year review to occur in 2027.

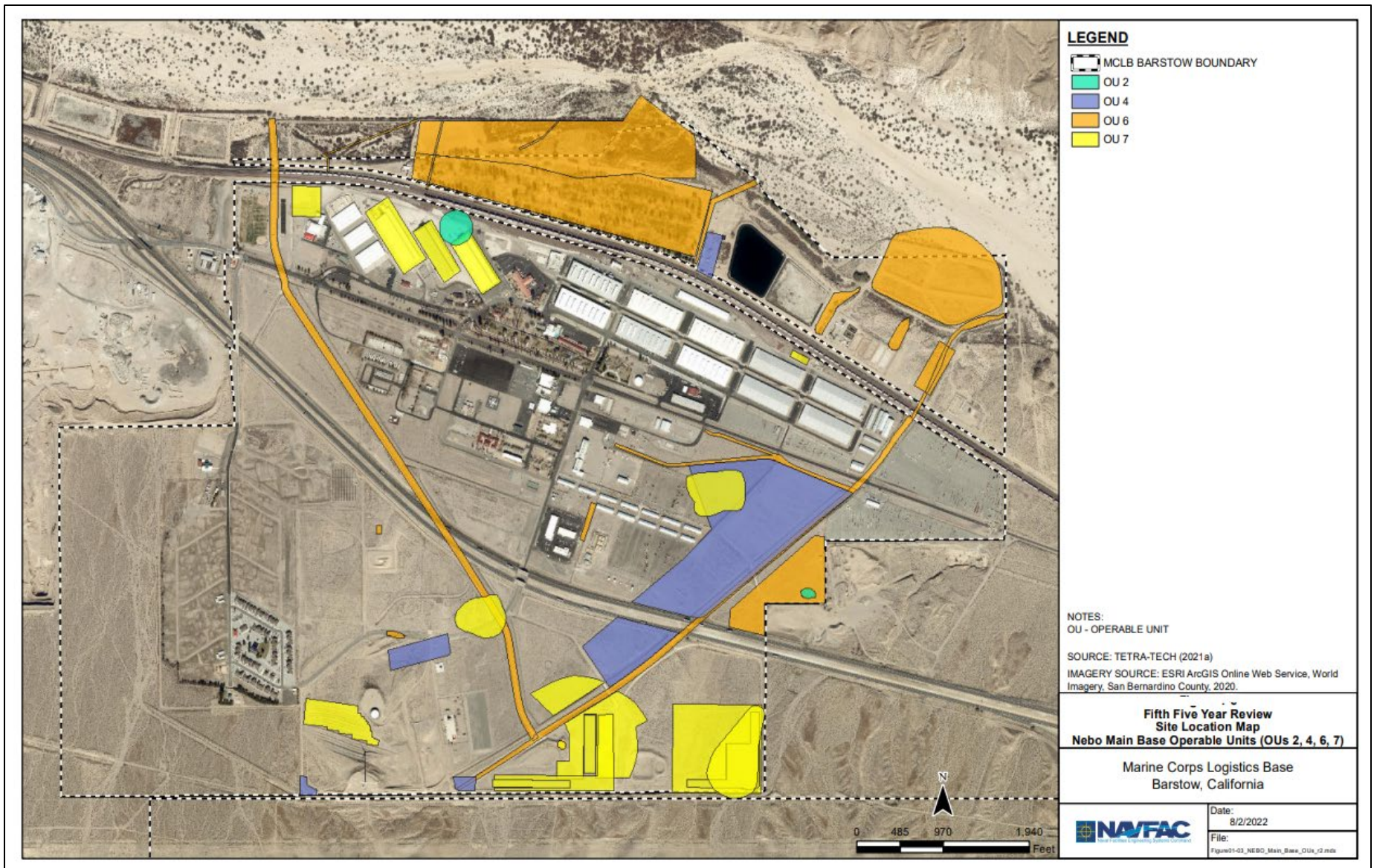


Figure 3.1: Nebo Main Base Operable Units 2, 4, 6 and 7

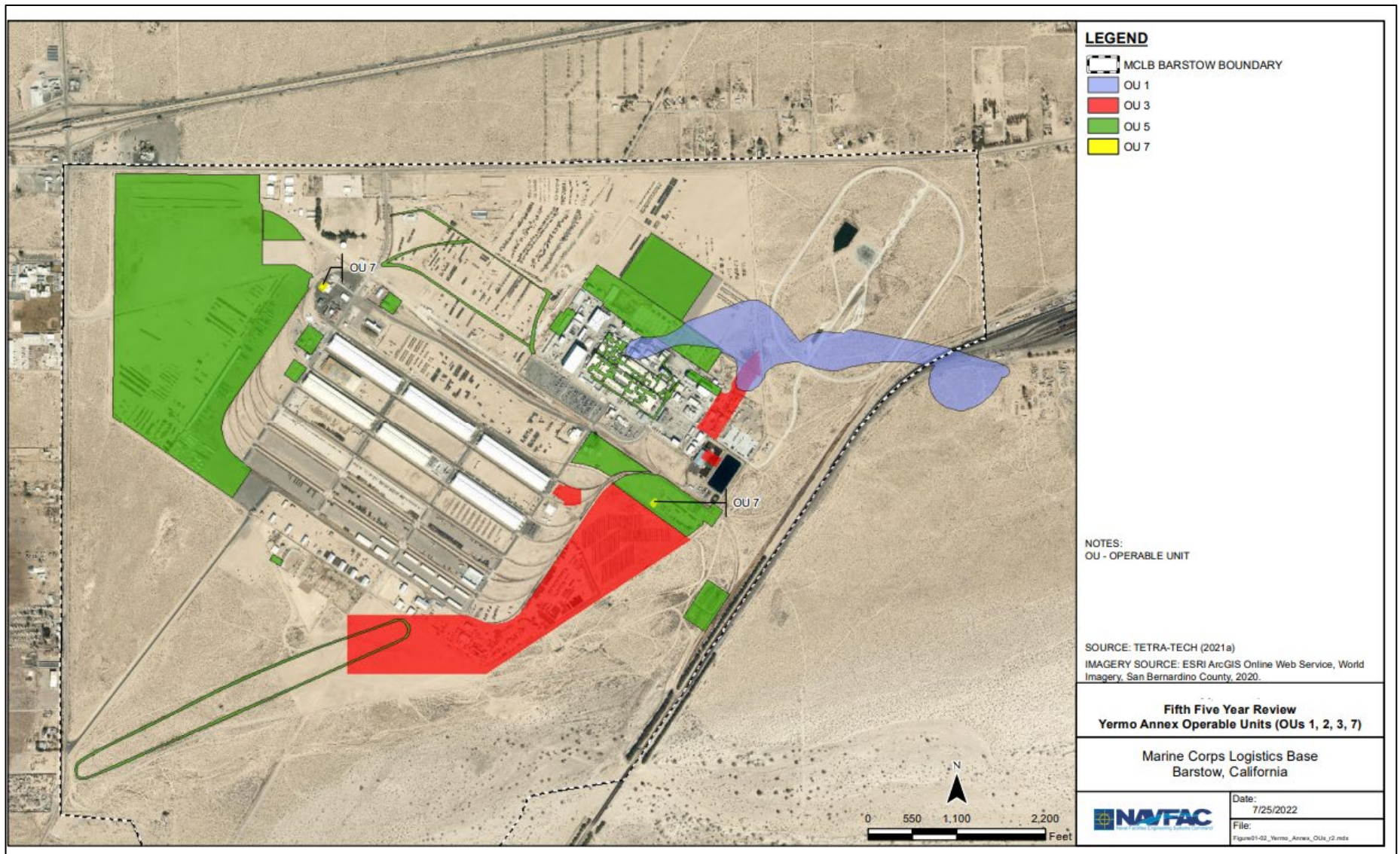


Figure 3.2: Yermo Annex Operable Units 1, 2, 3, & 7g

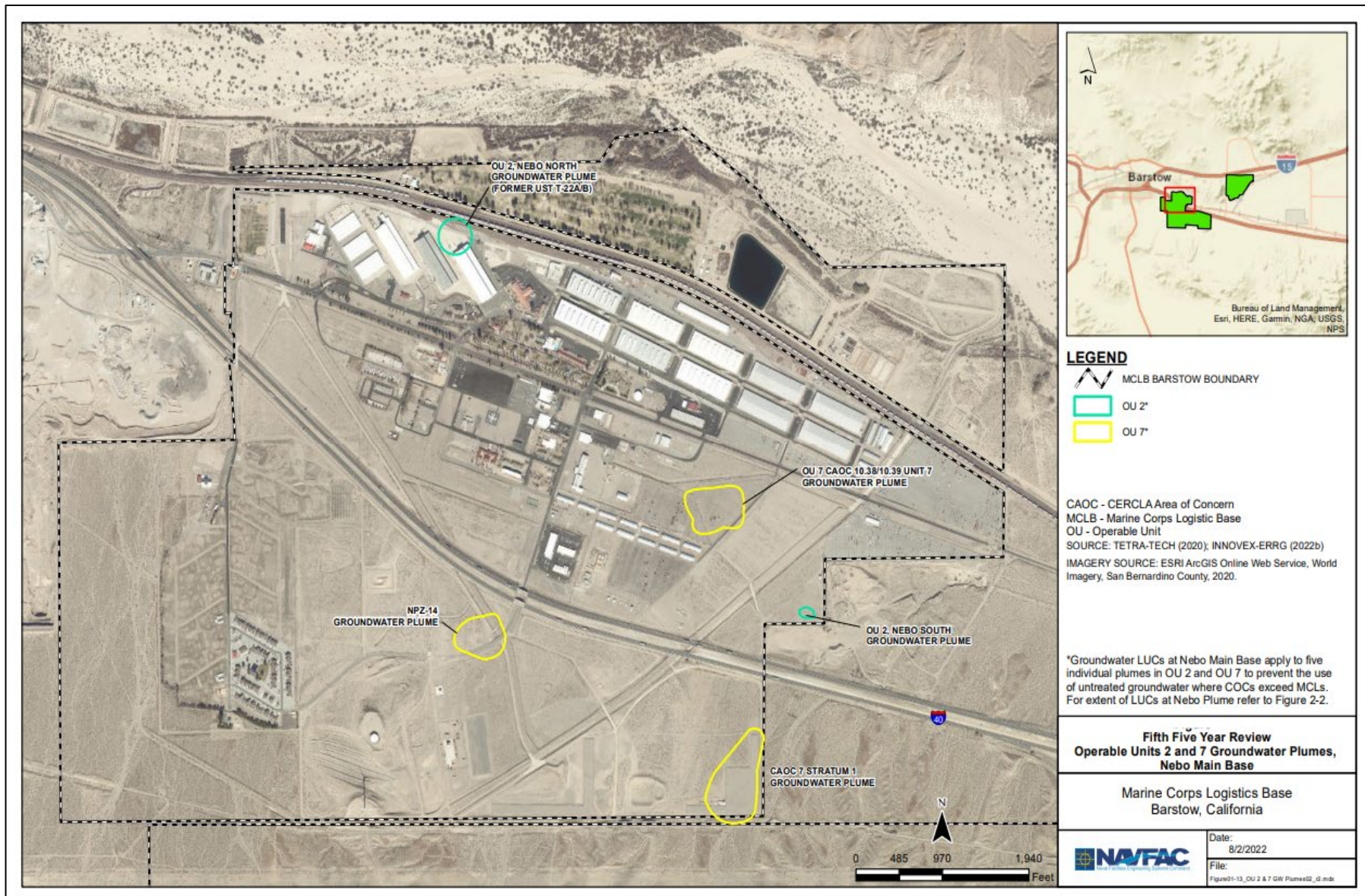


Figure 3.4: Nebo Main Base Groundwater Plumes

4. The Department of Navy at Naval Air Weapons Station (NAWS) China Lake with Water Board Acceptance Finalizes the 2022 Fourth Five-Year Review Report of Remedial Actions Installation Restoration Program Sites 6, 12 and the Armitage Field Operable Unit – Omar Pacheco

This above-referenced report presents the results of the 2022 fourth five-year review at Naval Air Weapons Station (NAWS) China Lake, California, for the following sites:

- Installation Restoration Program (IRP) Site 6 – T-Range Disposal Area,
- IRP Site 12 – Supersonic Naval Ordnance Research Track (SNORT) Road Landfill, and
- Armitage Field Operable Unit (OU) (IRP Sites 1, 2, 3, 44, 45, 50, and 58 and point of interest [POI] 197).

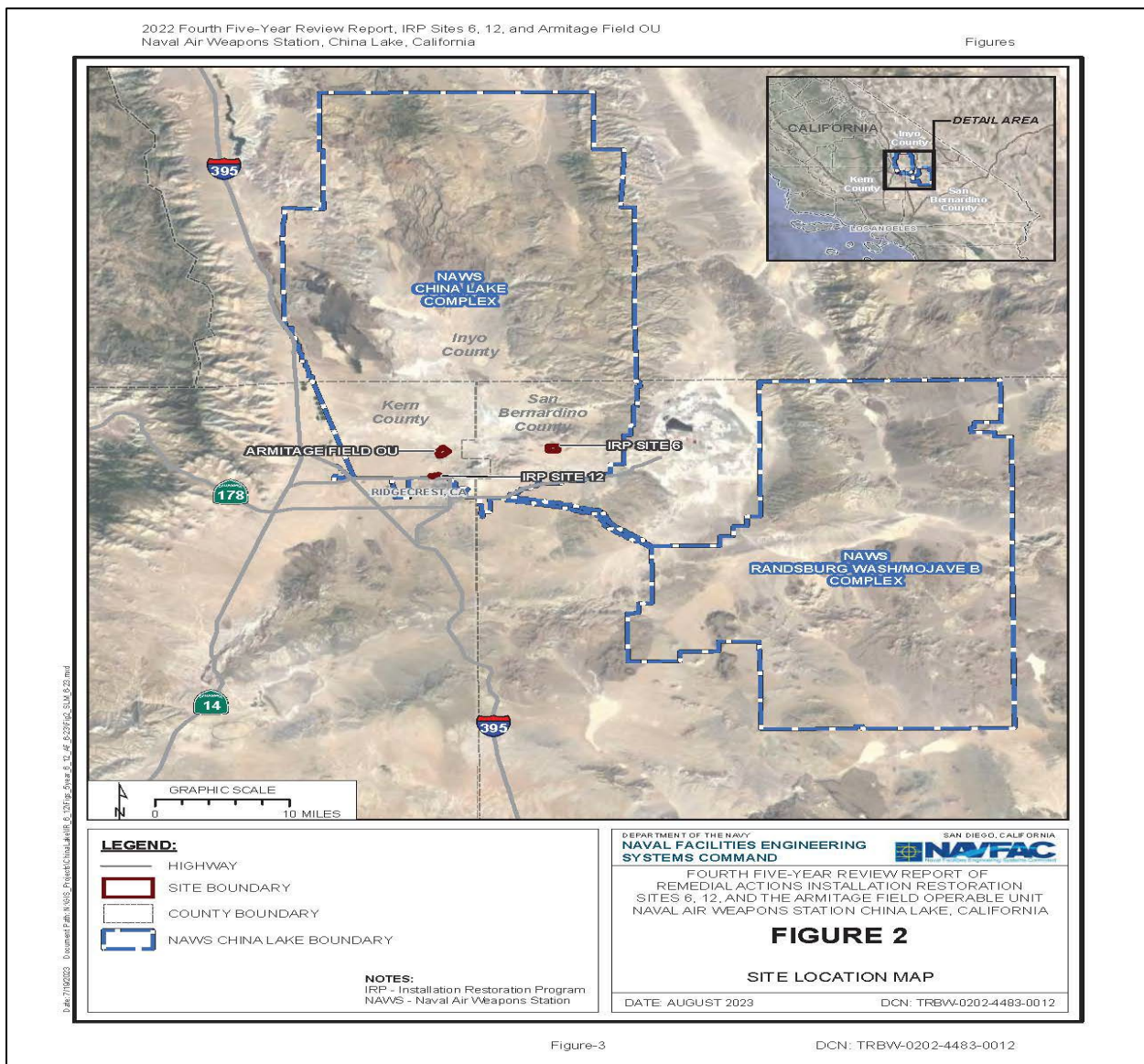


Figure 4.1: shows the locations of the above-mentioned sites.

The purpose of a five-year review is to determine whether the remedies selected for implementation in the record of decision (ROD) for a site are protective of human health and the environment. The evaluation and protectiveness determinations of the selected remedies are documented in five-year review reports, which identify any issues found during the review and provide recommendations to address them.

IRP Site 6

IRP Site 6 was a propellant, explosive, and pyrotechnic (PEP) waste open burn facility and past operations included disposal of wastes in trenches or pits. This site consists of six distinct areas with pits, trenches, and aboveground tanks designated Areas 1 through 6 that were used from 1946 to 1975 to dispose of PEP materials and explosive-contaminated waste.

IRP Site 6 Selected Remedy

The selected remedy for IRP Site 6 consists of, but not limited to the following:

- 1) Placing waste and debris into open trenches at Areas 1, 2, 3, 4 to be used as a foundation layer for engineered alternative covers.
- 2) Constructing engineered alternative covers at Areas 1, 2, 3, 4 using materials excavated from an existing borrow pit at NAWS China Lake.
- 3) Implementing land use controls (LUCs).
- 4) Maintaining the engineered covers, including conducting annual site inspections and five-year reviews to verify that the remedy is functioning as intended.

IRP Site 6 Conclusions and Recommendations

A review of documents, site inspections, and interviews with personnel knowledgeable of IRP Site 6 indicate that all LUC components have been implemented, remedial actions as outlined in the ROD have been implemented, and that the remedy is functioning as intended. As such, the remedy at IRP Site 6 is protective of human health and the environment.

The following are recommendations that were identified during the five-year review and that may improve performance of the remedy, but do not affect current or future protectiveness:

- 1) Conduct additional investigation and earthquake repairs, if necessary, at Area 4 during the next five-year review period.
- 2) Conduct surface geophysical surveys for the Areas 2 and 3 covers where surface fractures were observed during post-earthquake inspections.
- 3) Conduct additional investigation in the area of the 0.25-foot settlement of Area 3 at IRP Site 6.
- 4) Conduct site inspections and maintenance in accordance with the post closure maintenance plan and ROD for IRP Site 6.

IRP Site 12

IRP Site 12 includes a 15-acre landfill that received approximately 100 tons of solid waste per year from 1952 to 1979. Wastes included tree trimmings, construction debris, cans and barrels, small electrical parts, plastics, rags, and miscellaneous unspecified chemicals and ordnance, but no household garbage.

IRP Site 12 Selected Remedy

The selected remedy for IRP Site 12 consists of, but not limited to, the following:

- 1) Repairing the existing soil cover as necessary.
- 2) Regrading the landfill cover to redirect drainage. Intercepting drainage from higher elevation portions of the abandoned quarry.
- 3) Continuing maintenance and improvements of the fence, warning signs, and berms around the landfill.
- 4) Conducting annual site inspections.

IRP Site 12 Conclusions and Recommendations

A review of documents, site inspections, and interviews with personnel knowledgeable of IRP Site 12 indicate that all LUC components have been implemented, remedial actions as outlined in the ROD have been implemented, and that the remedy is functioning as intended. As such, the remedy at IRP Site 12 is protective of human health and the environment.

Armitage Field OU

Armitage Field OU includes IRP Sites 1, 2, 3, 44, 45, 50, and 58. IRP Site 44 also includes POI 197. IRP Sites 3, 50, and 58 were sites designated for no further action in the ROD.

IRP Site 1 was constructed in 1945, covers 4.4 acres, and includes 13 dry wells approximately 10 feet deep that were used to support operations at the fuel supply area. Aircraft fuels that did not meet military specifications — including used engine oils, fuel tank condensate, and excess fuels — were disposed of by discharge to the dry wells or by direct release to the ground surface for approximately 40 years.

IRP Site 2 consisted of a concrete pad and associated drainage culverts and ditches. Approximately 10,000 to 20,000 gallons of wastewater containing chlorinated solvents from degreasers, industrial detergents, hydraulic fluid, lubricating oil, antifreeze, and jet fuels was discharged to the ditch daily when the site was in operation.

IRP Site 44 is about 2,500 feet east of the aircraft runways at Armitage Field. From 1945 to 1988, a pad in the southwestern portion of IRP Site 44 was used as a practice facility for fighting petroleum fires. IRP Site 44 also encompasses POI 197, called the “Water Road Fuel Dump,” east of the old fire-fighting training area. Based on site

records and aerial photographs, fuels may have been released at POI 197 in the 1960s and 1970s.

IRP Site 45 is the Naval Air Field (NAF) Maintenance Area, which was used to service ground support equipment and vehicles. From 1945 to 1981, water and other runoff, such as solvents, were directed into a tributary of an unlined shallow ditch, with another unlined ditch draining runoff from the aircraft cleaning area.

Armitage Field OU Selected Remedy

The selected remedy for Armitage Field OU consists of, but not limited to, the following:

- 1) Implement monitored natural attenuation (MNA) and LUCs to prevent exposure to shallow groundwater until natural degradation processes reduce contaminants of concern to concentrations below applicable federal and state drinking water standards.
- 2) Remove free product at IRP Site 1 through continuation and expansion of a vapor-enhanced skimming (VES) system that has been previously installed and operated under a corrective action plan (CAP). Remove free product at IRP Site 44 using a VES system similar to IRP Site 1.

Armitage Field OU Conclusions and Recommendations

The protectiveness determination for the Armitage Field OU is deferred. Data from two separate ongoing investigations are being acquired to determine if exposure assumptions regarding risk associated with vapor intrusion is still valid and if the risk associated with the presence of perfluoroalkyl substances (PFAS) changes the protectiveness of the selected remedy for groundwater at Armitage Field OU.

The following are recommendations that were identified during the five-year review and that may improve performance of the remedy, but do not affect current or future protectiveness.

- 1) Conduct the recommended groundwater monitoring well repairs during the next five-year review period.
- 2) Conduct an additional remedial system optimization study at IRP Sites 1 and 44.
- 3) Conduct an optimization study of the groundwater monitoring program.
- 4) Evaluate nature and extent of PFAS concentrations at the Armitage Field OU.
- 5) Evaluate the presence or absence of PFAS at IRP Site 3.

The fifth five-year review report for IRP Sites 6, 12, and the Armitage Field OU at NAWS China Lake is required 5 years from the completion date of this five-year review, which will be in 2027. We look forward to following up on the recommendations of the Five-Year Review Report and the opportunity to review the next five-year review report in 2027.

5. Standing Item: Status of Triennial Review Projects – Daniel Sussman

The Lahontan Water Board adopted the current Triennial Review Priorities on March 10, 2022. State and federal laws require periodic review and revision of Basin Plans ([Resolution No. R6T-2022-0011](#)). The federal process is called “Triennial Review.” The 2022 Triennial Review priority list includes seven Basin Planning issues identified as High Priority. Additionally, the Triennial Review identifies six issues as Medium Priority and five as Low Priority.

Basin Planning is primarily the responsibility of the Planning and Assessment Unit. The unit is also responsible for the impaired waters (TMDL, Integrated Report) and surface water monitoring efforts (SWAMP). The unit currently consists of four Environmental Scientists, one Water Resource Control Engineer, and one Scientific Aid under the supervision of a Senior Environmental Scientist Supervisor. Progress on the 2022 High Priority issues includes contributions from the Regional Monitoring Coordinator, North Basin Regulatory Unit, and the Regional Groundwater Specialist.

The table below lists the prioritized 2022 Triennial Review High Priority issues and notes the progress made since March 2022. Issues are not prioritized within the High Priority category.

High Priority Issue	Progress
Evaluate Bacteria Water Quality Objectives	The Board adopted Resolution No. R6T-2023-0025 on June 28, 2023. The action removes the regionwide numeric and narrative bacteria water quality objectives and inserts reference and discussion of the statewide REC-1 bacteria provisions. Staff is currently scheduling the State Board public comment period and adoption hearing.
Editorial Amendment (Mojave)	The Board adopted Resolution No. R6T-2022-0021 in June 2022. The State Board approved the action December 6, 2022, through Resolution No. 2022-0050 . The Office of Administrative Law approved the action on April 5, 2023, which makes the amendment state law. USEPA review is ongoing, and staff expects a letter at the end of September 2023.

High Priority Issue	Progress
Groundwater Protection Prohibitions	<p>Staff are assessing the organization of Basin Plan groundwater basins which currently differ from Department of Water Resources basins. Alignment with DWR will provide the standardization needed as a first step to address this Triennial Review issue. For further discussion, see June 2023 EO report standing item – Update on Salt and Nutrient Management Plans in the Lahontan Region: subsection on Alignment of groundwater basins/sub-basins. This alignment project is also part of a Medium Priority 2022 Triennial Review issue.</p>
High Quality Beneficial Use	<p>An informal internal workgroup has been assessing the Triennial Review issue. This work includes defining the issue’s problem statement and identifying the need for, and discussing the approach for, potential solutions. Staff expects to revisit this topic with the Board in the coming months.</p>
Riparian, Floodplain, and Wetland Protection Updates	<p>Staff identified this Triennial Review issue as having four distinct parts. Staff worked to develop problem statements for each of the parts, develop a recommended approach, and identify next steps. The four parts can be thought of as potentially independent issues, and each has the possibility to be addressed without a Basin Plan amendment. Staff and management remain in discussion about these issues and their next steps.</p>

High Priority Issue	Progress
<p>Tribal Beneficial Use and Subsistence Beneficial Use Designations</p>	<p>The project focuses, first, on designating Tribal beneficial uses to the waters of the Mono Basin, historic home of the Kutzadika peoples. Staff are developing the Basin Plan amendment language and supporting staff report and environmental documentation for release in early November 2023, with the goal of Board consideration in spring 2024.</p> <p>A second effort will begin in September by re-engaging with other tribes with historic ties to the waters of the Lahontan Region. From these conversations, staff will refine the scope of work for a subsequent designation project. The broad geographic range of the Lahontan Region poses challenges when developing a coherent strategy to further designation projects, and the approach will be informed by the tribes' response and other factors, which could include historic tribal affinity, geographic location, interest, and capacity to engage by the Lahontan Region tribes.</p>
<p>Update Total Nitrogen WQO for Hot Creek</p>	<p>Basin Planning and NPDES program staff continue to work with California Department of Fish and Wildlife staff on a plan to evaluate the need for a new Nitrogen WQO for Hot Creek. Lahontan Staff identified data needs to support development of a new Basin Plan objective that protects beneficial uses, and together with CDFW, identified a potential compliance location downstream of the fish hatchery. Water Board staff have been collecting in-stream vegetation data to assess beneficial use support and CDFW is collecting nutrient data. CDFW will install groundwater wells this fall to monitor inputs from the facility's wastewater ponds to the springs which feed the hatchery. This is an ongoing multi-year effort, and an extension of the current Time Schedule Order is an anticipated need as staff develop a Basin Plan amendment.</p>