NATURAL RESOURCES ASSESSMENT, INC.

Jurisdictional Delineation
Essex Overhead Mine
Essex, San Bernardino County, California

Prepared for:
Lilburn Corporation
1905 Business Center Drive
San Bernardino CA 92408

Prepared by:
Natural Resources Assessment, Inc.
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May 20, 2024

Project Number: WOG22-101

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CERTIFICATION

I hereby certify that the statements furnished below and in the attached exhibits present data and information required for this biological evaluation, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

Karen Kirtland

NATURAL RESOURCES ASSESSMENT, INC.

May 20, 2024

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Appendices

1.0 Introduction

Natural Resources Assessment, Inc. (NRAI) was contracted by Lilburn Corporation to conduct a jurisdictional delineation for the Essex Overhead Mine site (Project) in Essex, California. Our work was to delineate any potential waters, including wetlands, which may occur within the Project. Our delineation includes a discussion of the functions and values of any riparian/riverine areas or species habitat in the Project area, describe the proposed Project, and provide quantities of direct impacts to any jurisdictional waters.

2.0 Site Location and Project Description

The Project Study Area (Project) is northeast of the community of Essex, California. It lies southwest of the junction of the National Trails Highway (NTH) and Goffs Road south of Interstate 40 (I-40) (Figures 1, 2 and 3).

The Project is located in Sections 29, 30, 31 and 32 of the Essex and Fenner 7;5- USGS topographic maps (2021) (Figure 3). There will be two open pits used for excavation (Figure 4).

The Department of Public Works (DPW) of San Bernardino is proposing to export material from the Project for use in County projects. The DPW is submitting a Mine and Reclamation Plan application for the development and use of the Essex Overhead Pit. This application would annually provide up to 10,000 cubic yards (cy) or 15,000 tons of material for various roads, culverts, and other DPW sites for annual maintenance and/or emergency repair due mainly to storm events. The annual amounts may vary from zero up to 50,000 tons or more depending on scheduled road maintenance and repair and emergency repairs caused by flooding or possibly earthquakes. The reclaimed end use of the North Pit will be revegetated open space (22.21 acres) and the South Pit (25.13 acres) will be used for a long-term DPW material maintenance and storage yard. Approximately 197 acres or 80% of the two parcels will not be disturbed

The proposed project site is located on County owned lands to the southwest of the intersection of Route 66 and/or NTH and the Essex Overpass Burlington Northern Santa Fe (BNSF) railroad (RR) tracks approximately 1.3 miles northeast of Essex in the eastern Mojave Desert. The two pits that will make up the overall Essex Overhead Pit are located on approximately 47 acres within approximately 90 acres in the western half of the 230.9-acre APN 0655-151-01, west of the RR tracks. The remaining 43 acres are outside the project rea and will be left as mostly undisturbed desert lands.

The project area includes 0.7 acres of an additional 14.16-acre parcel, APN 0655-162, that lie west of the RR tracks. The remaining and separate 13.46 acres east of the RR tracks will be left as mostly undisturbed desert land.

The portion of APN 0655-151-01 (155 acres) that lies east of the RR tracks is not part of the mine project but will remain as mostly undisturbed desert lands.

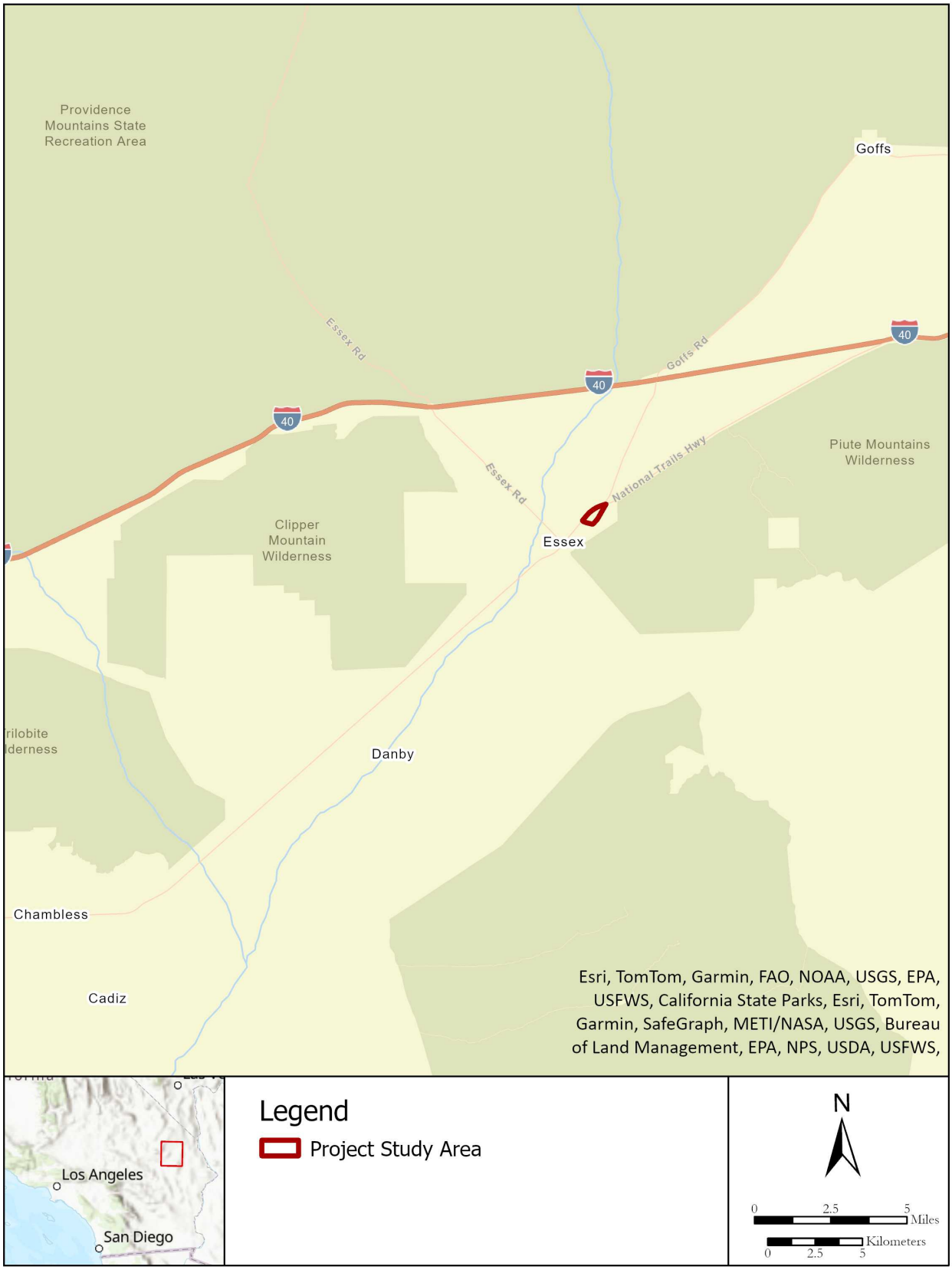

Figure 1. Regional Location of the Project Site.

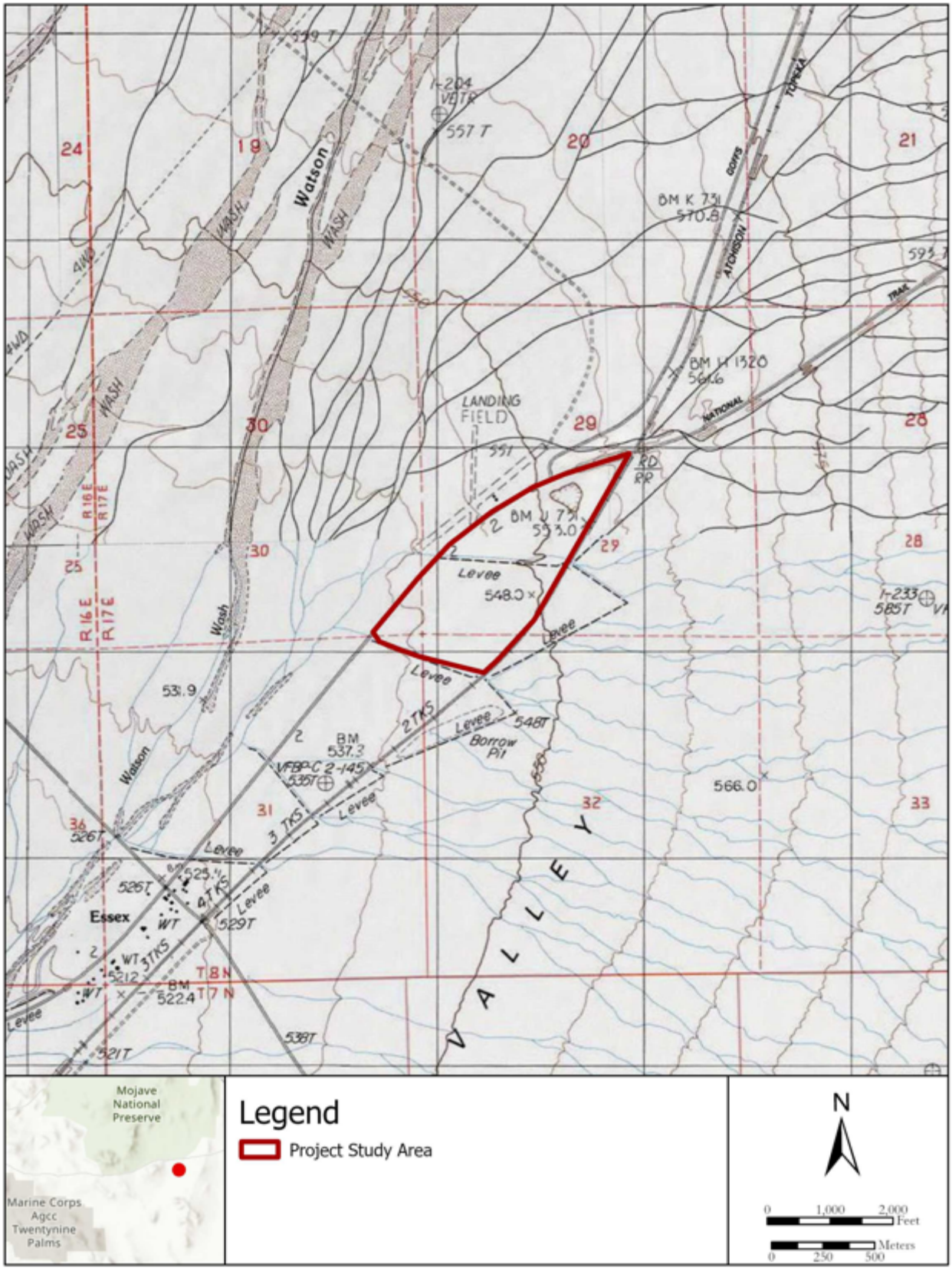

Figure 2. Topographic Map Showing the Project Study Area.

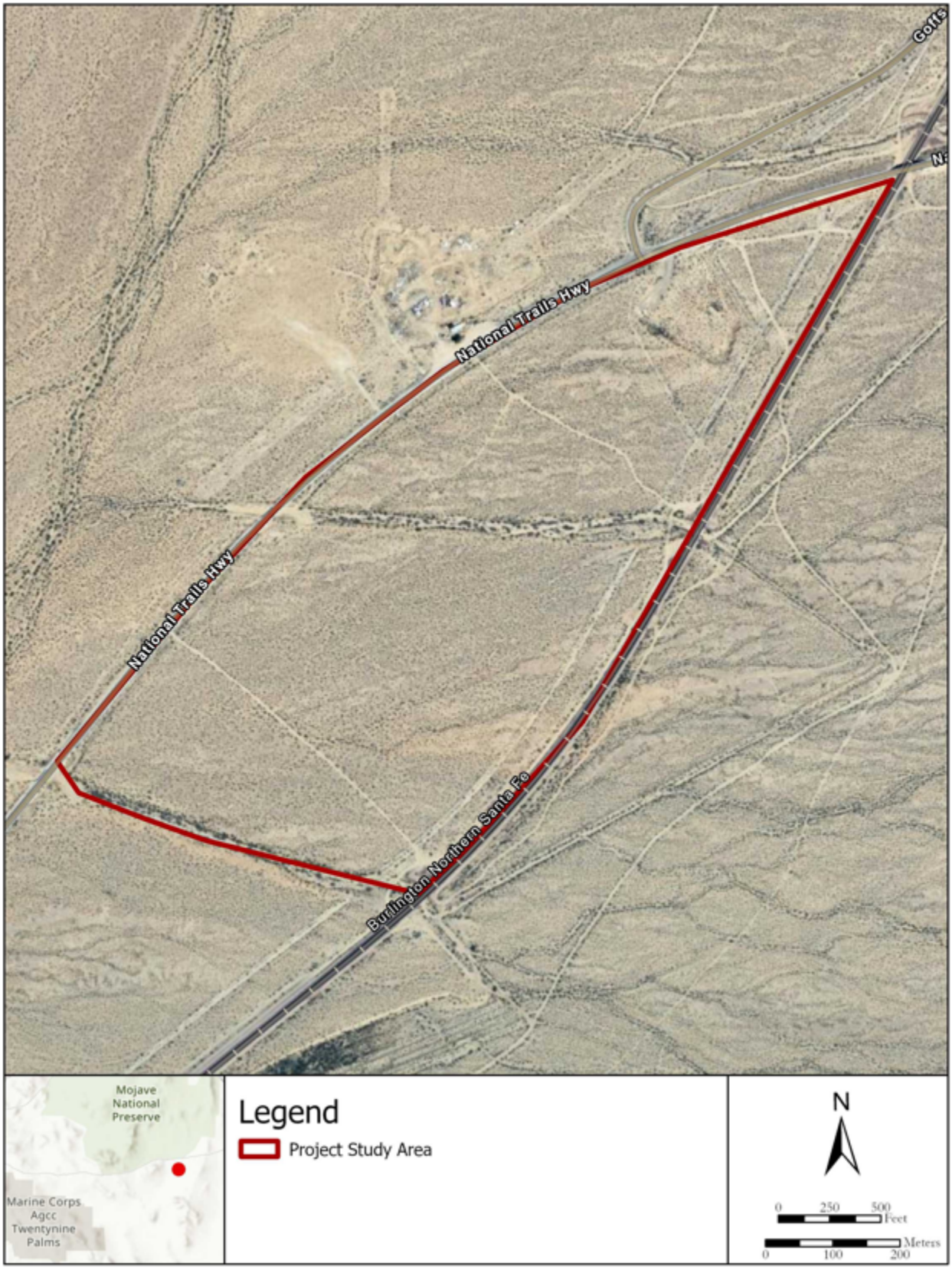

Figure 3. Project Aerial.

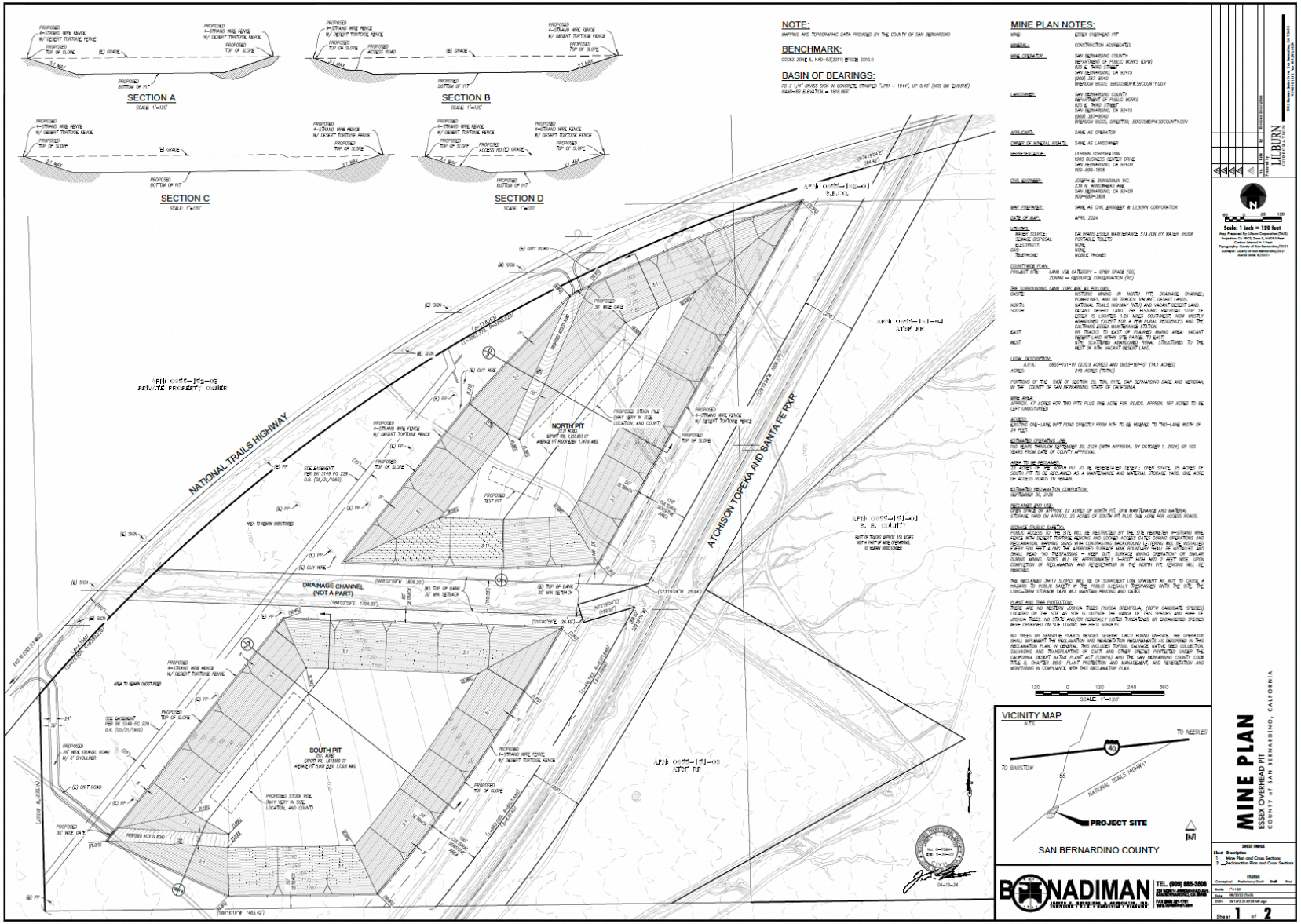

Figure 4. Project Plan.

Elevations of the mine pits range from approximately 1,725 feet above mean sea level (amsl) in the southwest corner to approximately 1,820 feet amsl in the northeast corner of the site; slightly increasing in elevation from the SW to NE.

The undisturbed portions of the project site are mainly vegetated with scattered creosote bush. Besides the NTH, powerline, and RR lines, the adjacent properties to the north, east, and south are vacant, undisturbed desert lands. Most of the areas to the west are also vacant desert lands except for a number of rural buildings located on private lands to the northwest across the NTH.

3.0 Methods

3.1 Data Review

NRAI reviewed current legislation, databases and documentation relevant to the Project. We also reviewed current and historical aerial photographs to evaluate land use effects on regional drainage patterns.

We reviewed the available data provided by the following for information on hydrologic features and wetlands areas in the vicinity of the Project:

- U.S. Fish and Wildlife Service National Wetland Inventory
- Environmental Protection Agency (EPA) Water Program "My Waters"
- United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) soil maps for San Bernardino County.
- California Native Plant Society (CNPS) Inventory, California Consortium of Herbaria and Calflora for plant species.
- U.S. Fish and Wildlife Service (USFWS), U.S. Army Corps of Engineers (Corps), Lahontan Regional Water Quality Control Board (RWQCB), and California Department of Fish and Wildlife (CDFW) regulations jurisdictional waters.
- Other texts relevant to this area of San Bernardino and information from regional experts and previous studies for this area.

A complete list of references is provided as part of the report.

3.2 Field Assessment

Ms. Karen Kirtland of NRAI and Mr. Ricardo Montijo conducted a jurisdictional delineation of the property on 17 October 2023. The field team evaluated the property drainages, making notes on the general and sensitive biological resources present and taking representative photographs. We also conducted a drone flyover of the site on 6 October 2023 to update the aerial imagery subsequent to changes caused by Tropical Storm Hilary in August 2023.

The field team surveyed for the presence of federally jurisdictional wetlands, federally jurisdictional non-wetland waters of the United States, CDFW jurisdictional streambeds including ephemeral and intermittent streambeds, riparian vegetation, RWQCB jurisdictional waters, and other water bodies, riparian habitats, potential wetlands, and connectivity.

Connectivity was determined using USGS topographic maps, National Wetlands Inventory (NWI) maps (2023), and Google Earth images. Water features (e.g., drainages, water bodies) within the Project limits were investigated for the presence of ordinary high-water marks (OHWM) and connectivity. Reference photographs were taken during this survey and are included in Appendix A.

4.0 Results

4.1 Weather, Topography and Soils

Weather at the beginning of the survey on 18 September 2023 was 78 degrees Fahrenheit, with clear skies and winds from one to five miles per hour (mph) from the north. By the end of the survey, the temperature was 92 degrees Fahrenheit, with clear skies and winds of two to five mph from the south.

The topography of the site has been altered by past uses and the construction of roads and the railroad. The Project area is separated into two excavated open pits divided by a two-levee channel crossing under the rail line (Figure 3). The excavated open pits have flat bottoms and sloped sides. The levee channel also has a flat bottom.

Springmeyer gravelly sandy loam is the only soil found on site (Figure 5). The soil series consists of very deep, well drained soils that formed in alluvium derived from mixed igneous rocks. Springmeyer soils are found on fan remnants and inset fans on slopes ranging from 0 to 50 percent. The series form Well drained; medium or high surface runoff and are classified as non-hydric (Natural Resources Conservation Service 2023).

The Springmeyer gravelly sandy loam found on this Project occurs on four to six percent slopes.

4.2 Jurisdictional Data

4.2.1 U.S. Army Corps

The Corps regulates discharges of dredged or fill material into waters of the United States. These watersheds include wetlands and non-wetland bodies of water that meet specific criteria. The lateral limit of Corps jurisdiction extends to the Ordinary High-Water Mark (OHWM) and to any wetland areas extending beyond the OHWM; thus, the maximum jurisdictional area is represented by the OHWM or wetland limit, whichever is greater.

Corps regulatory jurisdiction pursuant to Section 404 of the Clean Water Act is founded on a connection or nexus between the water body in question and interstate (waterway) commerce. This connection may be direct, through a tributary system linking a stream channel with traditional navigable waters used in interstate or foreign commerce, or indirectly, through a nexus identified in the Corps regulations.

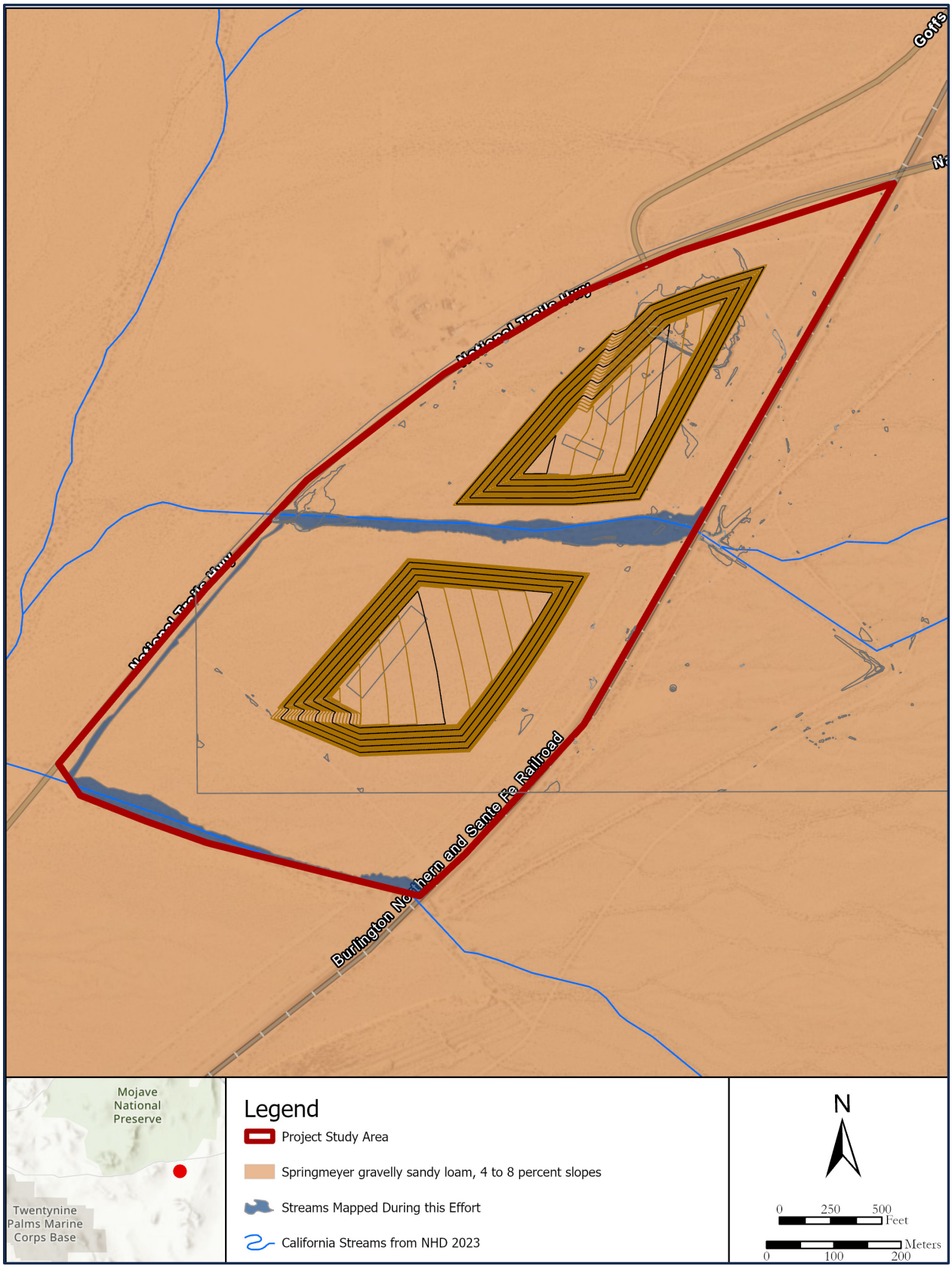

Figure 5. Project Soils.

NRAI reviewed the determination of jurisdictional waters current as of the date of this report. The identification of nexus is still in flux at this time.

The research data from the National Wetlands Inventory (2023) did not identify any wetlands within the Project limits (Figure 6). Information provided by the Environmental Protection Agency (EPA) Water Program "My Waters" shows that Project area drainages all flow into Watson Wash.

A request for a jurisdictional delineation from the Corps for a separate Project, Hoff's Wash (Appendix B) stated that Watson Wash is a non-Relatively Permanent Water (i.e., water does not flow for a minimum of three months) and is an intrastate water (only found in California. Watson Wash flows into Cadiz Lake. Cadiz Lake also does not meet the test for jurisdictional waters. It is not interstate, does not provide recreational opportunities and does not support fish or shellfish for interstate commerce. Watson Wash also meets these criteria and in addition flows into a non-jurisdictional water (Cadiz Lake). Watson Wash is therefore a non-jurisdictional water.

Because there is no downstream connection to jurisdictional waters. the Project drainages are not considered to be jurisdictional.

4.2.2 Regional Water Quality Control Board

The Corps has delegated the authority for use of 404 permits to each individual state. The use of a 404 permit in California is regulated by the State Water Control Board (SWCB) under Section 401 of the Clean Water Act regulations. The Board has authority to issue a 401 permit that allows the use of a 404 permit in the state, with the authority in the state being vested in regional offices known as Regional Water Quality Control Boards (RWQCB).

The Act identifies beneficial uses of waters of the state that the RWQCB use to evaluate jurisdiction. These beneficial uses (BUs) include: Warm Freshwater Habitat (WARM), Wildlife Habitat (WILD), Groundwater Recharge (GWR), Agricultural Supply (AGR), and Non-Contact Water Recreation (REC2) (which is limited by fencing), beneficial use of "rare, threatened or endangered species habitat", Municipal and Domestic Supply (MUN), Agricultural Supply (AGR), Industrial Service Supply (IND), and Industrial Process Supply (PROC). Under the Porter-Cologne Act of 2003, the SWCB has extended its responsibilities to include impacts to water quality from non-point source pollution.

In addition, the SWRCB has the responsibility to require that projects address ground water and water quality issues, which would be evaluated as part of the geotechnical and hydrology studies. Their authority extends to all waters of the State (of California).

The presence of non-federal waters onsite negates the need for the project proponent to request a 404 permit from the Corps and therefore 401 approvals from the RWQCB. Any water quality issues outside of biological resources or jurisdictional waters would be addressed as part of the Water Quality Certification requirements and is not part of the report.

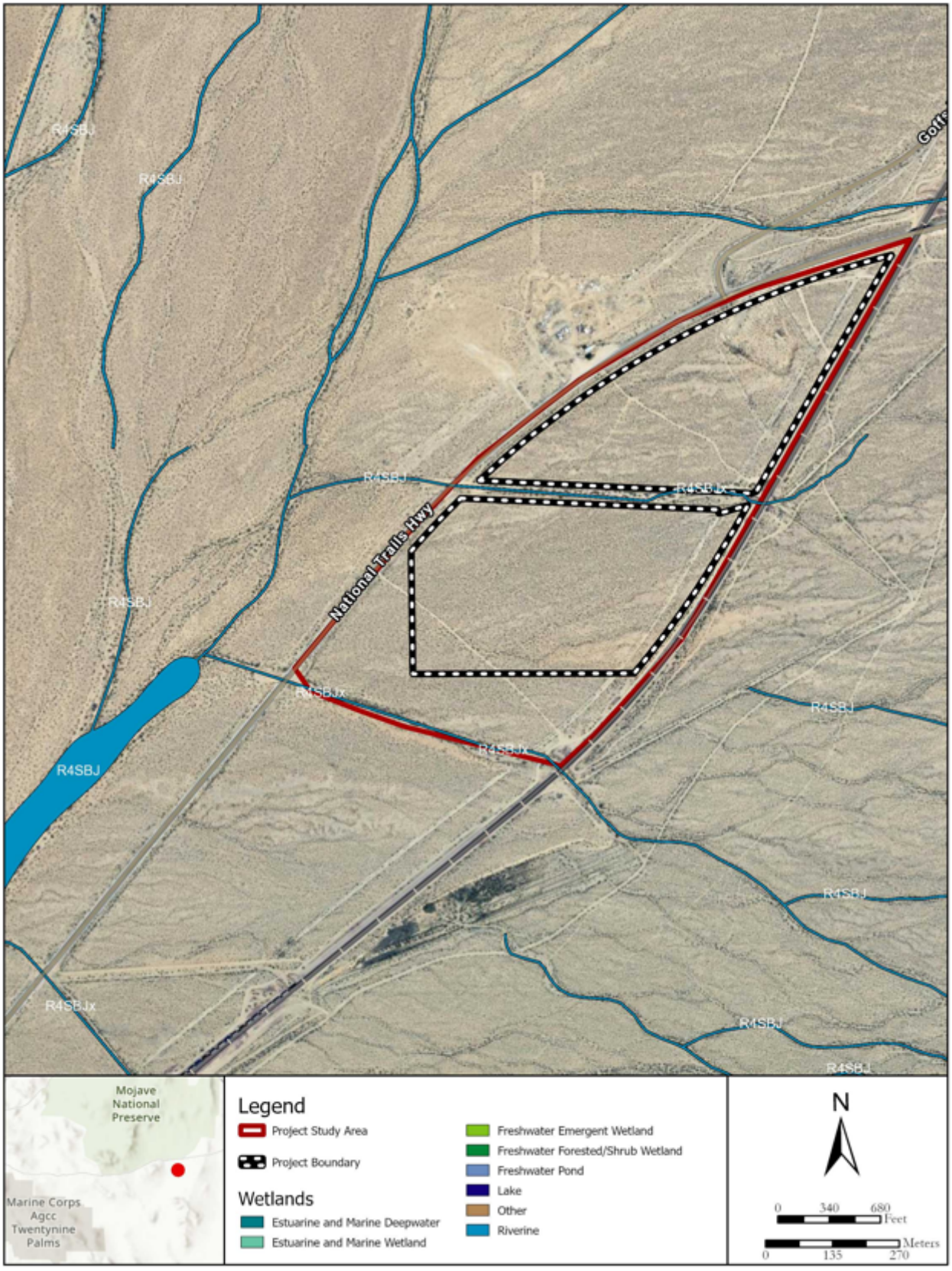

Figure 6. Jurisdictional Features (National Wetlands Inventory 2023)

4.2.3 California Department of Fish and Wildlife

The California Department of Fish and Wildlife (CDFW), through provisions of the State of California Administrative Code, is empowered to issue agreements for any alteration of a river, stream or lake where fish or wildlife resources may adversely be affected. Streams (and rivers) are defined by the presence of a channel bed and banks, and at least an intermittent flow of water. Lateral limits of jurisdiction are not clearly defined, but include any riparian resources associated with a stream or lake, CDFW regulates wetland areas only to the extent that those wetlands are part of a river, stream or lake as defined by CDFW.

CDFW has historically used the following definition of a "stream" from Title 14, Section 1.72:

> Title 14, Section 1.72. Stream (Includes Creeks and Rivers). A stream is a body of water that flows at least periodically or intermittently through a bed or channel having banks and that supports fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation.

The lack of riparian vegetation and/or suitable habitat for fish or other aquatic life is not the only criteria used by the CDFW in defining streambeds that may come under their jurisdiction. The presence of intermittent flows along drainages also brings some streambeds under the jurisdiction of the CDFW.

4.3 Raptors, Migratory Birds, and Habitat

Most of the raptor species (eagles, hawks, falcons and owls) are experiencing population declines because of habitat loss. Some, such as the peregrine falcon, have also experienced population losses because of environmental toxins affecting reproductive success, animals destroyed as pests or collected for falconry, and other direct impacts on individuals. Only a few species, such as the red-tailed hawk and barn owl, have expanded their range despite or a result of human modifications to the environment. As a group, raptors are of concern to state and federal agencies.

Raptors and all migratory bird species, whether listed or not, also receive protection under the Migratory Bird Treaty Act (MBTA) of 1918[1]. The MBTA prohibits individuals to kill, take, possess or sell any migratory bird, bird parts (including nests and eggs) except per regulations prescribed by the Secretary of the Department (16 U. S. Code 70[2]).

Additional protection is provided to all bald and golden eagles under the Bald and Golden Eagle Protection Act of 1940, as amended[3]. State protection is extended to all birds of prey by the California Fish and Game Code, Section 2503.5[4]. No take is allowed under these provisions except through the approval of the agencies or their designated representatives.

[1] https://www.fws.gov/birds/policies-and-regulations/laws-legislations/migratory-bird-treaty-act.php
[2] https://www.fws.gov/le/USStatutes/MBTA.pdf
[3] https://www.fws.gov/le/USStatutes/BEPA.pdf
[4] https://law.justia.com/codes/california/2015/code-fgc/division-4/part-2/chapter-1/section-3513

5.0 Project Impacts and Recommended Mitigation

5.1 Jurisdictional Waters

The absence of riparian vegetation and/or suitable habitat for fish or other aquatic life along the Project drainages does not remove them from consideration as jurisdictional waters (Figure 7). The presence of intermittent flows along the levee channel and the small connector channel brings these features under the potential jurisdiction of the CDFW (Figure 8).

There are no direct impacts to potential jurisdictional waters.

The original project design had a potential indirect impact to the north side of the levee channel, near the southeast corner of the northern open pit. The top corner of the open pit abuts directly against the levee side as shown in the callout. There is a potential for rain and wind to erode the levee side into the excavated pit area, resulting in a failure of the levee protection at this point. Failure of the levee may result in the redirection of flow into the open pit and altering the available flow down the center of the levee channel.

The plan has been revised) and this indirect impact no longer exists (Fgure 8). The remaining indirect impacts are:

- Food. Food sources present within the two channels do not differ from food sources in the surrounding area. Based on the location of the Project site within a larger habitat area and the size of the impact (approximately 0.5 acres), the loss of food from project construction is not considered to be significant.
- Cover. Tree and shrub cover is scattered and does not constitute a continuous canopy. Impacts to this resource are considered to be minimal.
- Water. Water is present only immediately after rain. The surrounding area provides other intermittent streams. The loss of this value is not considered to be significant.
- Migration routes and stopping points between habitats. There are no migration routes or stopping points that will be affected by project construction.
- Streambank stabilization. The proposed project will require bank stabilization. There is no impact to this function.
- Infiltration and Recharge. The proposed project will not affect these values. The remaining sections of the channels and surrounding areas will continue to allow for infiltration and recharge of rainfall. These functions will not be impacted.
- Downstream pollution. The proposed action is for the removal of material. There is no significant impact to downstream pollution.
- Loss of contributory water. Water movement through the site will continue offsite. There is no loss of contributory water.

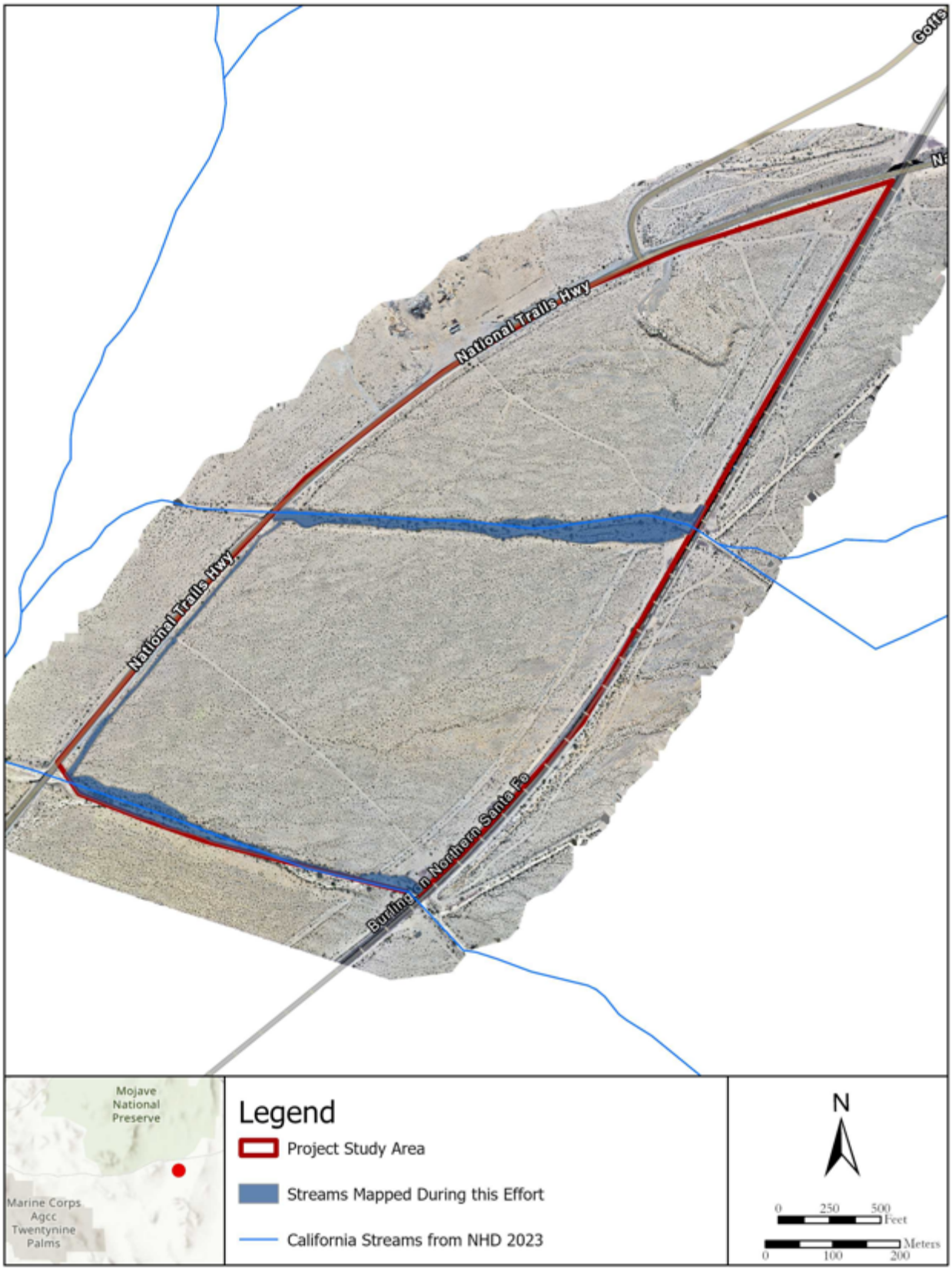

Figure 7. Potential Jurisdictional waters in and around the Project site. Base aerial created from drone flyover, 6 October 2023.

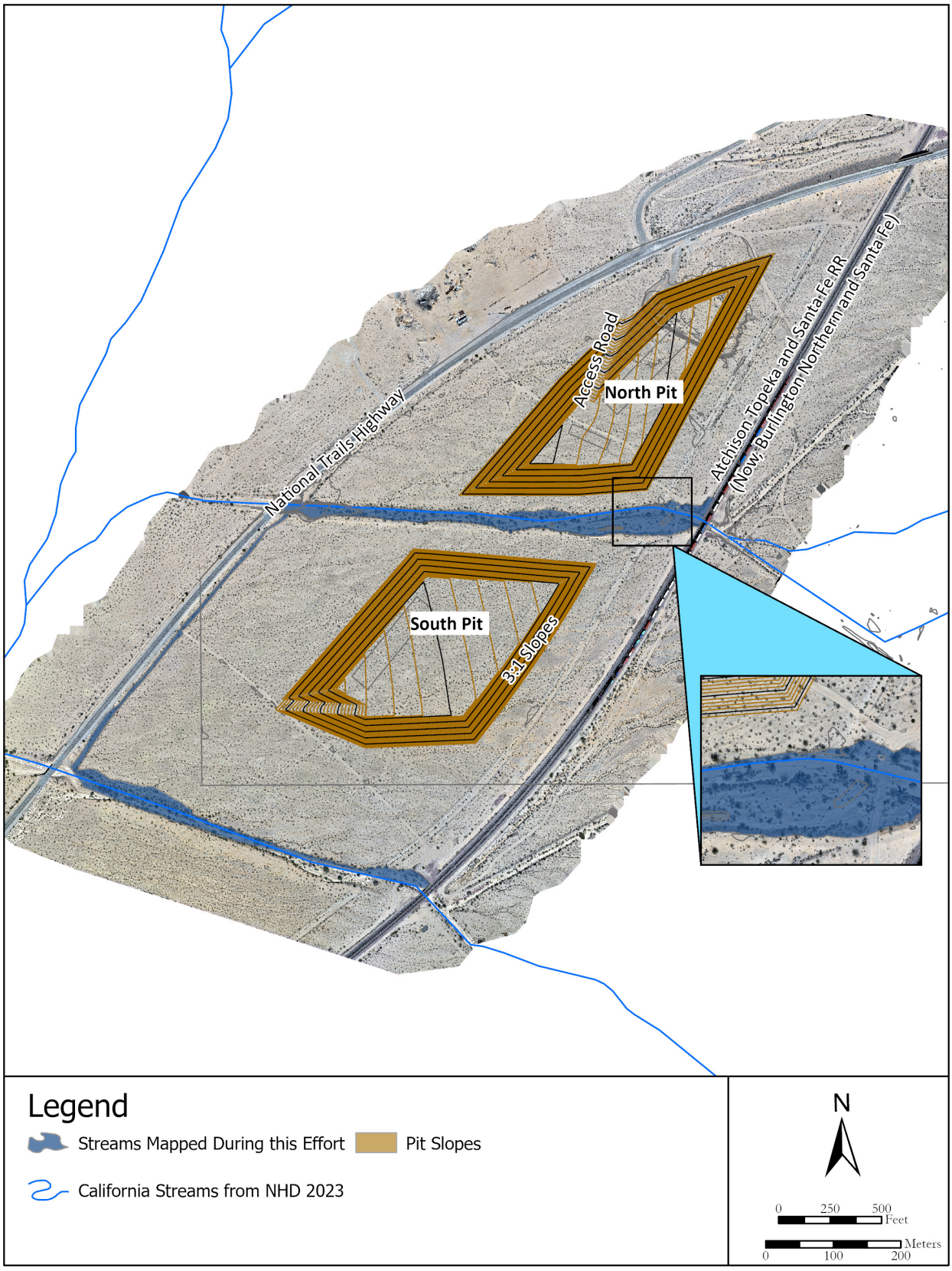

Figure 8. Jurisdictional waters and Project impacts. Base aerial formed from drone flyover, 6 October 2023.

Based on this assessment, the indirect impact to potential jurisdictional waters is minimal. We recommend the following Best Management Practices (BMP) measures to address project impacts:

- Drainage from the development areas includes runoff of water, soil, as well as inorganic and organic matter. NRAI recommends standard water quality measures required for all projects be implemented for this Project. Project design shall incorporate measures, including measures required through the National Pollutant Discharge Elimination System (NPDES) requirements, to ensure that all measures shall be put in place to avoid discharge of untreated surface runoff from developed and paved areas. Stormwater systems shall be designed to prevent the release of toxins, chemicals, petroleum products, exotic plant materials or other elements that might degrade or harm biological resources or ecosystem processes in adjacent areas.
- Operation of motor vehicles near adjacent undeveloped lands may introduce undesirable petroleum products and solvents into the natural environment. All activity involving hazardous substances should be conducted in accordance with applicable local, State, and Federal safety standards.

5.2 Nesting Birds

At the time of the survey, the parcel had nesting habitat for nesting bird species. A breeding bird survey following the recommended guidelines of the MBTA will be required to determine if nesting is occurring in this area.

1. If the start of construction occurs between February 1 and August 31, then a qualified biologist shall conduct a breeding bird survey no more than three days prior to the start of construction to determine if nesting is occurring.
2. If occupied nests are found, they shall not be disturbed unless the qualified biologist verifies through non-invasive methods that either (a) the adult birds have not begun egg-laying and incubation; or (b) the juveniles from the occupied nests are capable of independent survival.
3. If the biologist is not able to verify one of the above conditions, then no disturbance shall occur within a distance specified by the qualified biologist for each nest or nesting site. The qualified biologist will determine the appropriate distance in consultation with the California Department of Fish and Wildlife and the U.S. Fish and Wildlife Service.

"Construction" includes selection of staging areas, demolition, tree, trash and debris removal, placement of equipment and machinery on to the site preparatory to grading, and any other project-related activity that increases noise and human activity on the project site beyond existing levels. Emergency measures are exempt from this definition.

6.0 References

Army Corps of Engineers, 1994. *U.S. Army Corps of Engineers Regulations, Appendix C* in *Wetlands Regulation, A Complete Guide to Federal and California Programs*, 1995, P.D. Cylinder, K.M. Bogdan, E.M. Davis and A. J. Herson, eds., Solano Press Books, Point Arena, California.

Army Corps of Engineers. 1992. "CECW-OR Memorandum: Clarification and interpretation of the 1987 manual".

Army Corps of Engineers, 1991. "CECW-OR Memorandum: Questions and answers on the 1987 manual".

Baldwin, B.G. and Goldman, D.H., 2012. The Jepson Manual: Vascular Plants of California. University of California Press.

California Department of Fish and Game, 1984. Guidelines for Assessing Effects of Proposed Developments on Rare Plants and Plant Communities. Natural Heritage Division, California Department of Fish and Game.

California Department of Fish and Game, 1990. California's Wildlife, Volume 2, Birds. The Resources Agency, Sacramento, California.

California Department of Fish and Wildlife, May 2022. Complete List of Amphibian, Reptile, Bird and Mammal Species in California. California Wildlife Habitat Relationships Program, Sacramento.

Sawyer, J.O., T. Keeler-Wolf, and J.M. Evens, 2009. A Manual of California Vegetation, 2nd edition. California Native Plant Society Press. Sacramento, CA.

Soil Survey Staff, Natural Resources Conservation Service, 2023 United States Department of Agriculture. Web Soil Survey. Available online at http://websoilsurvey.nrcs.usda.gov/. Accessed September 2023.

Appendix A. Project Photographs

Photo 1. The upper (northern) basin. The plant communities are the same as the surrounding vegetation

Photo 2. The lower (southern) basin. The plant communities are the same as the surrounding vegetation.

Photo 3. Levee channel. Although the scrub vegetation is similar to surrounding areas, smoke tree (*Dalea spinosa*) and other wash species are found here.

Photo 4. Levee channel showing smoke tree (middle ground) and cut/eroded banks in the distance.

Photo 5. Bottom of the levee channel. Please note the vehicle disturbance of the bottom of the levee channel.

Photo 6. Showing the levee channel's downstream connection to Watson Wash west of the Route 66 bridge shown in the photo.

Appendix B. Jurisdictional Determination for Hoff Wash

APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): August 12, 2015

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Los Angeles District, Caltrans I-40 Hoff Wash Crossing SPL-2015-00074-VCL

C. PROJECT LOCATION AND BACKGROUND INFORMATION:
State:California County/parish/borough: San Bernardino County City: Near Essex
Center coordinates of site (lat/long in degree decimal format): Lat. 34.78656° **N**, Long. 115.42316° **W**.
Universal Transverse Mercator: NAD83 / UTM Zone 11S 0644260 E, 3850500 N
Name of nearest waterbody: Hoff Wash
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: None
Name of watershed or Hydrologic Unit Code (HUC): 18100100 - Southern Mojave
☒ Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.
☐ Check if other sites (e.g., offsite mitigation sites, disposal sites, etc…) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):
☒ Office (Desk) Determination. Date: August 5, 2015
☐ Field Determination. Date(s):

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There **Are no** "*navigable waters of the U.S.*" within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [*Required*]
☐ Waters subject to the ebb and flow of the tide.
☐ Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.
Explain: .

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There **Are no** "*waters of the U.S.*" within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [*Required*]

1. **Waters of the U.S.**
   a. **Indicate presence of waters of U.S. in review area (check all that apply):** [1]
      ☐ TNWs, including territorial seas
      ☐ Wetlands adjacent to TNWs
      ☐ Relatively permanent waters[2] (RPWs) that flow directly or indirectly into TNWs
      ☐ Non-RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
      ☐ Impoundments of jurisdictional waters
      ☐ Isolated (interstate or intrastate) waters, including isolated wetlands

   b. **Identify (estimate) size of waters of the U.S. in the review area:**
      Non-wetland waters: 0 linear feet: 0 width (ft) and/or acres.
      Wetlands: 0 acres.

   c. **Limits (boundaries) of jurisdiction** based on: **Not Applicable.**
      Elevation of established OHWM (if known): .

2. **Non-regulated waters/wetlands (check if applicable):**[3]
   ☒ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.
   Explain: **The project is located along Interstate 40 (I-40) from realigned Post Mile (PM) 93.1 to realigned PM 94.2,**

[1] Boxes checked below shall be supported by completing the appropriate sections in Section III below.
[2] For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).
[3] Supporting documentation is presented in Section III.F.

approximately 10 miles northwest from the unincorporated community of Essex. The applicant is proposing to replace the I-40 eastbound and westbound bridges crossing Hoff Wash.

Hoff Wash is an intrastate non-RPW that originates in the Clipper Mountains just south of the project site, within the Southern Mojave watershed. Hoff wash is approximately 55 feet wide at the project site and approximately 17.67 acres of Hoff Wash falls within the project area. According to the NHD and topographic maps flows northward from the project site into Watson Wash. Watson Wash flows eastward and then turns south, flows into Schluyer Wash until it ends at Cadiz Lake, approximately 40 miles from the project site.

Cadiz Lake serves as the terminus for the project non-RPW, as well as all other drainages within the HUC 12 watershed. All surface flows that enter Cadiz Lake either evaporate or percolate into the groundwater table. Currently, there are no published surface water commercial uses of any of the tributary non-RPWs, including Hoff Wash. The only published use of Cadiz Lake is a salt evaporation pond facility, which does not utilize surface water. Moreover, Cadiz Lake is not used by interstate or foreign travelers for recreational or other purposes since it is dry throughout most of the year, only experiences temporary ponding, and is an industrial mining site. Cadiz Lake also does not support fish or shellfish which could be taken and sold for recreational or other purposes in interstate or foreign commerce.

Cadiz Lake, as the terminus for the project water, is NOT a TNW. Moreover, Cadiz Lake and the project non-RPW are NOT (a)(3) water as defined by 33 CFR 328.3. Cadiz Lake and Hoff Wash do NOT meet criteria (a)(3)(i-iii), as they: i) DO NOT have use for surface water recreation or other purposes by foreign or interstate travelers, ii) DO NOT have harvesting activities of fish or shellfish that may be sold in interstate or foreign commerce, and iii) DO NOT have surface water industrial usage by industries in interstate commerce. The above is based upon the review of aerial photos (Google Earth), NHD flowline data (USGS), USGS topographic maps, California Groundwater Bulletin 118, and prior Approved Jurisdictional Determinations (SPL-2008-00402-SLP and SPL-2012-00283-SCH). Therefore, since Cadiz Lake is an intrastate isolated water without surface water connection to commerce, the project water is also isolated and additionally has no nexus to commerce.

Based on the above information, the Corps concludes the project water (isolated non-RPW) is a NONJURISDICTIONAL water of the United States, since the water is NOT tributary to either a TNW or an (a)(3) water and is NOT an (a)(3) water itself. The Corps makes such a conclusion since the water is tributary to an isolated, intrastate dry lake.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. **TNW**
   Identify TNW: .

   Summarize rationale supporting determination: .

2. **Wetland adjacent to TNW**
   Summarize rationale supporting conclusion that wetland is "adjacent": .

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody[4] is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. **Characteristics of non-TNWs that flow directly or indirectly into TNW**

   (i) General Area Conditions:
   Watershed size: **Pick List**
   Drainage area: **Pick List**
   Average annual rainfall: inches
   Average annual snowfall: inches

   (ii) Physical Characteristics:
   (a) Relationship with TNW:
   ☐ Tributary flows directly into TNW.
   ☐ Tributary flows through **Pick List** tributaries before entering TNW.

   Project waters are **Pick List** river miles from TNW.
   Project waters are **Pick List** river miles from RPW.
   Project waters are **Pick List** aerial (straight) miles from TNW.
   Project waters are **Pick List** aerial (straight) miles from RPW.
   Project waters cross or serve as state boundaries. Explain: .

   Identify flow route to TNW[5]: .
   Tributary stream order, if known: .

[4] Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.
[5] Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

(b) General Tributary Characteristics (check all that apply):

Tributary is:
- ☐ Natural
- ☐ Artificial (man-made). Explain: .
- ☐ Manipulated (man-altered). Explain: .

Tributary properties with respect to top of bank (estimate):
- Average width: feet
- Average depth: feet
- Average side slopes: **Pick List.**

Primary tributary substrate composition (check all that apply):
- ☐ Silts
- ☐ Sands
- ☐ Concrete
- ☐ Cobbles
- ☐ Gravel
- ☐ Muck
- ☐ Bedrock
- ☐ Vegetation. Type/% cover:
- ☐ Other. Explain: .

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: .
Presence of run/riffle/pool complexes. Explain: .
Tributary geometry: **Pick List**
Tributary gradient (approximate average slope): %

(c) Flow:

Tributary provides for: **Pick List**
Estimate average number of flow events in review area/year: **Pick List**
Describe flow regime: .
Other information on duration and volume: .

Surface flow is: **Pick List.** Characteristics: .

Subsurface flow: **Pick List**. Explain findings: .
- ☐ Dye (or other) test performed: .

Tributary has (check all that apply):
- ☐ Bed and banks
- ☐ OHWM[6] (check all indicators that apply):
  - ☐ clear, natural line impressed on the bank
  - ☐ changes in the character of soil
  - ☐ shelving
  - ☐ vegetation matted down, bent, or absent
  - ☐ leaf litter disturbed or washed away
  - ☐ sediment deposition
  - ☐ water staining
  - ☐ other (list):
  - ☐ the presence of litter and debris
  - ☐ destruction of terrestrial vegetation
  - ☐ the presence of wrack line
  - ☐ sediment sorting
  - ☐ scour
  - ☐ multiple observed or predicted flow events
  - ☐ abrupt change in plant community
- ☐ Discontinuous OHWM.[7] Explain: .

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):
- ☒ High Tide Line indicated by:
  - ☐ oil or scum line along shore objects
  - ☐ fine shell or debris deposits (foreshore)
  - ☐ physical markings/characteristics
  - ☐ tidal gauges
  - ☐ other (list):
- ☒ Mean High Water Mark indicated by:
  - ☐ survey to available datum;
  - ☐ physical markings;
  - ☐ vegetation lines/changes in vegetation types.

(iii) Chemical Characteristics:

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).
Explain: .
Identify specific pollutants, if known: .

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[6]A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.
[7]Ibid.

(iv) Biological Characteristics. Channel supports (check all that apply):
- ☐ Riparian corridor. Characteristics (type, average width): .
- ☐ Wetland fringe. Characteristics: .
- ☐ Habitat for:
  - ☐ Federally Listed species. Explain findings: .
  - ☐ Fish/spawn areas. Explain findings: .
  - ☐ Other environmentally-sensitive species. Explain findings: .
  - ☐ Aquatic/wildlife diversity. Explain findings: .

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW

(i) Physical Characteristics:

(a) General Wetland Characteristics:
Properties:
Wetland size: acres
Wetland type. Explain: .
Wetland quality. Explain: .
Project wetlands cross or serve as state boundaries. Explain: .

(b) General Flow Relationship with Non-TNW:
Flow is: **Pick List**. Explain: .

Surface flow is: **Pick List**
Characteristics: .

Subsurface flow: **Pick List**. Explain findings: .
- ☐ Dye (or other) test performed: .

(c) Wetland Adjacency Determination with Non-TNW:
- ☐ Directly abutting
- ☐ Not directly abutting
  - ☐ Discrete wetland hydrologic connection. Explain: .
  - ☐ Ecological connection. Explain: .
  - ☐ Separated by berm/barrier. Explain: .

(d) Proximity (Relationship) to TNW
Project wetlands are **Pick List** river miles from TNW.
Project waters are **Pick List** aerial (straight) miles from TNW.
Flow is from: **Pick List.**
Estimate approximate location of wetland as within the **Pick List** floodplain.

(ii) Chemical Characteristics:
Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: .
Identify specific pollutants, if known: .

(iii) Biological Characteristics. Wetland supports (check all that apply):
- ☐ Riparian buffer. Characteristics (type, average width): .
- ☐ Vegetation type/percent cover. Explain: .
- ☐ Habitat for:
  - ☐ Federally Listed species. Explain findings: .
  - ☐ Fish/spawn areas. Explain findings: .
  - ☐ Other environmentally-sensitive species. Explain findings: .
  - ☐ Aquatic/wildlife diversity. Explain findings: .

3. Characteristics of all wetlands adjacent to the tributary (if any)
All wetland(s) being considered in the cumulative analysis: **Pick List**
Approximately ( ) acres in total are being considered in the cumulative analysis.

Appendix C. Plant and Wildlife Species Observed

PLANTS

* Denotes non-native species

SCIENTIFIC NAME	COMMON NAME
AMARANTHACEAE	**AMARANTH FAMILY**
Amaranthus fimbriatus (Torr.) Benth. ex S. Watson	Fringed Amaranth
ASTERACEAE	**SUNFLOWER FAMILY**
Adenophyllum cooperi (A. Gray) Strother	Cooper's Dyssodia
Ambrosia dumosa (A. Gray) Payne	Cheesebush
Ambrosia salsola (Torr. & A. Gray) Strother & B. G. Baldwin var. *salsola*	Burrobush
Pectis papposa Harv. & A. *Gray* var. *papposa*	Common Cinchweed
BORAGINACEAE	**BORAGE FAMILY**
Amsinckia tessellata A. Gray var. *tessellata*	Devil's Lettuce
BRASSICACEAE	**MUSTARD FAMILY**
Lepidium fremontii S. Watson	Desert Alyssum
CARYOPHYLLACEAE	**PINK FAMILY**
Achyronychia cooperi Torr. & A. Gray	Frost Mat
EUPHORBIACEAE	**EUPHORB FAMILY**
Euphorbia polycarpa Benth.	Smallseed Sandmat
FABACEAE	**PEA FAMILY**
Psorothamnus spinosus (A. Gray) Barneby	Smoke Tree
MONTIACEAE	**MONTIA FAMILY**
Calyptridium monandrum Nutt.	Pussypaws
ONAGRACEAE	**EVENING PRIMROSE FAMILY**
Chylismia claviformis (Torr. & Frém.) A. Heller ssp. *aurantiaca* (Munz) W.L. Wagner & Hoch	Pinnate Leaved Primrose
ZYGOPHYLLACEAE	**CALTROP FAMILY**
Tribulus terrestris L. *	Punctureviine
Larrea tridentata (DC) Coville	Creosotebush
POACEAE	**GRASS FAMILY**
Bouteloua aristidoides (Kunth) Griseb.	Needle Grama
Schismus barbatus (L.) Thell.*	Mediterranean Grass
Bromus diandrus Roth *	Ripgut Brome
Bromus rubens L.*	Red Brome

WILDLIFE

SCIENTIFIC NAME	COMMON NAME
REPTILIA - REPTILES	
IGUANIDAE	**IGUANAS AND RELATIVES**
Dipsosaurus dorsalis dorsalis	Northern Desert Iguana
AVES - BIRDS	
CANIDAE	**DOGS AND RELATIVES**
Corvus corax	Common Raven
TYRANNIDAE	**TYRANT FLYCATCHERS**
Sayornis saya	Say's Phoebe
MAMMALIA - MAMMALS	
CANIDAE	**DOGS AND RELATIVES**
Canis latrans	Coyote
LEPORIDAE	**RABBITS AND HARES**
Lepus californicus	Black-tailed Hare