

FINAL

Fourth Five-Year Review Report

**Former Camp Elliott-Tierrasanta, Project Number J09CA006701
Former Camp Elliott-Mission Trails, Project Number J09CA006702
San Diego, California**

Submitted to:

U.S. Army Corps of Engineers, Los Angeles District



Approved by:

A handwritten signature in black ink, reading "Julie A. Balten", written over a horizontal line.

Julie A. Balten
Colonel, U.S. Army
District Commander

Date: 7 September 2021

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LIST of ABBREVIATIONS and ACRONYMS

ARAR	Applicable or Relevant and Appropriate Requirements
CA	California
CalTrans	California Department of Transportation
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CESPLUSACE	Los Angeles District
COVID-19	Coronavirus Disease 2019
CSDPRD	City of San Diego Park and Recreation Department
DD	Decision Document
DoD	Department of Defense
DTSC	Department of Toxic Substances Control
ECC	Environmental Chemical Corporation
EOD	Explosive Ordnance Disposal
EODMU	Explosive Ordnance Disposal Mobile Unit
EPA	United States Environmental Protection Agency
FRS	Flow Regulatory Structure
FS	Feasibility Study
FUDS	Formerly Used Defense Site
Jacobs	Jacobs Engineering
LUC	Land Use Control
LUCIP	Land Use Controls Implementation Plan
MAST	Metro Arson Strike Team
MCAS	Marine Corps Air Station
MEC	Munitions and Explosives of Concern
MFR	Memorandum for Record
mm	Millimeter
MRS	Munitions Response Site
msl	Mean sea level
MTRP	Mission Trails Regional Park
OA	Presumed Acronym for “Open Area”
%	Percent
PDT	Project Delivery Team
POC	Point of Contact
PUD	Public Utilities Department
QR	Quick Response (code)
RAO	Remedial Action Objective
ROD	Record of Decision
ROE	Right-of-Entry
SCH	Presumed Acronym for “School”
SDCWA	San Diego County Water Authority
SDG&E	San Diego Gas and Electric
SDUSD	San Diego Unified School District
TCC	Tierrasanta Community Council
U.S.	United States
USACE	U. S. Army Corps of Engineers
UXO	Unexploded Ordnance

1. INTRODUCTION

The purpose of a Five-Year Review is to evaluate the implementation and performance of a remedy to determine if the remedy is and will continue to be protective of human health and the environment. The methods, findings, and conclusions of reviews are documented in Five-Year Review reports such as this one. In addition, Five-Year Review reports identify issues found during the review, if any, and document recommendations to address them. The report follows the Environmental Protection Agency's (EPA) 2016 *Five-Year Review Recommended Template* (EPA, 2016). A list of references used to prepare this report is included in **Appendix A**.

The United States (U.S.) Army Corps of Engineers (USACE), Los Angeles District (CESPL) is preparing this Five-Year Review pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Section 121, consistent with the National Contingency Plan (40 Code of Federal Regulations Section 300.430(f)(4)(ii)), and considering EPA, Department of Defense (DoD), and Formerly Used Defense Sites (FUDS) policy. The CESPL has procured the services of BSX, LLC (contractor) to prepare the report.

This is the fourth Five-Year Review for the Former Camp Elliott, Tierrasanta (Tierrasanta) and the Former Camp Elliott, Mission Trails (Mission Trails) projects. It addresses the remedies for these two projects. The triggering action for this statutory review is based on the completion date of the previous Five-Year Review. The previous (third) Five-Year Review was signed on 16 September 2016. The Five-Year Review has been prepared because hazardous substances, pollutants, or contaminants remain at the site above levels that allow for unlimited use and unrestricted exposure.

Tierrasanta is assigned FUDS Project Number J09CA006701, and Mission Trails is assigned FUDS Project Number J09CA006702. The Tierrasanta and Mission Trails projects are in San Diego County, California, approximately 12 miles northeast of San Diego, California (CA) (**Figure 1-1 and Figure 1-2**). There are two other project areas within the former Camp Elliott, identified as East Elliott (FUDS #J09CA006703) and Areas D, G & H (FUDS #J09CA006704), which are not part of this Five-Year Review. **Figure 1-3** shows the location of each of the four projects associated with the former Camp Elliott.

This Five-Year Review was conducted to determine whether the remedial actions continue to minimize the explosives safety hazards and continue to be protective of human health, safety, and the environment.

Pursuant to Executive Order 12580, the DoD is the lead agency at FUDS properties when executing a DoD response action associated with DoD hazards. Five-Year Reviews are conducted under the Defense Environmental Restoration Program. Authority for executing military munitions response actions at FUDS has been delegated to the USACE by DoD through Headquarters, Department of the Army. Military munitions response actions, are planned, managed, and executed using the CERCLA remedial process. The California Department of Toxic Substances Control (DTSC) is the state support agency.

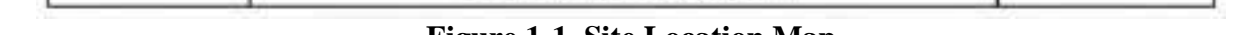




Figure 1-2. Local Vicinity Map

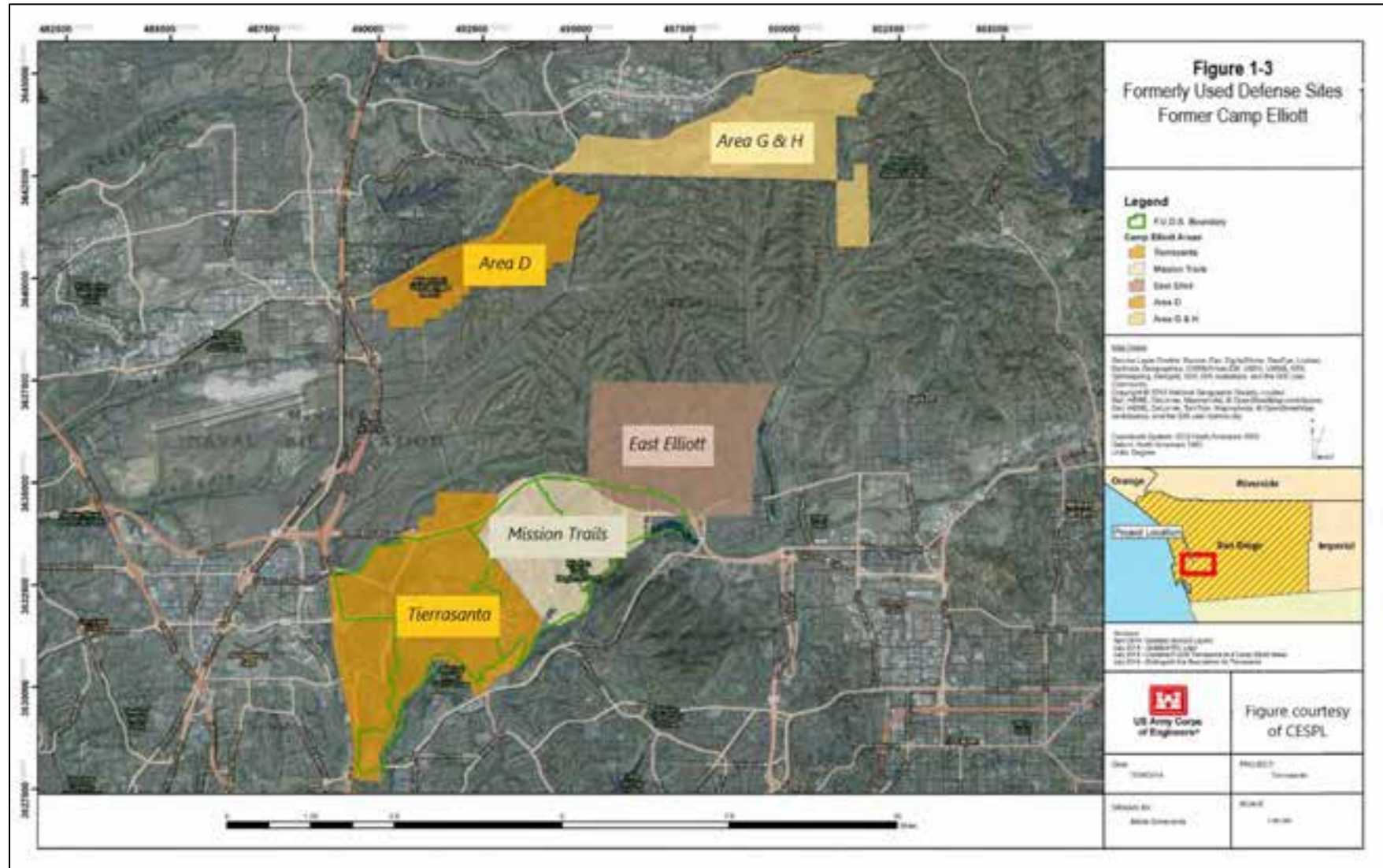


Figure 1-3. Formerly Used Defense Sites, Former Camp Elliott

The Project Delivery Team (PDT) for this Five-Year Review consists of personnel from CESPL, USACE Sacramento District, and the contractor. The members of the PDT that participated in the Five-Year Review, including their titles and contact information are provided in **Table 1-1**.

**Table 1-1. Five-Year Review Points of Contact
Former Camp Elliott – Tierrasanta and Mission Trails**

Project Delivery Team Members	
United States Army Corps of Engineers, Los Angeles District (CESPL)	
Mr. Lu Tan CESPL Project Manager	Mr. James Hug Contracting Officer's Representative
Mr. Mark Jones Toxicologist	Mr. Sylvester Willis, Jr. Ordnance and Explosives Safety Specialist Technical and Environmental Support
BSX, LLC Team	
Mr. Jeff Bryant Program Manager	Ms. Patti De La O Project Manager
Ms. Joni Jorgensen-Risk Environmental Scientist	

1.1 Site Background

The Tierrasanta and Mission Trails project areas encompass an approximately 6,700-acre portion of the former Camp Elliott. According to the updated Archive Search Report, the former Camp Elliott included approximately 32,000 acres. Camp Elliott operated as a tank, anti-tank, and artillery training/practice range during the World War II-Korean War era. The portion of the former Camp Elliott that now includes the Tierrasanta community was declared surplus property and transferred to developers in 1968. The Mission Trails portion was declared surplus by the U.S. Government and deeded to the City of San Diego and is now incorporated into the Mission Trails Regional Park (MTRP). No restrictions were placed on the development of the property and no hold harmless clauses were included in the land transfers (USACE, 1985), although the Quitclaim deed for Mission Trails did restrict the use to historic monument/public recreational use for 20 years.

1.2 Site Topography

The former Camp Elliott site is mostly hills, mountains, and rugged terrain; the slopes of the mountain sides are steep to undulating. Elevations range from just over 1000 feet above mean sea level (msl) in the north, to about 500 feet above msl in the southwest. The topography of the west side has changed dramatically because of residential development in the Tierrasanta community. On the east side, Mission Trails is largely undeveloped, as intended, with most of the property inside the MTRP (USACE, 2016).

The topography of the land comprising the Tierrasanta project has been modified due to the grading required for the housing development. In places where homes and businesses have been built, most of the native peaks and valleys have been leveled to accommodate the construction footprints. The open space areas within the Tierrasanta community have steep slopes and deep canyon bottoms that have remained largely unchanged but contain trails for hiking and non-motorized biking (USACE, 2016).

The major topographic features of the Mission Trails project site are Fortuna Mountain, which is approximately 1,200 feet above msl in the northern portion of the site, and a few mesas (elevation approximately 800 feet msl) in the western portion. The overall elevation change within MTRP is approximately 600-800 feet from northeast to southwest, and 500 feet from northwest to southeast. The slopes within MTRP are generally steep, especially in the southern and eastern portions of the project site (USACE, 2016).

1.3 Current and Projected Land Use – Tierrasanta

The Tierrasanta community consists of over 32,000 residents and 10,947 households (Point2, 2020), small to medium commercial establishments, schools, the Tierrasanta Branch Library, the Tierrasanta Recreation Center, and open space areas. The west/southwest portion of the community is the Lincoln Military Housing, Santo Terrace – Murphy Canyon (Marine Corps Air Station [MCAS] Miramar). The City of San Diego and the Tierrasanta community are planning minor improvements for the open space areas, expansion of recreational facilities, and road improvements (USACE, 2016).

1.4 Current and Projected Land Use – Mission Trails

Most of the Mission Trails project area includes the MTRP; however, it is only included in a portion of the much larger 8,000-acre MTRP. MTRP is the largest municipally owned park in the State of California. This Five-Year Review includes selected portions of the MTRP including the Mission Gorge Area - the area between the San Diego River and Mission Gorge Road, and the Fortuna Mountain Area - the area between the San Diego River, State Route 52 and the Tierrasanta community.

At MTRP, the Visitor and Interpretive Center receives tens of thousands of visitors annually. About 92 miles of roads and trails are part of the park's official trail system. More than 63 miles of dirt roads make up most of the park roads, with 40 miles being related to utility access roads maintained by San Diego Gas and Electric (SDG&E) and San Diego County Water Authority (SDCWA). In addition to the official recreational trails, there are about 7 miles of unauthorized user created trails within the park (City of San Diego Park and Recreation Department [CSDPRD], 2019)

The City of San Diego and San Diego County are the largest landowners of MTRP. Smaller parcels of property are owned by the SDCWA, and San Diego State University. There are gas, water, electricity, and sewer lines within the MTRP boundaries. The SDCWA operates several pipelines and its associated facilities in MTRP. The Mission Trails Flow Regulatory Structure (FRS) is located along the Mission Trails Pipeline near the western ridgeline in the Fortuna Mountain area. Presently, construction is underway at the project site for the SDCWA Mission Trails FRS II development project that includes 155 acres within MTRP (SDCWA, 2021 and SDCWA, 2006).

The City of San Diego Public Utilities Department (PUD) operates and maintains several water pipelines and associated facilities in the park. The City of San Diego PUD also operates and maintains major sewer facilities in MTRP. A major high pressure SDG&E gas transmission line runs from the main system backbone near Interstate 15 east into the park where it continues east through the Fortuna Mountain Area until it leaves the park near the Equestrian Staging Area (CSDPRD, 2019).

The projected land use for the Mission Trails project area is to remain within the MTRP. Additional new trails are planned for the MTRP, including the proposed San Diego River Trail, tentatively planned to extend from the Pacific Ocean to the Cleveland National Forest. Further, there are plans to construct additional parking and staging areas within the Mission Gorge and Fortuna Mountain areas, as well as the construction of new shade structures within Fortuna Mountain (CSDPRD, 2019).

1.5 Five-Year Review Summary Form

SITE IDENTIFICATION		
Site Name: Former Camp Elliott, Tierrasanta and Former Camp Elliott, Mission Trails		
FUDS Property ID: J09CA0067		
Region: 9	State: CA	City/County: San Diego
SITE STATUS		
National Priorities List Status: Non-NPL		
Multiple Operable Units? Yes	Has the site achieved construction completion? No	
REVIEW STATUS		
Lead agency: Other Federal Agency <i>[If "Other Federal Agency", enter Agency name]:</i> U. S. Army		
Author name (Federal or State Project Manager): Mr. Lu Tan		
Author affiliation: U.S. Army Corps of Engineers		
Review period: 08 May 2019 – 16 September 2021		
Date of site inspection: 06 and 07 November 2019 and 02 through 05 March 2020		
Type of review: Statutory		
Review number: 4		
Triggering action date: 16 September 2016		
Due date (five years after triggering action date): 16 September 2021		

2. RESPONSE ACTION SUMMARY

2.1 Basis for Taking Action

Contamination identified in the Feasibility Study (FS) of Remedial Action Alternatives for Conventional Explosive Ordnance Items on the Former Camp Elliott (USACE, 1988), included unexploded ordnance (UXO) and related debris caused by previous DoD-related activities. It was determined at the time that ordnance contamination ranged from 0.28 to 29.3 items per acre on the surface and 3.0 to 90.7 items per acre in the subsurface. Additionally, approximately 87 percent (%) of the contamination lay within 6 inches of the surface and 94% lay within 12 inches of the surface. Approximately 1% of the ordnance contamination constituted a potentially explosive hazard. Ordnance items and debris ranged from .22 caliber small arms to 155mm howitzer rounds.

The FS reported that:

“The chain of events leading to a catastrophic explosive incident or accident in the project area would include the discovery of an intact explosive item by an uninformed individual and the probability that the explosive filler and detonating train are still sensitive to initiation. Considering the safety factors designed for military munitions, these possibilities are remote. The 1983 accident proved, however, that the potential for risk does exist. Therefore, there is an element of risk to the public.” (USACE, 1988)

The public risk from residual UXO items was assessed by evaluating the severity of the hazards remaining and the probability of encountering the hazards. For the areas at Tierrasanta (which included portions of what would become the Mission Trails project and MTRP), the probability assessment results ranged from “Unlikely to Occur But Possible” to “Unlikely But Can Reasonably Be Expected,” with the severity ranging from “Death” to “Severe Injury” (USACE, 1988).

2.2 Response Actions

2.2.1 Initial Response Pre-Record of Decision

Numerous ordnance clearances were conducted in the Tierrasanta community and in the MTRP property prior to the Record of Decision (ROD) being signed in 1988. The limited data for those earlier clearances are summarized in **Table 2-1**.

Table 2-1. Summary of Ordnance Clearance Operations in Tierrasanta and Mission Trails 1964 – 1988 (Pre-ROD)

Year	1964 ¹	1965 ¹	1973	1983	1984	1985	1986
Type of Operation	Sweep	Sweep	Clearance	Surface Sweep	Clearance	Clearance	Clearance
Organization	Navy	Marine Corps	Army	Army	Navy (EODMU 3)	Navy (EODMU 3)	USACE
Total UXO/MEC Items Found	No data	No data	38 UXO items found	“108 pieces of live ordnance found”	41 UXO items ²	8 UXO items	Unknown
Surface Clearance Results							
Number of Ordnance-Related Items Found	Unknown	Unknown	93	Unknown	147 ²	159	1,343
Number of Acres Searched	Unknown	Unknown	5,160	Unknown	326	322.4	185
General Location	Unknown	Unknown	Portions of what are now the Tierrasanta and Mission Trails projects	Tierrasanta community	Trails and roads in Tierrasanta	Villa Trinidad/Villa Martinique Canyon, Admiral Baker Field, Granada Canyon, and open space near Murphy Canyon Navy Housing.	Sub-Areas A, B, C, E, F

Table 2-1. Summary of Ordnance Clearance Operations in Tierrasanta and Mission Trails 1964 – 1988 (Pre-ROD) (Continued)

Subsurface Clearance Results							
Year	1964 ¹	1965 ¹	1973	1983	1984	1985	1986
Number of Ordnance - Related Items Found Subsurface or Electronically	No data	No data	No subsurface search	No subsurface search	31 ²	56	521
Number of Acres Searched					326 (total reported)	322.41 (total reported)	20
General Location					Roads and trails	Roads and trails	Sub-Areas A, B, C, E and F

¹ Details of these clearance efforts were not located.

² An historical document (Commander, Naval Base San Diego 1984) states that 202 ordnance items were recovered, of which 41 were high explosive and 161 were inert or expended.

EODMU = Explosive Ordnance Disposal Mobile Unit

MEC = Munitions and Explosives of Concern

ROD = Record of Decision

UXO = Unexploded Ordnance

Source: USACE, 2016

2.2.2 Tierrasanta Response Actions

The open space within the 1,897-acre portion of the former Camp Elliott project area was divided into sub-areas A, B, C, D, E, and F (**Figure 2-1**). On 19 August 1988, the Final ROD for former Camp Elliott was signed by the Deputy Assistant Secretary of Defense (Environment) to document the remedial action decision for the UXO and related debris contamination caused by previous DoD-related activities. The ROD stated that the primary objective of the project was “to protect public health, safety, and general welfare” on a portion of the former Camp Elliott Training Range. The ROD recommendations for Tierrasanta included the following remedy components (as written):

- **Sub-Area A:** The plan for this area involves reacquisition and fencing by the U.S. Government of the 167 acres adjacent to the Naval Air Station Miramar, north of the project area. The reacquisition will be accomplished pursuant to a non-CERCLA authority.
- **Sub-Area B:** The plan for this area, which encompasses 85 acres, involves fencing along the southern right-of-way line of the proposed State Route 52. Fencing would occur once the California Department of Transportation (CalTrans) has obtained legal right-of-way. This will effectively isolate both Sub-Areas A and B from the rest of Tierrasanta to the south.
- **Sub-Area C:** The plan for this area (Tierrasanta Norte residential development, approximately 358 acres) involves ordnance clearance sweeps using electromagnetic ordnance locators, after selective manual removal of vegetation, in areas to remain as permanent open space (approximately 75 acres), and ordnance clearance sweeps using electromagnetic ordnance locators in the remaining undeveloped area disturbed by the developer.
- **Sub-Area D:** The plan for this area (Regency Hill residential development, 58 acres) involves an ordnance clearance sweep using electromagnetic ordnance locators, of approximately 23 acres which surround the developing area and form the faces for the mesa, and no action in the remaining area disturbed by the development.
- **Sub-Area E:** The plan for this area (approximately 454 acres located along the eastern project boundary) involves 209 acres, at the time U.S. Navy owned, and is not eligible for funding under the FUDS program, and 245 acres where separate actions are planned. The plan for the 245 acres is as follows: approximately 56 acres, previously burned, involves ordnance clearance using electromagnetic ordnance locators; 129 acres involves ordnance clearance using electromagnetic ordnance locators after selective manual removal of vegetation; and 60 acres involves ordnance clearance sweeps using electromagnetic ordnance locators and controlled burning for vegetation removal.
- **Sub-Area F:** The plan for this area (approximately 774 acres of remaining open space in canyons adjacent to developed residential or commercial areas) involves ordnance clearance using electromagnetic ordnance locators after selective removal of brush by manual cutting and removal. This area will be given priority for implementation.

Additionally, the ROD required that a follow-up ordnance test sweep be conducted one year after the initial clearance effort to monitor and/or verify the clearance effectiveness. Follow-up ordnance sweeps were to be conducted based on the results of the one-year follow-up test sweep efforts. Further, efforts would be made to expand educational programs on UXO within the community.

There was no remedial action objective (RAO) established for the Tierrasanta project.

2.3 Status of Implementation

2.3.1 Tierrasanta and Mission Trails Response Actions Post-ROD

The area of concern for the 1990-1994 removal action included the six sub-areas detailed in **Section 2.2.2 (Figure 2-1)** with different remedy components applied to each. Two additional sub-areas were included as Sub-Area OA (presumed an acronym for “open area”) and SCH (presumed an acronym for “school”), owned by San Diego Unified School District (SDUSD) (**Figure 2-2**). Details are included below.

The USACE performed an ordnance clearance on the Tierrasanta project area (**Figure 2-2**) between November 1990 and May 1994. During this time, 1,904.24 acres were swept; 171,559.9 pounds of ferrous debris; 28,491.7 pounds of ordnance scrap; 3,991 hazardous small arms; and 1,066 hazardous items larger than small arms were located and removed. As reported in the Final Ordnance Report (Environmental Chemical Corporation [ECC], 1995a), Sub-Areas C through F were surface and subsurface cleared to three feet. It is important to note that Sub-Area E included the lands that were being held in escrow for turnover to the City of San Diego to be incorporated into the city’s holdings at MTRP. The munitions and explosives of concern (MEC) discovered during project activities was present in low densities over most of the site, with a few areas of high density. Several areas were completely devoid of UXO (USACE, 2016).

A narrative of the clearance in each sub-area, as reported in the Final Ordnance Report (ECC, 1995a) follows.

- **Sub-Area A:** The property, which included 167 acres, was reacquired by the U.S. Government for use by the U.S. Navy and fenced as required.
- **Sub-Area OA:** Although the Murphy Canyon Naval housing project is not included in either project area, the open area designated as OA-1 was swept by the USACE.
 - **Area OA-1** – An area located north of Sub-Area D. Two MK-13 signal flares were found and removed from this area; no other ordnance was found.
- **Sub-Area B:** Fence installation was completed by USACE, after CalTrans obtained right-of-way and after the area had been cleared of ordnance by the USACE contractor. According to the Final Removal Report, no MEC/UXO was found. Sub-Area B is not included in the Final Ordnance Report maps or figures; however, Sub-Area B is depicted in **Figure 2-1**.

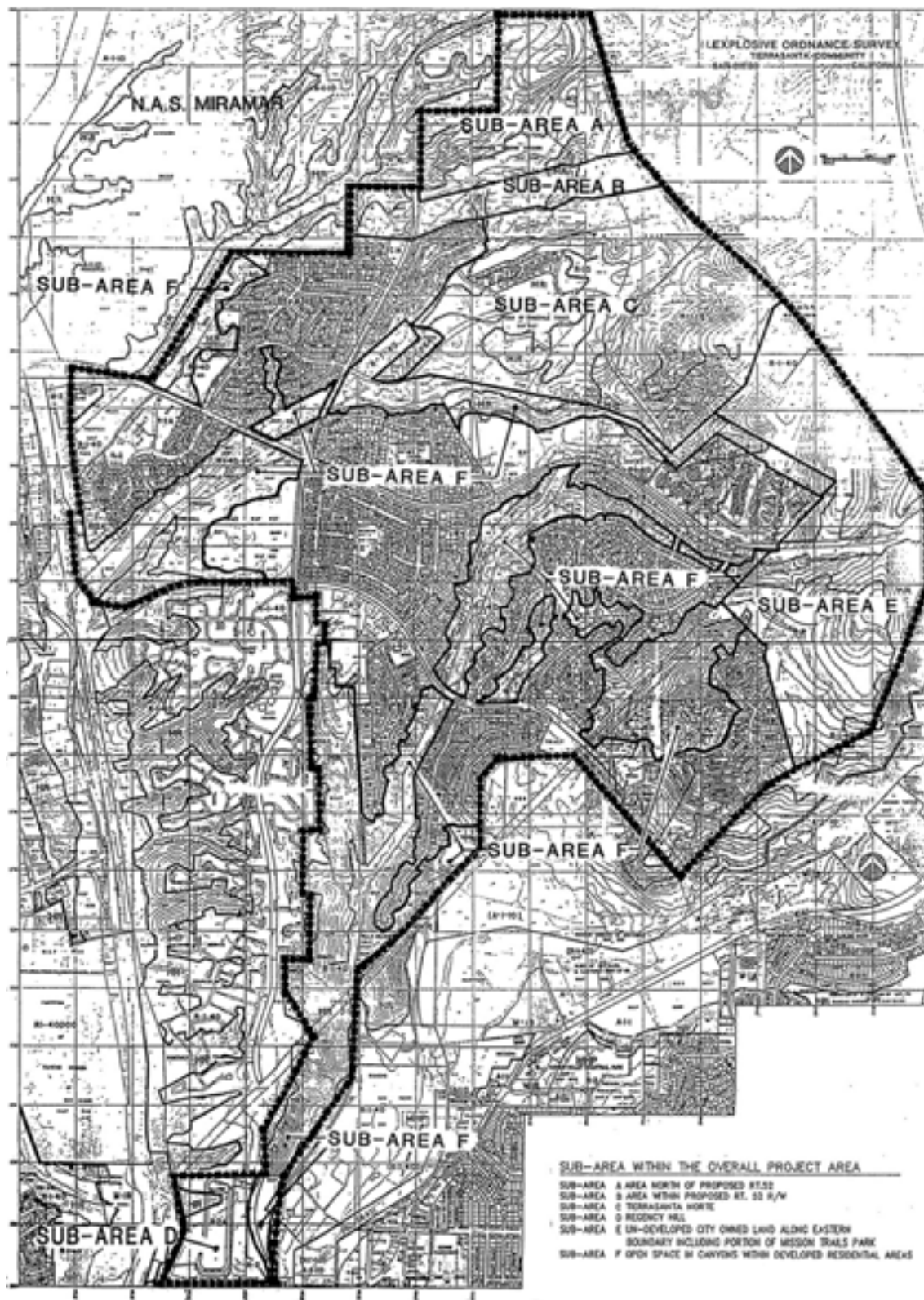


Figure 2-1. Sub-Area Boundaries Map from the Feasibility Study, April 1988
(Figure courtesy of CESPL)

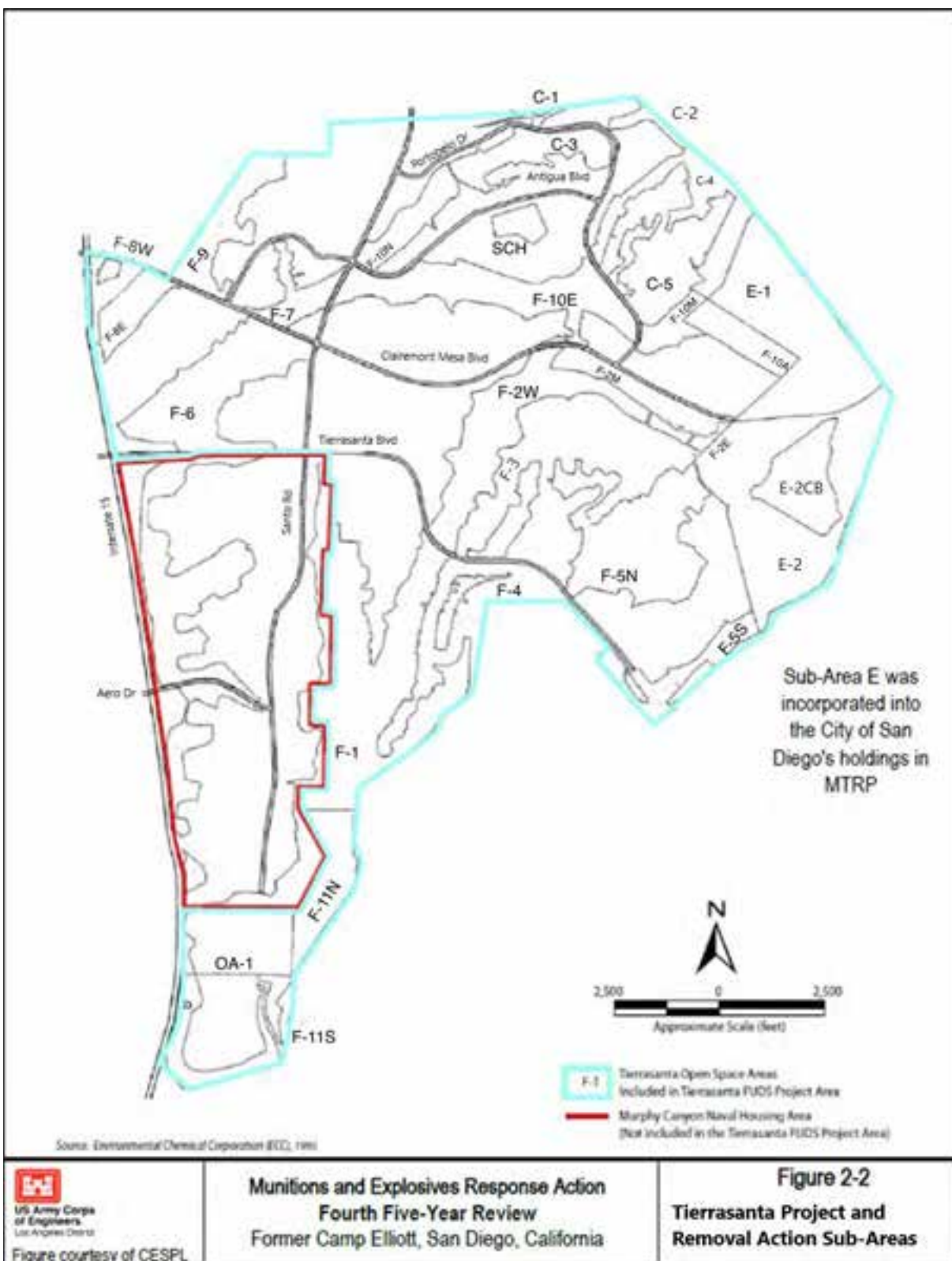


Figure 2-2. Tierrasanta Project and Removal Action Sub-Areas
(Figure courtesy of CESPL)

- **Sub-Area C:** The ordnance clearance sweep was completed in Areas C-1, C-2, C-3, C-4, and C-5. Three hundred seventy small arms-related items and 118 items other than small arms were found and removed in 5,156,959 square feet (118.39 acres).
 - **Area C-1** – Only small arms were found in this area.
 - **Area C-2** – The area had been entirely landscaped at the time of the survey. During the sweep, the sweep team found one fuze and 40 small arms rounds. There were no areas of centralized density.
 - **Area C-3** – A significant amount of hazardous ordnance was recovered from the area including three 75 millimeter (mm) high explosive rounds (two without fuzes and one with), two 75mm rounds with explosive charges, four other 75mm shrapnel rounds without charges, and one 75mm shrapnel round with black powder. One 37mm round of French origin was discovered and blown-in-place. An additional 169 rounds of small arms including blanks, tracer, and incendiary rounds in .30 and .50 caliber were recovered.
 - **Area C-4** – The area was reported as one of the most active from an ordnance disposal standpoint with six live rounds (five 37mm and one 75mm) that were blown-in-place. According to the Final Ordnance Report, “In all, 70 large and 134 hazardous small arms were removed from the area.”
 - **Area C-5** – Ordnance density was heaviest in the center of the area. It is not clear from the Final Ordnance Report, but it appears that small arms as well as numerous fuzes, smokeless powder, and a 75mm round with fuze were in this area.
- **Sub-Area D:** The ordnance clearance sweep was not completed because the property owners (cited as the La Mirage Association at the time) did not permit the clearance sweep to occur. Because the La Mirage Condominium Association refused to grant the USACE a right-of-entry (ROE) to access its property, “only the 9 northern most [sic] grids (19,325 square feet)” were swept (USACE, 2016). The Final Ordnance Report (page 143 of the pdf) documented 42 pounds of scrap recovered from 19,325 square feet (0.444 acres) (nine grids in the northern portion of the sub-area) (ECC, 1995a).
- **Sub-Area E:** The ordnance clearance for this area was completed using electromagnetic locators, after selective manual brush clearing in areas requiring brush clearing. According to the Final Ordnance Report, a “significant amount of ordnance was removed” in Area E-1. Area E-1 was owned by the U.S. Navy at the time but held in escrow to be turned over to the City of San Diego for incorporation into the city’s holdings at MTRP.
 - **Area E-1** – 267 small arms and 170 items other than small arms were found and removed. Three of these items had to be blown-in-place.
 - **Area E-2** – 311 small arms items and 67 items other than small arms were found in this area.

Due to the significant MEC finds in Sub-Area E (the eastern portion of the Tierrasanta community ordnance clearance), the land area addressed in the ROD was expanded to include additional portions of the former Camp Elliott – Mission Trails, given that large

portions of the property were slated to be made into a regional park frequented by the public.

- **Sub-Area F:** The area was cleared, with portions designated as F-1 through F-11 (including F-10A, F-10E, F-10M, F-10N, F-11N, and F-11S). These areas are described below:
 - **Area F-1** – In this area, 23 small arms items and four items other than small arms were found.
 - **Area F-2** – There were 537 small arms items and 217 items other than small arms found in this area, including items containing white phosphorus. Ordnance density was heavy throughout Area F-2. According to the Final Ordnance Report (page 223 of the pdf document), one hazardous item was blown-in-place.
 - **Area F-3** – Twelve small arms and three items other than small arms were found and removed.
 - **Area F-4** – No ordnance was found in this area.
 - **Area F-5N** – Over 1,100 small arms items and 196 items identified as ‘other than small arms’ were found in this area. There were nine blow-in-place events, some as consolidated shots.
 - **Area F-5S** – No ordnance was found in this area.
 - **Area F-6** – There were 417 small arms items and 11 items identified as ‘other than small arms’ found in the canyon area.
 - **F-7** – During clearance activities, 36 small arms items and 81 items identified as ‘other than small arms’ were found and removed.
 - **F-8** – Fourteen items were explosively disposed of in this canyon, all on the eastern half of the canyon.
 - **F-9** – One hundred five small arms items and two items ‘other than small arms’ were found in this area.
 - **F-10A** – In 66 swept grids, 30 small arms items and 67 items ‘other than small arms’ were found and removed from the area.
 - **F-10E** – With two blow-in-place operations, there was otherwise moderate ordnance density. Hazardous small arms were recovered throughout Area F-10E and there was evidence of historical use as a base camp/field training camp.
 - **F-10M** – There were 32 small arms items and 20 items identified as ‘other than small arms’ found and removed from the area. There was one blow-in-place operation.
 - **F-10N** – Sixty-four small arms and 12 items identified as ‘other than small arms’ were removed from this area.
 - **F-11N** – No ordnance or scrap was found in this area.
 - **F-11S** – No ordnance and only four pounds of scrap was found in this area.

- **SCH** – An area located between Area C-3 and F-10E, belonging to SDUSD, comprising 537,834 square feet. The area was contaminated with hazardous waste (oil, oil filters, oil canisters, and sundry other items), that was subsequently remediated, with only two military-related items found (a .50 caliber round and one .30 caliber clip without bullets).

The 2003 Ordnance and Explosive Recurring Review for MTRP reports that the 1990-1994 ECC clearance operation located and removed 1,016 ordnance items; 3,787 small arms; 26,321 pounds of ordnance debris; and 142,253 pounds of trash within the Tierrasanta project. An additional 620 ordnance items; 779 small arms; 27,869 pounds of ordnance debris; and 41,106 pounds of trash were located and removed from clearance operations within the Mission Trails project area (Zapata Engineering, 2003).

From July through September 2007, a surface clearance utilizing visual methods supported by use of Schonstedts (hand-held magnetometers) to check areas where visibility was restricted (high grass, brush) was conducted by USACE for East Fortuna, located within MTRP and a portion of the Mission Trails project area (see **Figure 2-3**). During the field operations, the area cleared totaled approximately 554 acres, or 83% of the surveyed acreage targeted by the project. Inaccessible areas, including steep terrain and dense brush, were not cleared. Nineteen munitions debris items, the bulk of which were 75mm practice rounds, were located and disposed either by turning over the property to MTRP (five items) for educational purposes or to the U.S. Navy Explosive Ordnance Disposal (EOD) Mobile Unit (EODMU) VII for training purposes (14 items). No MEC (or “live munitions”) were found (Project Resources Inc. 2008).

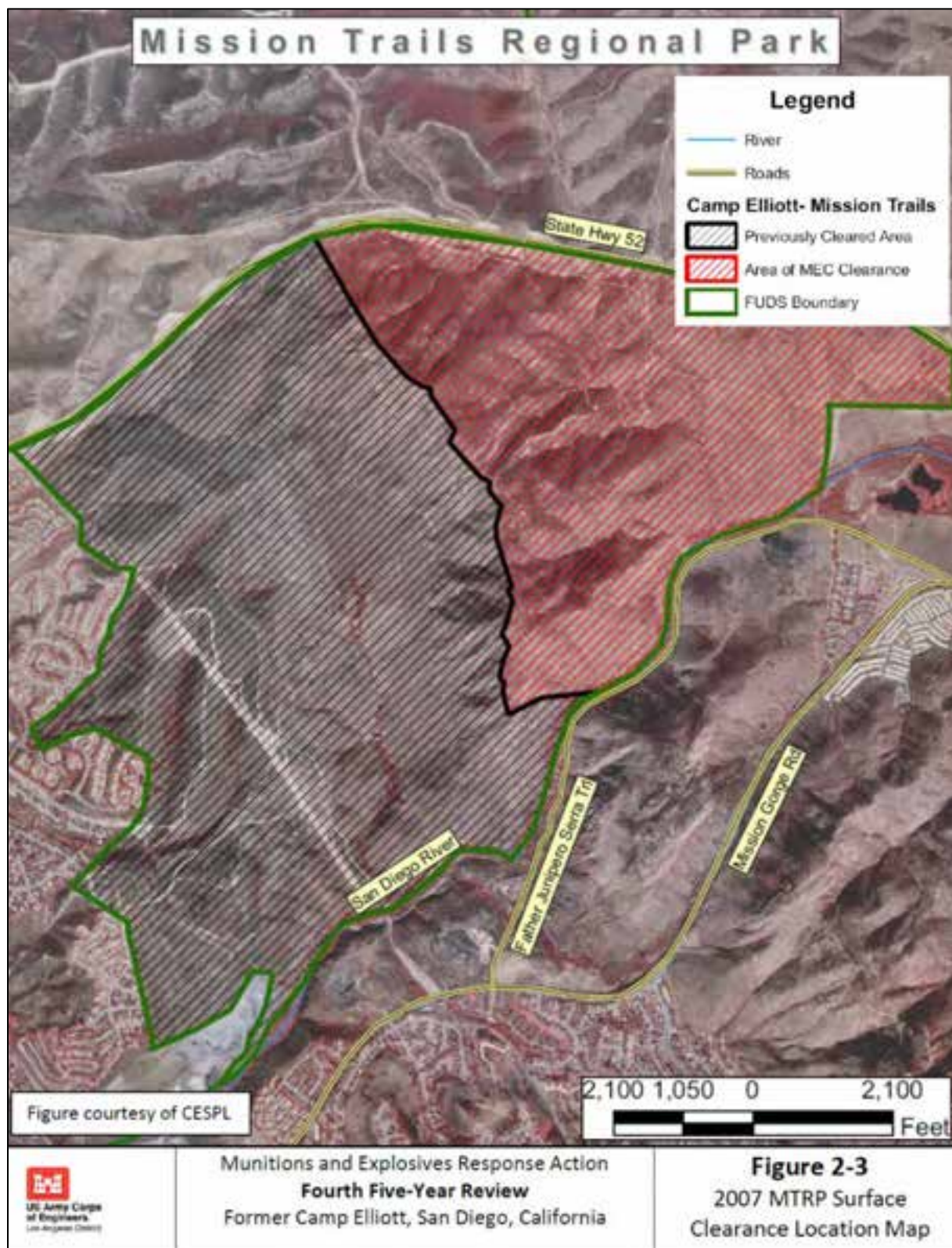


Figure 2-3. 2007 Mission Trails Regional Park Surface Clearance Location Map
(Figure courtesy of CESPL)

2.3.2 Additional Remedy Components

Following the clearance activities, USACE and the City of San Diego implemented land use controls (LUCs).

2.3.2.1 Tierrasanta and Mission Trails Land Use Controls

LUCs have been implemented at Tierrasanta and Mission Trails projects. The LUCs include public/community education, notification of individuals (e.g., contractors, homeowners) that might potentially encounter MEC, placement of warning/information signage in open spaces, and establishment of document repositories. These measures are discussed in more detail below.

Public/Community Education

- Establishment of a USACE website for each project
- Stakeholder meetings
- Community fact sheets

Notification of Individuals

- Contractor fact sheets
- School education program materials (coloring books, videos, fact sheets, etc.)
- Tierra Times advertisements

Placement of Signs

- Over 250 signs have been installed throughout the project areas

Establishment of Information Repositories

- Two information repositories established
 - San Diego Public Library – Tierrasanta Branch Library
 - Mission Trails Regional Park Visitor and Interpretive Center

The following remedy components have been implemented during the last five years:

- 2018 LUC audit
- Land Use Control Implementation Plan (LUCIP) completed July 2018 (USACE, 2018)
- Implementation Plan for LUC Audit Recommendations completed February 2020 (BSX, 2020a)
- Implementation Report for Land Use Controls Audit Recommendations completed December 2020 (BSX, 2020c)

3. PROGRESS SINCE THE LAST REVIEW

This section includes the protectiveness determinations and statements from the last (third) Five-Year Review (**Table 3-1**) as well as the recommendations from the Third Five-Year Review and the status of those recommendations (**Table 3-2**).

The Third Five-Year Review Report also recommended the development of a memorandum for record (MFR) explaining that the remedy described in the Tierrasanta Decision Document (DD) (the ROD) was expanded to cover Mission Trails. The recommendation does not affect protectiveness. The recommendation to develop an MFR has not yet been carried out.

**Table 3-1. Protectiveness Determinations/Statements from the 2016 Third Five-Year Review
Former Camp Elliott – Tierrasanta and Mission Trails**

Site	Protectiveness Determination	Protectiveness Statement
Sitewide	Short-term Protective	<i>The remedy at Tierrasanta and Mission Trails currently protects human health and the environment, because the elements of the public awareness program--consisting of public/community education, notification of individuals (e.g., contractors, homeowners) potentially coming in contact with MEC, placement of warning/information signage in open spaces, and establishment of document repositories--prevent inappropriate exposure of the public to MEC and instruct the public in the proper response on encountering MEC. However, in order for the remedy to be protective in the long-term, the following action needs to be taken to ensure protectiveness: Develop a Land Use Control Implementation Plan that formally defines the objectives of the public awareness program, the elements necessary to meet the objectives, and the roles and responsibilities of USACE and other stakeholders, and implement accordingly.</i>

**Table 3-2. Status of Recommendations from the 2016 Third Five-Year Review
Former Camp Elliott – Tierrasanta and Mission Trails**

Site	Issue	Recommendations	Current Status	Current (2021) Implementation Status Description	Completion Date
Sitewide	The public awareness component of the remedy may not be reaching its intended audience, because it has been developed and implemented without a governing plan that defines the objectives of the program, the elements necessary to meet the objectives, and the roles and responsibilities of USACE and other stakeholders	Develop a LUCIP that formally defines the objectives of the public awareness program, the elements necessary to meet the objectives, and the roles and responsibilities of USACE and other stakeholders. Implement accordingly.	Completed	<ul style="list-style-type: none"> • 2018 LUC audit included recommendation to develop LUCIP and implement. • LUCIP completed July 2018 (USACE, 2018) • Implementation Plan for LUC Audit Recommendations completed February 2020 (BSX, 2020a) • Implementation Report for Land Use Controls Audit Recommendations completed December 2020 (BSX, 2020c) 	12/16/2020

LUC = Land Use Control

LUCIP = Land Use Control Implementation Plan

USACE = U.S. Army Corps of Engineers

4. FIVE-YEAR REVIEW PROCESS

This section describes the process followed during this Five-Year Review.

4.1 Community Notification, Involvement and Site Interviews

Early in the Five-Year Review process, points of contact (POCs) for the Tierrasanta community and the Mission Trails project were identified. All POCs for the project, including the City of San Diego (Planning Department, Park and Recreation Department), SDUSD, DTSC, MTRP, and Tierrasanta Community Council (TCC), were notified of the initiation of the Five-Year Review process. They were all emailed meeting invitations in advance of the stakeholder meeting once the date of the meeting was coordinated. Relevant information about this Five-Year Review process was provided for their dissemination and/or review. The first stakeholder meeting was held at the MTRP Visitor and Interpretive Center on 06 November 2019 to discuss the Five-Year Review for the Tierrasanta and Mission Trails projects. A second meeting was held on 19 August 2020 via Microsoft Teams Meeting with the City of San Diego, Development Services Department.

Stakeholders include DTSC, the City of San Diego, SDUSD, MTRP, and TCC.

A public notice of the Five-Year Review was made available with the publication of a Tierrasanta and Mission Trails project areas informational fact sheet (**Appendix B**). The fact sheet announced the Five-Year Review and asked for the public's input via a Survey Monkey link. The fact sheet was also posted to the CESPL project websites, the TCC website, and the MTRP website. Additionally, the fact sheet was published in the Tierra Times on 08 October 2020 (**Appendix B**). The fact sheet was also provided electronically to SDUSD with a request to include in the "Facts for Parents" package of handouts at the beginning of the school year. However, the 2020-2021 "Facts for Parents" handout was posted on the SDUSD website, but the fact sheet was not included (SDUSD, 2021). Finally, the fact sheet was provided both electronically and in hard copy to Mr. Paul Kilburg, Open Space Interim Deputy Director, City of San Diego Parks and Recreation Department. Mr. Kilburg was also provided with electronic and hard copies of the "Additional Information for Contractors and Homeowners" fact sheet (included in **Appendix B**).

The results of the Five-Year Review and this final report will be made available to the public at the information repositories:

- San Diego Public Library – Tierrasanta Branch Library, located at 4985 La Cuenta Drive, San Diego, CA 92124
- MTRP Visitor and Interpretive Center, located at 1 Junipero Serra Trail, San Diego, CA 92118.

Please note that both facilities are currently closed until further notice due to the Coronavirus Disease-2019 (COVID-19) pandemic. The report will also be made available on the CESPL project websites.

During the Five-Year Review process, interviews were conducted to document any perceived problems or successes with the remedy that has been implemented to date. The results of these interviews are summarized below.

Thirteen agency interviews were conducted and included representatives from SDUSD, SDCWA, San Diego Metro Arson Strike Team (MAST), MCAS Miramar EOD, Navy EOD, San Diego Sheriff, San Diego Fire Department, TCC, and Tierrasanta Open Space Committee. An additional six interviews were conducted with the public at the MTRP in November 2019 and March 2020. An online survey service, Survey Monkey, was initially used to collect data from the public. It has since been determined that CESPL is no longer allowed to use Survey Monkey. In accordance with this policy, the responses of those respondents to the Tierrasanta and Mission Trails project questionnaire on Survey Monkey who did not provide contact information were not included. The completed interviews are included in **Appendix C, Attachment C17**.

One important goal of the interviews with the agencies was to identify ordnance incidents that may have occurred in the Tierrasanta and Mission Trails project areas since the last Five-Year Review in 2016. The interview with Matt Spicer, MAST Captain and Bomb Tech, resulted in a query of the MAST database. The results of the query are discussed in **Section 4.2.1**.

One agency respondent wondered if the local realtors were informing potential home buyers that hazards may remain. The respondent thought more effort might be needed in this area. Other notable observations from the agency interviews revealed that many respondents believed that the annual UXO safety presentations to the local schools were still taking place. The Naval Facilities Engineering Systems Command hires Jacobs Engineering Group (Jacobs) to provide the annual training to the two leased Navy schools in Murphy Canyon (Hancock and Miller Elementary Schools). Ms. Rosa Esquivel with Jacobs was contacted, and she confirmed that the presentations are provided annually to the two elementary schools within Navy property (Murphy Canyon). Due to the COVID-19 pandemic; however, the training was suspended in 2020 until school resumes.

Of those members of the public that were surveyed, about 44% were not aware that UXO items may be present in the MTRP. However, the interviewees did feel that the public awareness program and institutional controls (i.e., warning signs, fact sheets, media announcements) were effective in minimizing risks to the public. Based on the interviews conducted, visitors to MTRP and the open spaces of Tierrasanta are seeing the signs and generally know the history of the Former Camp Elliott. However, several members of the public weren't sure that they could identify potential UXO, and five (three of whom were visitors to the park) reported they did not know how to recognize UXO. All but one respondent knew what to do if they happened to come upon potential UXO.

4.2 Data Review

4.2.1 Internet/Media Search and Public Records

An internet search was conducted for articles and news stories pertaining to the Mission Trails and Tierrasanta projects published since 2016. The results of the research effort were documented in the *Identify/Review New Information, Current Site Conditions, and Completion of Recommendations from the 2018 Audit of Existing Land Use Controls (LUCs) Memorandum* dated 28 May 2020 (**Appendix C**). The MTRP Master Plan Update (including a hazardous materials/UXO review) and the Final Program Environmental Impact Report for the MTRP update discusses the potential for UXO within the park. One source of information from the SDCWA describing the Mission Trails FRS II project suggested mitigation measures for determining the potential presence of UXO in the project area. There were no other significant findings resulting

from the internet search. **Table C1** in **Appendix C** provides a summary of new information gathered during this Five-Year Review process from sources that include the regional newspapers, media, and government websites. **Table C3** in **Appendix C** includes communications with individual SDUSD school principals.

The results of the MAST database query, briefly described in **Section 4.1**, identified 21 potential ordnance finds for zip codes 92119 and 92124. The details were limited in the MAST database and MAST referred the contractor to MCAS Miramar for additional details. MCAS Miramar also had limited details, but they were able to provide some new data on three of the 21 finds. The expanded MAST database query is included in **Appendix C, Attachment C18**. While the MAST database indicates the locations of finds, it does not describe the finds. The database does not indicate what was found, nor does it say whether it was munitions debris or MEC. **Appendix C, Attachment C18** also includes a map of the item locations based on the limited data provided by MAST/MCAS Miramar. The map shows that Item #2 is located just outside of the Mission Trails project area boundary. Item #3 is documented to have been located at 9200 Father Junipero Serra Trail, but the description of the location provided by MCAS Miramar states the item was found on the border of MCAS Miramar and MTRP by a Park Ranger. Therefore, the location of Item #3 was moved on the map to that general location. Eight items (Items #1, #5, #6, #11, #13, #14, #19 and #21) were located within the Tierrasanta project area boundary. The remainder of the items were located outside of either project boundary. It is also important to note that five of the 21 items found are dated prior to the review period of this Five-Year Review, but they do not appear to have been reported on in the 2016 Five-Year Review Report. Two of the 21 items are identified as MEC; however, as described above, there is insufficient data associated with the remaining 19 items to identify them as MEC or munitions debris. The two items identified as MEC included Item #2, located within the Missions Trails project area at Cowles Mountain Gate 4, and Item #19, found on a hiking trail within the Tierrasanta project area.

4.2.2 Site Inspection

The site inspection was conducted on 06 and 07 November 2019 and 02 through 05 March 2020 in the Tierrasanta and Mission Trails project areas. The site inspection was conducted by contractor personnel. The purpose of the inspection was to assess the protectiveness of the remedy. A summary of the site visit is included in **Appendix C, Attachment C1**. The site visit photo log is included in **Appendix C, Attachment C2**. Notable observations include:

- A few signs could not be located based on coordinates provided.
- A few signs were showing age (i.e., fading, cracking) and may need to be replaced in the next couple of years.
- Some signs were obscured by vegetation.
- Half of one sign was missing (coordinates were provided to Mr. Loren Boerboom, City of San Diego Open Space Grounds Maintenance Manager for replacement). The Sign Condition Log is included as **Appendix D** and Site Inspection Checklist is included in **Appendix E**.

The inspection team also observed that not all trailhead kiosks within MTRP included MEC information. The inspection team talked with Mr. Ryan Robertson, Senior Park Ranger at MTRP,

about the process of maintaining the MEC information on the kiosks. Mr. Robertson indicated that he would like information about MEC to include on the kiosks. Per Mr. Robertson's request, the contractor provided him with electronic MEC information flyers for posting on the kiosks. Examples of the two flyers are included in **Appendix B**.

5. TECHNICAL ASSESSMENT

5.1 QUESTION A: Is the remedy functioning as intended by the decision documents?

ANSWER: Yes.

The primary objective of the Tierrasanta and Mission Trails projects is the protection of human health, safety, and general welfare. The remedy included a surface and subsurface (to three feet) ordnance clearance of 1,904.24 acres, which effectively removed 3,991 hazardous small arms and 1,066 hazardous items larger than small arms. Additional components of the remedy include warning/informational signs in open spaces and a public/community education/awareness program. Interviews conducted for this Five-Year Review found that some members of the public were not aware of the potential MEC hazards present, although warning signs are located throughout the open spaces for both the Tierrasanta and Mission Trails project areas. Even though some respondents did not know how to identify potential MEC, all but one respondent were aware of the proper procedure should a potential MEC item be found. With two confirmed MEC finds since 2015 and 19 potential munitions finds reported to MAST and/or MCAS Miramar, the public education component of the remedy is effective at keeping the public safe; visitors to the open spaces are heeding the warnings of the 3Rs and contacting the authorities. By repeating the munitions awareness safety messages on the MTRP, TCC, and CESPL FUDS websites, and in print media (i.e., Tierra Times, fact sheets, 3Rs postings on kiosks at MTRP) the message is further reinforced and reaching new audiences. However, because ROE was denied at Sub-Area D (known before the preparation of this Five-Year Review), the remedy has not been fully implemented at the Tierrasanta project site.

5.2 QUESTION B: Are the exposure assumptions, toxicity data, cleanup levels, and RAOs used at the time of the remedy selection still valid?

ANSWER: Yes.

No formal cleanup levels were established in the FS or the ROD.

In the 1980s and early 1990s, there were no Applicable or Relevant and Appropriate Requirements (ARARs) under consideration for these projects. Further, no chemical specific ARARs or “To Be Considered” were identified for the former Camp Elliott FUDS, and there was no RAO established for either project.

There will be a change in the exposure pathways in the short term during the construction of the new Mission Trails FRS II by the SDCWA. The construction project will result in increased potential for exposure to munitions. The SDCWA is taking necessary steps to reduce the exposure risks to construction and maintenance workers during construction. With the completion of the construction activities the exposure pathways are anticipated to return to present-day conditions.

5.3 QUESTION C: Has any **other** information come to light that could call into question the protectiveness of the remedy?

ANSWER: No.

There is no other information that calls into question the protectiveness of the remedy. There have been no impacts from natural disasters. However, because ROE was denied at Sub-Area D (known

before the preparation of this Five-Year Review), the remedy has not been fully implemented at the Tierrasanta project site.

6. ISSUES/RECOMMENDATIONS

Issues/Recommendations
Operable Units without Issues/Recommendations Identified in the Five-Year Review:
Tierrasanta (without Sub-Area D) and Mission Trails Projects

Issues and Recommendations Identified in the Five-Year Review				
Operable Unit: Tierrasanta	Issue Category: Remedy Performance			
	Issue: Implementation of the remedy for part of Sub-area D was prevented due to right-of-entry (ROE) refusal			
	Recommendation: Delineate Sub-Area D as a new munitions response site (MRS) and amend the Record of Decision (ROD) to exclude the newly delineated MRS.			
Affect Current Protectiveness	Affect Future Protectiveness	Party Responsible	Oversight Party	Milestone Date
No	Yes	Army	State	12/31/2022

6.1 OTHER FINDINGS

The following recommendations do not affect current and/or future protectiveness of the remedy but may help improve the performance of the remedy.

- The previous Five-Year Review included a recommendation to develop an MFR explaining that the Tierrasanta project site remedy was expanded to cover the Mission Trails project site. This recommendation has not been carried out. The preparation of an MFR is recommended once again because it is considered essential to documenting why there is no DD for Mission Trails.
- Adding quick response (QR) code stickers to the existing warning signs could provide the public quick access to important safety information. Given that the public does not receive UXO Safety Awareness training, and the videos are no longer presented at MTRP or in the SDUSD schools, the purpose of the QR codes would be to link the participant to a UXO safety website. Further, a QR code could serve the same purpose when added to project brochures and fact sheets.

- Given the increasing enrollment of Hispanic/Latino student population within SDUSD (up from 12.7 to 35.7% in 2004 to current [2019] enrollment of 20.6 to 41% [BSX, 2021]) it is recommended that CESPL provide Spanish language educational materials and signage for that population of the demographic. The signage could be limited in number (to avoid further clutter of the open space areas) but placement should be well-planned. The educational materials could be provided to the schools and repositories and posted on the kiosks in the open areas. QR codes could also be added to the warning signs (sticker format as noted above), fact sheets, and brochures. The codes could include safety awareness and site information in several languages (Tagalog was also suggested during the previous Five-Year Review).
- CESPL has provided UXO awareness educational materials to SDUSD over the years, but the annual presentations to the SDUSD schools has fallen by the wayside. It is recommended that CESPL contact the SDUSD to see what additional resources are needed to recommit to the annual safety presentations, and then provide those resources.
- It is suggested that CESPL provide the warning sign template and funding to MTRP so that they can properly manage and maintain the inventory of signs within the park itself.
- It was observed that members of the public visiting MTRP did not feel they could identify UXO. It is suggested that a small sampling of new signs be placed to selectively target heavy use park entry points. The signs should include images of UXO and actual historic finds to drive home the point that these items could still be present. Additionally, the 3Rs (Recognize, Retreat, Report) message is not included on the existing warning signs currently in place at Tierrasanta or MTRP. That is the driving message key to the Military Munitions Response Program and should be included with the UXO images warning signs.
- Based on the research conducted for this Five-Year Review, it appears that the communication path set forth in the LUCIP is not being followed when an MEC item is discovered. The reporting process goes no further than MAST and/or MCAS Miramar. The LUCIP recommended that MAST/MCAS Miramar notify CESPL of any MEC reports, and CESPL then notify the City of San Diego, County of San Diego, TCC, MTRP, and DTSC. It is suggested that CESPL contact MAST and MCAS Miramar to identify a POC that will keep them better informed, thus allowing CESPL to keep the community informed when MEC items are found.
- The site visit photo log noted that several signs were not visible and poorly placed. It is recommended that the signs be moved to more visible locations.
- It is clear from the research conducted for this Five-Year Review that visitors are not reading the signs. They know they are present, but they are not reading them. This is evidenced in the fact that of the park visitors interviewed (all returning visitors), 67% were not aware that UXO has been found at MTRP. Further, of those visitors, 83% reported seeing the warning signs, and one visitor wasn't sure if he had seen the signs. It is recommended that as signs are replaced (due to damage or missing signs) or moved to more visible locations, that they be replaced with a sign similar to the sign shown in **Appendix C, Attachment C2, Observation ID TS19b**).

7. PROTECTIVENESS STATEMENT

Protectiveness Statement(s)		
<p><i>Site:</i></p> <p>Tierrasanta and Mission Trails projects</p>	<p><i>Protectiveness Determination:</i></p> <p>Short-term Protective</p>	<p><i>Planned Addendum Completion Date:</i></p> <p>Click here to enter a date</p>
<p><i>Protectiveness Statement: The remedy at Tierrasanta and Mission Trails project areas is protective of human health and the environment.</i></p> <p><i>The elements of the public awareness program, consisting of public/community education, notification of individuals (e.g., contractors and homeowners) potentially coming into contact with MEC, placement of warning/information signage in open spaces, and establishment of document repositories, reduces inappropriate exposure of the public to MEC and instructs the public in the proper response upon encountering potential MEC. The development and implementation of the LUCIP further enhanced the protectiveness by formally defining the objectives of the public awareness program, the elements needed to meet those objectives, and the roles and responsibilities of USACE and other stakeholders. However, because right-of-entry (ROE) was denied at Sub-Area D (known before the preparation of this Five-Year Review), the remedy has not been fully implemented at the Tierrasanta project site.</i></p>		

8. NEXT REVIEW

The next (fifth) Five-Year Review Report for the former Camp Elliott Tierrasanta and Mission Trails project is required five years from the completion date of this review.

APPENDICES

APPENDIX A

References

References

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APPENDIX B
Fact Sheets and Website Postings

If you **did not**
drop it,
do not
pick it up!

UXO, Dud, Training Round, War Trophy, Souvenir

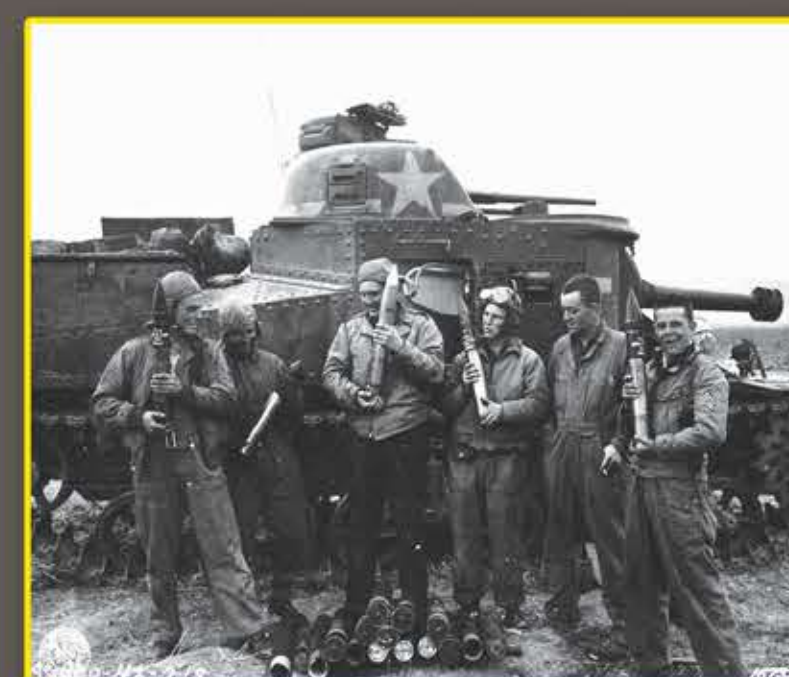
NO MATTER WHAT YOU CALL THEM! THEY CAN BE DEADLY!

Learn and Follow the **3Rs**

RECOGNIZE: The danger that a souvenir
munition poses to yourself,
your family and your neighbors

RETREAT: Do not disturb, touch or move it
Do not give or throw it away

REPORT: Call 911



UXO, Dud, Training Round, War Trophy, Souvenir NO MATTER WHAT YOU CALL THEM! THEY CAN BE DEADLY!



If you
did not
drop it,
do not
pick it up!

Learn and Follow the **3Rs**

RECOGNIZE: The danger that a souvenir
munition poses to yourself,
your family and your neighbors

RETREAT: Do not disturb, touch or move it
Do not give or throw it away

REPORT: Call 911



www.denix.osd.mil/uxo

Additional Information for Contractors and Homeowners

Former Camp Elliott,
Tierrasanta and Mission
Trails FUDS
San Diego, CA

This fact sheet has been developed to provide additional information to the contractor and homeowner regarding potential historical military munitions that could remain in the subsurface at the former Camp Elliott, Tierrasanta and Mission Trails Formerly Used Defense Sites (FUDS). Former Camp Elliott, now known as the Tierrasanta community and Mission Trails Regional Park (MTRP) (refer to Figure 1), operated as a tank, anti-tank, and artillery training/practice range from World War I to the Korean War.

Since the 1980s, the U.S. Army Corps of Engineers (USACE) has conducted extensive ordnance investigations and cleanup efforts at the former Camp Elliott.

Suspicious items can be encountered while:

- * Installing underground pools;
- * Installing posts for decking and fencing projects;
- * Digging foundations;
- * Excavating and installing utilities (e.g., cables, piping); and
- * Any other ground disturbing activity.

While the chances of encountering old shells, mortars, and other munitions are slim, you should be cautious of any type of old metal object you may find in the area. Regardless of age, ordnance can still be explosive. With time, these items can become more sensitive and detonations could occur with even the slightest touch or vibration.

Homeowners, and contractors and their personnel should be aware of these hazards before digging in the Tierrasanta community or the MTRP. If any suspicious metal items are found, stop digging immediately, remove yourself and/or personnel from the immediate area, and call 911 to report the findings to local authorities.



These images show only a few of the types of ordnance that could be found at Tierrasanta and MTRP. Not all ordnance types are represented. ANY old metal object could be ordnance.



Safety Counts!

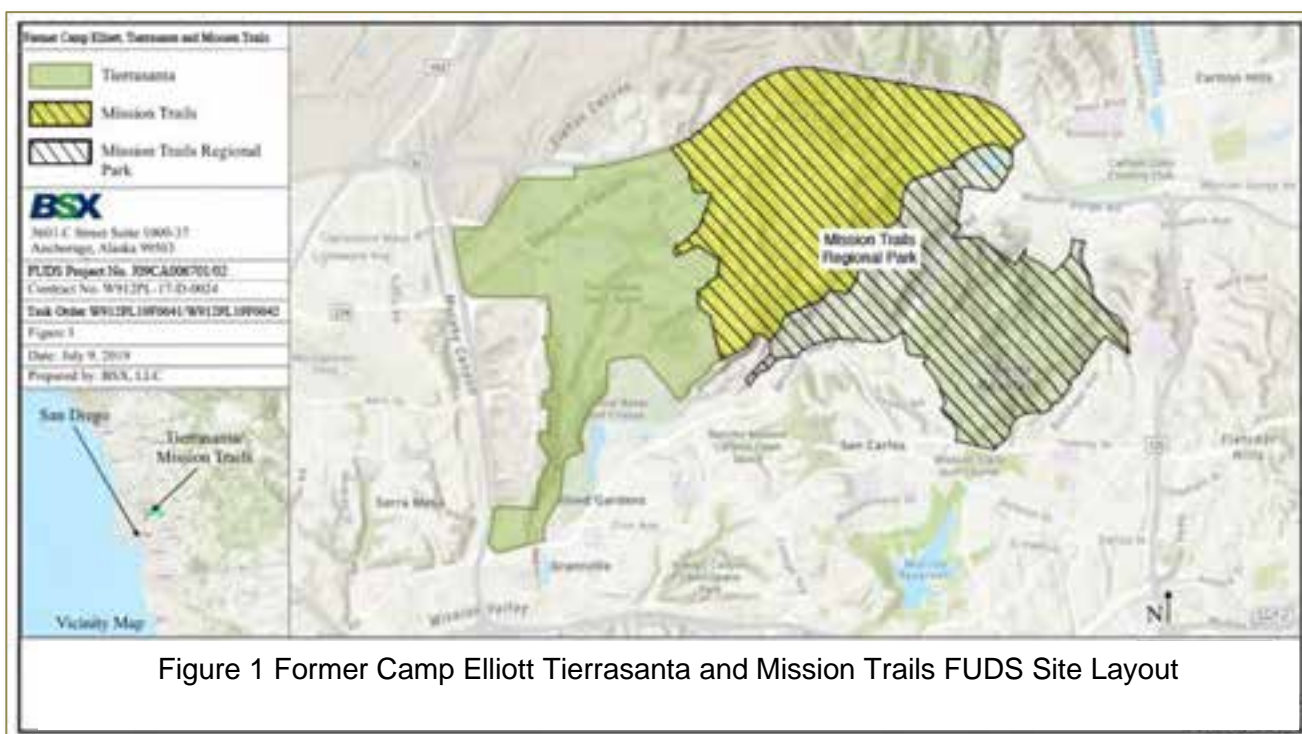
If you suspect that you have encountered any military munitions, be sure to follow the 3Rs of explosives safety.



Recognize you may have encountered a munition.

Retreat from the munition. Do not touch or disturb it; instead move away carefully, walking out the same way you entered the area.

Report what you saw and where you saw it, by calling 911.



Point of Contact



U.S. Army Corps of Engineers, Los Angeles District
Public Affairs Office
915 Wilshire Blvd.
Los Angeles, CA 90017
213-452-3921

Additional information about former Camp Elliott; the Tierrasanta and Mission Trails Formerly Used Defense Sites; and ordnance safety awareness can be found at the following USACE websites:

<https://www.spl.usace.army.mil/Missions/> and [Formerly-Used-Defense-Sites/Camp-Elliott/Mission-Trails/](https://www.spl.usace.army.mil/Formerly-Used-Defense-Sites/Camp-Elliott/Mission-Trails/)

Former Camp Elliott, Tierrasanta and Mission Trails

Formerly Used Defense Sites

The Tierrasanta community and the northern portion of the Mission Trails Regional Park (MTRP) were once part of the former Camp Elliott, used by the U.S. Marine Corps (USMC) for artillery, anti-aircraft, and machine gun training. The munitions used ranged from 37 millimeter (mm) high explosive (HE) to 155mm HE and shrapnel projectiles.

Military use of Camp Elliott began in 1917 and continued to 1960. In 1961, the Navy declared 15,000 acres of the former Camp Elliott, including the area that became the Tierrasanta community and MTRP, to be excess land. This land was sold over several years by the General Services Administration to real estate developers and private individuals. Additionally, property was transferred to local municipalities. The remainder of Camp Elliott was retained by the military and is part of Marine Corps Air Station Miramar.

Portions of the former Camp Elliott have been subject to several clearance actions, including one in 1964 by the U.S. Navy, one in 1965 by the USMC, and one in 1973 by the U.S. Army. Even after the multiple surface clearances, two boys from the Tierrasanta community were killed by accidental detonation of a 37mm HE projectile in 1983. Additional investigations have been conducted at the former Camp Elliott since 1984 through the Formerly Used Defense Site (FUDS) Program. Since that time, the former Camp Elliott has been divided into four FUDS project areas: Tierrasanta (comprises the Tierrasanta community); Mission Trails (comprises the northern portion of MTRP); East Elliott; and Areas D, G, and H.

Even though multiple surface and subsurface clearances have been performed, there is still a potential for encountering munitions and explosives of concern (MEC) in the Tierrasanta community and MTRP. While the chances of encountering unexploded ordnance or MEC items are slim, the risk does exist and you should be wary of any type of old metal you might find within the Tierrasanta community and the MTRP. Protect yourself, your family, your friends, and your community in the unlikely event you encounter potential munitions, and learn and follow the **3Rs**:



Recognize

Recognize when you may have encountered a munition. Do not touch or pick up suspicious items, whether they are whole or in fragments.

Retreat

Mark a location near the item and carefully move away on the same path you entered – do not run.

Report

Call 911. Notify local law enforcement that you found a suspect ordnance item. Tell them what you saw and where you saw it.

Currently, the U.S. Army Corps of Engineers, Los Angeles District, is performing a Five-Year Review of the former Camp Elliott for Tierrasanta and Mission Trails to evaluate whether previously implemented munitions response actions continue to minimize explosives safety risks and remain protective of human health and safety and the environment. Please visit <https://www.surveymonkey.com/r/6LS7CCV> if you would like to participate in a brief survey to provide input for the Five-Year Review. The survey will be available through October 31, 2020.

Additional information about the former Camp Elliott can be found at:

<https://www.spl.usace.army.mil/Missions/Formerly-Used-Defense-Sites/Camp-Elliott/>

and the information repositories:

Tierrasanta Branch Library
4985 La Cuenta Drive
San Diego, CA 92124

Mission Trails Regional Park Visitor Center
One Father Junipero Serra Trail
San Diego, CA 92119

The American Period

Background

California's wealth had been noticed by the United States. By 1842, U.S. Navy ships were regularly cruising offshore, and by 1845 Americans were openly expounding the idea of a United States that stretched "from sea to shining sea." Mexican California came to an end within two years. After a series of battles, including Kearny's battle at San Pasqual, the United States laid claim to the territory.

By 1850, California was a state. Americans settling in California after 1848 brought their own ideas about land ownership. According to American tradition, they could settle on public land, build a farm, and then, after making some improvements, buy the land for a modest price. The Mexicans viewed them as squatters. During the American period, the land in and around Mission Trails Regional Park came under a variety of new uses, as well as new owners. Ranching, farming, mining, recreation, and military activities were initiated, but much of the land remained undeveloped

Ranching and Farming

In 1885, the former mission lands were opened up for settlement and a number of ranches and farms were purchased in the area. One of the most notable tracts was Rancho Fanita, owned by the Scripps family; dairy farming was represented by the Edgemoor Dairy. Beans were regularly planted for years between Cowles Mountain and Lake Murray.

Mining in Mission Gorge

Beginning in 1873, granite mines appeared in Mission Gorge. Light gray in color, the granodioritic rock extracted from these mines was used to construct roads, buildings, jetties, and dams. Blocks of granite from the Gorge were used in the construction of a breakwater in San Diego Bay and are still in place today. The family of Robert Waterman, Governor of California from 1887 to 1891, built the San Diego and Cuyamaca Eastern Railroad, which allowed the granite to be shipped economically from the mines. Modern mining industries, which provide sand, gravel, and decomposed granite products, evolved out of the early granite mining business. Many firms extracted sand and gravel on lands now part of Mission Trails Regional Park, including J.B. Stringfellow, the Kenneth Golden Company, H.G. Fenton, and the V.R. Dennis Company. In addition, the Morse Construction Company operated a dynamite magazine on park premises in the 1960s. Kumeyaay Lake and other nearby ponds are the by-products of these mining operations, created by the removal of rock materials in the late 1940s.

Military Presence - *Information from US Army Corps of Engineers Los Angeles District Fact Sheets*

Military use of the land that has become the Fortuna area of Mission Trails Regional Park began in 1917 and continued to 1960 – from World War I to the Korean War. Most of the land was used for live-fire artillery and tank exercises by the U.S. Army from 1917 to 1919 and by the U.S. Marine Corps from 1941 to 1944. The munitions used ranged from 37 millimeter (mm) to 155 mm High Explosive and shrapnel projectiles. It is part of the former Camp Elliott Training Area which encompassed 30,500 acres of land including the Fortuna area of Mission Trails and extending north of SR52 through East Elliott and most of Marine Corps Air Station (MCAS) Miramar. With the establishment of Camp Pendleton for the Marine Corps, Camp Elliott was transferred to the Navy, and served as a Training and Distribution Center until 1960, when it was deactivated.

Nearly half of Camp Elliott was declared excess land in 1961, including the area that became the Tierrasanta community and Mission Trails Regional Park, and was sold over several years to real estate developers, private individuals, and government entities. The remainder of Camp Elliott was retained by the military and most is part of MCAS Miramar. The majority of the Fortuna area of Mission Trails Regional Park was transferred to the city of San Diego in January 1964. The deed restricted its use to historic monument/public recreational purposes for 20 years.

[Unexploded ordnance](#) was an unfortunate legacy of the military period. After Camp Elliott closed in 1960, the Navy and the Marine Corps cleared ordnance from portions of the former camp. In 1983 three children discovered a 37mm unexploded round in an open area near their Tierrasanta homes, and while playing with it the round detonated. This accident prompted action by the U.S. Navy and searches for unexploded ordnance in the area of the Tierrasanta community, extending into the southwest boundary of Mission Trails were conducted in 1984 and 1985. Additional searches and removal actions were conducted from 1992 through 1995 and the Corps of Engineers removed ordnance items, small arms, munitions debris and trash. The Fortuna area of Mission Trails is under Long-Term Management by the U.S. Army Corps of Engineers. The site is investigated every five years to evaluate if previous removal actions and remediation activities are still protective of human health and the environment.

[Learn more about unexploded ordnance](#)

Water Issues

As San Diego grew, the need for a reliable water source became as critical to the City Fathers as it once had been to the Mission padres. In 1920, the San Diego River was the only river flowing through the city, so the choice for the source was limited. But where along the river to site a dam and just who owned the rights to the water was destined to be fought over throughout the decade and into the next. Two powerful San Diegans, Colonel Ed Fletcher, owner of the Cuyamaca Water Company which held title to a mile and a half of the San Diego River, and wealthy magnate John D. Spreckels, each championed different sides of the debate. Fletcher wanted to sell his water interests to the City for \$1,400,000 and argued that the best place for a new dam was below the old Mission Dam, on land he owned. Spreckels, represented by the City Attorney, was outraged, claiming that the City already held all of the river's water rights as established under Spanish law, which subsequently passed to Mexico and then to the United States. This view was later upheld by the County Superior Court and again in the Supreme Court. With regard to a dam site, Fletcher's opponents argued for an upriver location, at El Capitan, on El Cajon Mountain.

In 1924, in a special election citizens voted down a bond measure to construct the dam in Mission Gorge, but later that year approved a bond issue to construct the dam at El Capitan by a three-to-one margin. It was ten years before El Capitan Dam was finally built. In 1930, a second bond measure was put before the voters, who were asked to fund the construction of a dam one-half mile below the old Mission Dam - it too failed, and this time by an even greater margin than the first. If a dam had been built anywhere in Mission Gorge the 1920s or 30s, large portions of the land that became Mission Trails Regional Park would have disappeared beneath its waters. By the mid-1950s the area had become far too developed and populated to seriously consider a dam project, and by the 1960s it had become impossible.

Recreational Uses


As San Diego grew, the back country along the San Diego River provided an outlet from stress and an opportunity to get away from city life. As late as the mid-1920s, enough unfenced land remained to allow unhindered treks all the way from the Cuyamaca foothills westward to the coast. Hunters, hikers, and naturalists alike shared this "wilderness" area so close to home. Climbing Cowles Mountain for the view from the top was a favorite local pastime, and for 40 years, from 1931 to 1971, San Diego State College freshman classes repainted the "S" (which stood for San Diego State) on the southwest side of the mountain.

More articles:

The American Period

GO

Mission Trails eNewsletter



Receive information about MTRP programs, events, and news from around the park.

Sign Up >

Photo: David Cooksy

Mission Trails Regional Park



The park encompasses 7,220 acres of both natural and developed recreational acres. Its rugged hills, valleys, and open areas represent a San Diego prior to the landing of Cabrillo in San Diego Bay in 1542. **Read more >**

Photo: Chris Szwedo

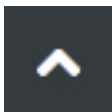
MTRP Visitor Center



One Father Junipero Serra Trail
San Diego, CA 92119
(619) 668-3281
mtrp@mtrp.org

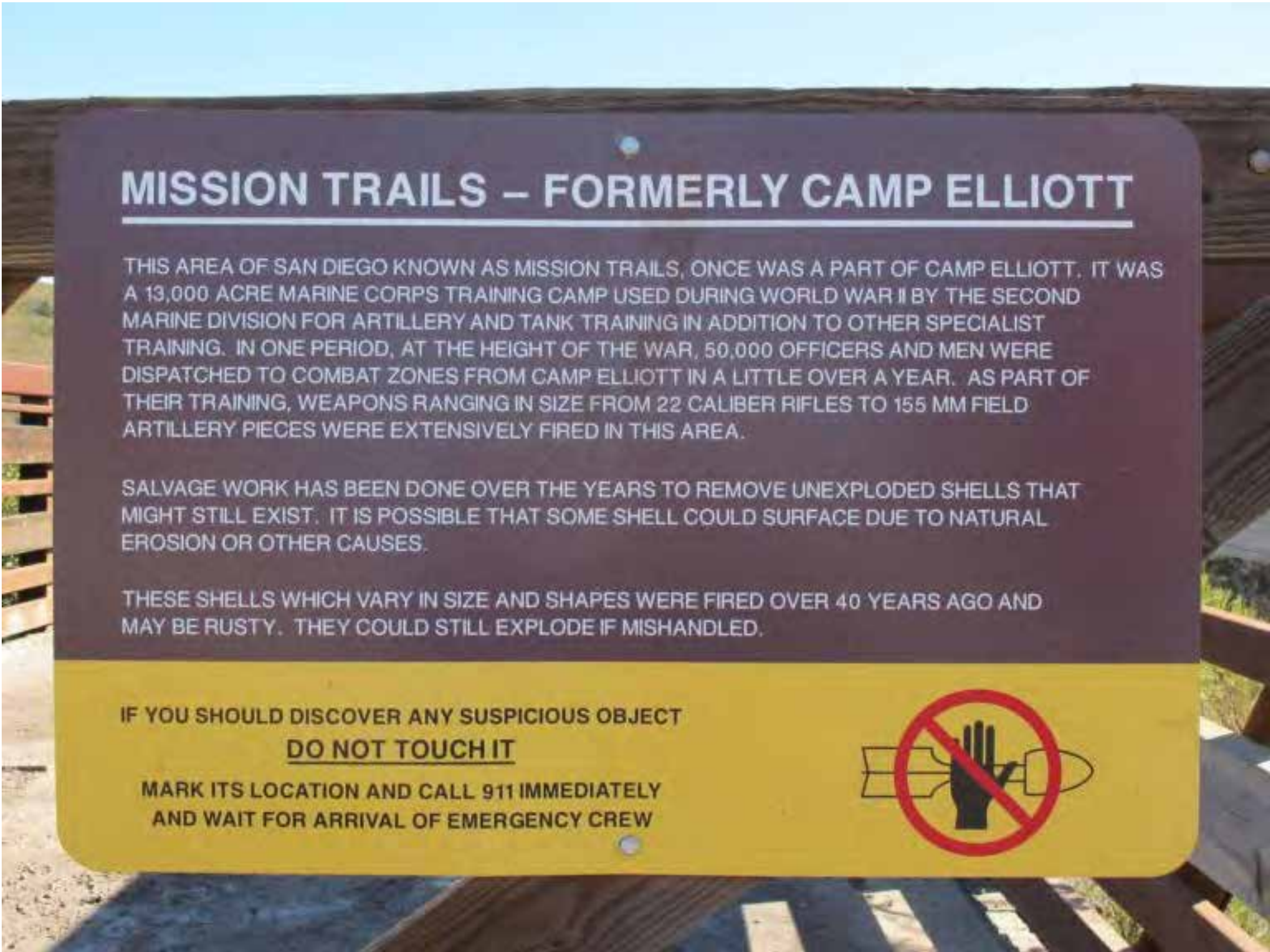
Trail Maps · Directions

Photo: Gerry Tietje



Unexploded Ordnance at Mission Trails

Warning signs, such as the one shown in the photo, have been installed in several locations in Mission Trails Regional Park (and throughout the neighboring Tierrasanta community). A [safety notice](#) is also available at trail kiosks in the park.



The sign reads:

Mission Trails – Formerly Camp Elliott

This area of San Diego known as Mission Trails, once was a part of Camp Elliott. It was a 13,000 acre Marine Corps Training Camp used during World War II by the Second Marine Division for artillery and tank training in addition to other specialist training. In one period, at the height of the war, 50,000 officers and men were dispatched to combat zones from Camp Elliott in a little over a year. As part of their training, weapons ranging in size from 22 caliber rifles to 155 mm field artillery pieces were extensively fired in this area.

Salvage work has been done over the years to remove unexploded shells that might still exist. It is possible that some shell could surface due to natural erosion or other causes.


These shells which vary in size and shapes were fired over 40 years ago and may be rusty. They could still explode if mishandled.

If you should discover any suspicious object DO NOT TOUCH IT: mark its location and call 911 immediately and wait for arrival of emergency crew

For more information on the past military use of the area, please visit the [U.S. Army Corps of Engineers, Los Angeles District's website for the Camp Elliott project](#).

Information is also available at the [Visitor's Center](#), and at the Tierrasanta Library (4985 La Cuenta Drive, San Diego, CA 92124).

Mission Trails eNewsletter




Receive information about MTRP programs, events, and news from around the park.

Sign Up >

Photo: David Cooksy

Mission Trails Regional Park



The park encompasses 7,220 acres of both natural and developed recreational acres. Its rugged hills, valleys, and open areas represent a San Diego prior to the landing of Cabrillo in San Diego Bay in 1542. [Read more >](#)

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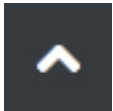
MTRP Visitor Center



One Father Junipero Serra Trail
San Diego, CA 92119
(619) 668-3281
mtrp@mtrp.org

Trail Maps · Directions

Photo: Gerry Tietje



Even though multiple surface and subsurface clearances have been performed, there is still a potential for encountering munitions and explosives of concern (MEC) in the Tierrasanta community and MTRP. While the chances of encountering unexploded ordnance or MEC items are slim, the risk does exist and you should be wary of any type of old metal you might find within the Tierrasanta community and the MTRP. Protect yourself, your family, your friends, and your community in the unlikely event you encounter potential munitions, and learn and follow the 3 Rs:

Recognize: when you may have encountered a munition. Do not touch or pick up suspicious items, whether they are whole or in fragments.

Retreat: Mark a location near the item and carefully move away on the same path you entered – do not run.

Report: Call 911. Notify local law enforcement that you found a suspect ordnance item. Tell them what you saw and where you saw it.

Warning signs, as shown in the photo below, have also been installed throughout the Tierrasanta community (and the neighboring Mission Trails Regional Park).



Currently, the U.S. Army Corps of Engineers, Los Angeles District, is performing a Five-Year Review of the former Camp Elliott for Tierrasanta and Mission Trails to evaluate whether previously implemented munitions response actions continue to minimize explosives safety risks and remain protective of human health and safety and the environment. Please visit <https://www.surveymonkey.com/r/6LS7CCV> if you would like to participate in a brief survey to provide input for the Five-Year Review. The survey will be available through October 31, 2020.

For more information on the past military use of the site, please visit the U.S. Army Corps of Engineers, Los Angeles District's website for the Camp Elliott project: <https://www.spl.usace.army.mil/Missions/Formerly-Used-Defense-Sites/Camp-Elliott/>.

Additional information is also available at these information repositories:

- Tierrasanta Library, 4965 La Cuenta Drive, San Diego, CA 92124
- Mission Trails Regional Park, 1 Father Junipero Serra Drive, San Diego, CA 92119

[Sign Up Now](#)

Tierrasanta Community Council
Information Email List

Categories

- 1 Annual Reports
- 2 Committees
- 3 Community Development Committee
- 4 Concerts in the Park
- 5 Important Community Information and Documents
- 6 Meetings
- 7 Miramar Marine Corps Air Station
- 8 Open Space
- 9 Public Notices
- 10 Tierrasanta Community Council
- 11 Tierrasanta Schools
- 12 Uncategorized

ADVERTISE

The Tierrasanta Community Council is starting a new Community Partners section on its website.

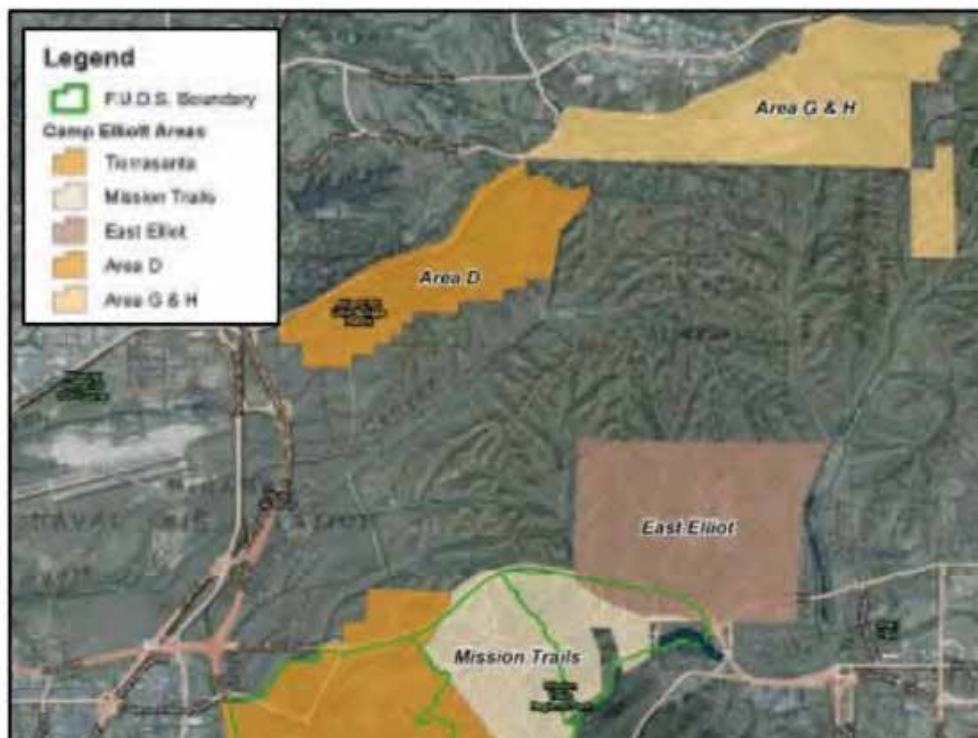
[Click here for details](#)

Unexploded Ordnance in Tierrasanta

The Tierrasanta community and the northern portion of the Mission Trails Regional Park (MTRP) were once part of the former Camp Elliott, used by the U.S. Marine Corps (USMC) for artillery, anti-aircraft, and machine gun training. The munitions used ranged from 37 millimeter (mm) high explosive (HE) to 155mm HE and shrapnel projectiles.

Military use of Camp Elliott began in 1917 and continued to 1960. In 1961, the Navy declared 15,000 acres of the former Camp Elliott, including the area that became the Tierrasanta community and MTRP, to be excess land. This land was sold over several years by the General Services Administration to real estate developers and private individuals. Additionally, property was transferred to local municipalities. The remainder of Camp Elliott was retained by the military and is part of Marine Corps Air Station Miramar.

Portions of the former Camp Elliott have been subject to several clearance actions, including one in 1964 by the U.S. Navy, one in 1965 by the USMC, and one in 1973 by the U.S. Army. Even after the multiple surface clearances, two boys from the Tierrasanta community were killed by accidental detonation of a 37mm HE projectile in 1963. Additional investigations have been conducted at the former Camp Elliott since 1984 through the Formerly Used Defense Site (FUDS) Program. Since that time, the former Camp Elliott has been divided into four FUDS project areas: Tierrasanta (comprises the Tierrasanta community); Mission Trails (comprises the northern portion of MTRP); East Elliott; and Areas D, G, and H.



Register your cell, VoIP phone number & email with AlertSanDiego at readysandiego.org

AlertSanDiego is for registering your cell phone number, VoIP phone number and email address only. Listed and unlisted landline phone numbers are already included in the database and do not need to be registered. Visit readysandiego.org for complete information.

The County of San Diego, in partnership with Blackboard Connect Inc., has instituted a regional notification system that will be able to send telephone notifications to residents and businesses within San Diego County impacted by, or in danger of being impacted by, an emergency or disaster.

This system, called AlertSanDiego, is used by emergency response personnel to notify those homes and businesses at risk with information on the event and/or actions such as evacuation, shelter in place, a gas leak, missing person, etc. and the action that the county's emergency services providers are asking them to take.

The system utilizes the region's 9-1-1 database, provided by the local telephone companies, and thus is able to contact landline telephones whether listed or unlisted. It is TTY/TDD capable.

Because the system uses the 9-1-1 database, only landline numbers are in the system. If you have a Voice over IP (VoIP) or a cellular telephone and would like to be notified over that device, or if you would like an email notification, you must register those telephone numbers and/or email address for use by the system.

AlertSanDiego is now available in accessible American Sign Language (ASL). Accessible AlertSanDiego for American Sign Language (ASL) provides emergency notifications to residents of San Diego County who are deaf, blind, hard of hearing, and deaf/blind before, during, and after a disaster.

Emergency notifications are available to internet and video capable devices such as computers, cell phones, smart phones, tablet computers and wireless Braille readers. These alerts are offered in American Sign Language (ASL) video with English voice and text.

Select the Accessible Option during registration to receive AlertSanDiego notifications in American Sign Language (ASL). Contact alertsd@sdcounty.ca.gov

zero8hundred can ease the transition from service in the military to civilian life

Navigating the transition to civilian life can be challenging. zero8hundred was created by San Diego community leaders who joined together to create a better system to ease transitions for service members when they have from 0-9 months remaining on active duty.

Through a unique partnership with the armed forces, the program offers a one-stop approach to support transitioning members and families with a variety of important services, resources and opportunities. zero8hundred's staff are veterans and individuals who have been military dependents with personal experience with the unique challenges of transitioning service members.

Well-trained peer navigators work personally with transitioning military members and spouses to help develop transition plans that include education, employment, childcare, housing, and health and wellness.

Log on to zero8hundred.org to find out how they can help make a smooth transition into civilian life!

If you find a piece of unexploded ordnance in Tierrasanta/Murphy Canyon or Mission Trails Regional Park - Don't Touch It! Mark its location & Call the Fire Department at 9-1-1 & Wait for their Arrival!

The City's Get it Done App really works!

As part of an effort to make city government more efficient and accessible for all San Diego residents, the Get it Done San Diego app allows you to report problems and request improvements for city properties and facilities in neighborhoods throughout the city. The app is available for both iPhone and Android users.

You can also report over 20 non-emergency problems/complaints regarding roads, streetlights, traffic signals, etc.

You can also upload photos that become part of the record for your complaint.

You don't have to use the App. You can go online and provide the information by visiting www.sandiego.gov

Have you tried this yet?
Report potholes or grafitti or burned out streetlights or downed trees or illegally parked cars!! The list is endless!



Use the "Get it Done" App. or go to www.sandiego.gov/get-it-done

Please be extra cautious at this time of year when ground fogs at night and in the early morning hours makes it difficult to see the deer and other animals moving in and out of our open space! Watch for wildlife along our roads. Many species live in Mission Trails Park visit in Tierrasanta during the night!

Former Camp Elliott, Tierrasanta and Mission Trails Formerly Used Defense Sites

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Call 911. Notify local law enforcement that you found a suspect ordnance item. Tell them what you saw and where you saw it.

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Additional information about the former Camp Elliott can be found at:

<https://www.spl.usace.army.mil/Missions/Formerly-Used-Defense-Sites/Camp-Elliott/>

and the information repositories:

Tierrasanta Branch Library
4985 La Cuesta Drive
San Diego, CA 92124

Mission Trails Regional Park Visitor Center
One Father Junipero Serra Trail
San Diego, CA 92119



Mission Trails Regional Park – VOLUNTEER FACT SHEET-



Examples of UXO and
their approximate
lengths (in inches)



105 mm
~15" long



75 mm
~8" long



37 mm
~5" long

Suspicious items can be encountered while:

- Installing posts for fencing projects
- Digging foundations
- Excavating and installing utilities (cables, piping, etc.)

Suspicious items can look like :

- A baseball
- Rusted car mufflers
- Old pipes
- Oversized bullets

Suspicious items can be found:

- Inches below the surfaces
- Underneath parking lots or roads
- Partially unearthed due to weather and erosion
- On land or in water

No matter what they look like, how old they are, or where they are found, UXO/MEC items should ALWAYS be considered a safety hazard!

In 1993, more than 150 high explosive tank shells were unearthed and properly disposed of because an alert construction worker reported suspicious metal objects that were being unearthed when they were digging a trench in a former training area. Protect yourself, your employees and your colleagues by following the 3 Rs of UXO Safety:

Recognize

Recognize when you may have encountered a munition. Do not touch or pick up suspicious items, whether they are whole or in fragments.

Retreat

Mark a location near the item and carefully move away on the same path you entered on—do not run.

Report

Call 911! Notify local law enforcement that you have found a suspect ordnance item. Tell them what you saw and where you saw it.

This fact sheet has been developed to assist you in meeting the OSHA Hazard Communication Standard (Right to Know). Inform your workers about these hazards before digging in the Mission Trails Regional Park. We also recommend that you clearly post on your jobsite the UXO Safety information provided with your construction permit. If you find any suspicious metal items, immediately stop digging, remove workers from the immediate area and call 911 to report the findings to local authorities.



U.S. Army Corps of Engineers,
Los Angeles District

Additional information regarding the former Camp Elliott can be found at:
www.spl.usace.army.mil

For more safety information visit the UXO Safety Education Website at:
<https://www.denix.osd.mil/uxosafety>

and the Formerly Used Defense Sites Program Website at:
https://environment.usace.army.mil/what_we_do/fuds

APPENDIX C

Identify/Review New Information, Current Site Conditions, and Completion of Recommendations from the 2018 Audit of Existing Land Use Controls (LUCs) Memorandum

*Note: For brevity Attachments C3 through C16 of this Memorandum are not included in this Five-Year Review Report. **Table C1** of **Appendix C** includes the source website addresses for these documents.*

Note: See Appendix D for additional photos.



MEMORANDUM

28 May 2020

To: Lu Tan, U.S. Army Corps of Engineers, Los Angeles District (CESPL)
Cc: James Hug, TESB
From: Patti De La O, BSX
Contract: W912PL-17-D-0024, Conduct a Five-Year Review and Complete Recommendations from LUCIP Audit for Former Camp Elliott, Mission Trails, Formerly Used Defense Site (FUDS No. J09CA006702) and Task Order W912PL19F0041; Conduct a Five-Year Review and Complete Recommendations from LUCIP Audit for Former Camp Elliott, Tierrasanta, (FUDS No. J09CA006701) and Task Order W912PL19F0042
Subject: Identify/Review New Information, Current Site Conditions, and Completion of Recommendations from the 2018 Audit of Existing Land Use Controls (LUCs)

BSX, LLC (BSX) identified and reviewed new information and current site conditions in accordance with Section 3-5, Engineer Pamphlet 200-1-18 (U. S. Army Corps of Engineers [USACE], 2011). BSX gathered information via a site visit, internet and media searches, public records, stakeholder input, and interviews. The following information is available since the Third Five-Year Review Report Former Camp Elliott-Tierrasanta and Former Camp Elliott-Mission Trails issued 16 September 2016.

Site Visit

BSX conducted a site visit on 06 and 07 November 2019 and 02 through 05 March 2020 to note any changes at the Mission Trails and Tierrasanta FUDS since the implementation of the remedy in the 1990s and to observe current site conditions. The site visit was conducted by Patti De La O, BSX Project Manager; Jeffrey Bryant, BSX General Manager; and S. Julia Liu, BSX Project Engineer. A summary of the site visit is included as **Attachment C1**. The site visit photo logs are included as **Attachments C1 and C2**.

Internet/Media Search and Public Records

A general internet search was conducted for articles and news stories pertaining to the Mission Trails and Tierrasanta FUDS since 2016. Over 700 results were generated from this search. **Table C1** identifies the regional newspapers and media sources researched.



Table C1 New Information Sources Researched

Newspapers		
Name	Website Address	Documents Recovered
San Diego Union-Tribune	https://www.sandiegouniontribune.com	Nothing pertinent recovered
San Diego Daily Transcript	http://www.sddt.com	Nothing pertinent recovered
San Diego Community Newspaper	http://www.sdnews.com	Nothing pertinent recovered
Tierrasanta Times	Telephone (858) 292-1037	Spoke with Deanna Spehn who works there; interview form completed by Ms. Spehn on 14 April.
Voice of San Diego	https://www.voiceofsandiego.org	Nothing pertinent recovered
Broadcast Media		
Name	Website Address	Documents Recovered
NBC 7 San Diego	https://www.nbcsandiego.com	Articles regarding small fires in both Tierrasanta and Mission Trails Regional Park (MTRP) and debut of new ranger station at MTRP
Fox 5 San Diego	https://fox5sandiego.com	Articles regarding small fires in both Tierrasanta and MTRP
KGTV 10 News	https://www.10news.com	Articles regarding small fires in both Tierrasanta and MTRP and palm trees removed from Rueda Canyon in Tierrasanta
CBS 8 San Diego	https://www.cbs8.com	Articles regarding small fires in both Tierrasanta and MTRP



Table C1 New Information Sources Researched (continued)

Government Websites		
Name	Website Address	Documents Recovered
City of San Diego	https://www.sandiego.gov	<p><i>North City Project Pure Water San Diego Program Environmental Impact Report (EIR)/Environmental Impact Statement (EIS), 27 February 2018</i></p> <p>Summary: The document includes responses to comments and a portion of the final report up to Section 3.5.3. See the summary below for <i>North City Project EIR/EIS Part 2</i>.</p>
		<p><i>North City Project EIR/EIS Part 2, February 2018</i></p> <p>Summary: The document begins with the Executive Summary and ends with Section 5.18 Recreation. There is no mention of potential explosive hazard associated with the proposed San Vicente Reservoir Alternative that would include a pipeline traveling through the Tierrasanta community described as “a segment of the pipeline that would be installed within the existing paved roadways is the lone project component located in the Tierrasanta community plan area.” The proposed alternative also includes construction of the Mission Trails Booster Station on the south side of Mission Gorge Road near Mission Vista Way; south of MTRP. The San Vicente Reservoir Alternative is not the preferred alternative.</p>
		<p><i>City of San Diego Parks and Recreation Department Organization Chart, February 2020</i></p> <p>Summary: Contact names and numbers for the various divisions and services of the department.</p>
		<p><i>Mission Trails Regional Master Plan Update and Natural Resources Management Plan Programmatic Environmental Impact Report: Cultural Resources Report, RECON Environmental, Inc., 14 June 2016</i></p> <p>Summary: Included in the Impact Analysis is reference to the removal of unexploded ordnance (UXO) by USACE should UXO be identified prior to or during implementation of management actions. Such removal could require excavation and thus soil disturbance. Potential impacts would be significant, and mitigation would be required.</p>
		<p><i>Tierrasanta Community Plan, The City of San Diego Planning Department and the Tierrasanta Community Council, 2011</i></p> <p>Summary: There is a minimal discussion of former military use in the area as part of the former Camp Elliott; however, there is no mention of the potential explosives hazards remaining due to former military munition.</p>



Table C1 New Information Sources Researched (continued)

Government Websites		
Name	Website Address	Documents Recovered
Mission Trails Regional Park	https://mtrp.org	<p><i>Mission Trails Design District Ordinance and Design Manual, May 2013</i></p> <p>Summary: There is no mention of potential explosives hazard, though new housing construction is the primary topic and discussions of cut and fill throughout. Subarea 2 – Hillside Areas includes two distinct areas within Tierrasanta and one area within MTRP. Subarea 3 – Mission Gorge and the San Diego River Park Areas includes a distinct area located outside the southwest corner of MTRP, between Tierrasanta and MTRP. The guidelines for this subarea are most concerned with protecting the visual linkages to and from the park in the Mission Gorge area and implementing the San Diego River Park Master Plan Design Guidelines. This area appears on FUDS maps on the cusp of the FUDS boundary and may only include a small portion of the former DoD land use. Commercial and Mixed Use Zones, and Industrial Zones are permitted within Subarea 3. The City-owned portion of the eastern Mission Gorge area within Subarea 3 of the Mission Trails Design District should be retained as open space linkage to the MTRP.</p>
		<p><i>Mission Trails Regional Park Master Plan Update Hazardous Materials/Unexploded Ordnance (UXO) Review, GHD Inc., May 2016</i></p> <p>Summary: The purpose of the Review is to evaluate the MTRP Master Plan Update (MPU) as a whole to identify potential hazards and hazardous materials, disclose and address the safe removal, disposal, and/or remediation of potentially existing UXO materials, and discuss human health/public safety as it relates to fire hazards. It also makes recommendations for addressing potential impacts generated from implementing elements of the updated MTRP Master Plan. A total of six areas within MTRP include the potential for UXO, of which Fortuna Mountain area is located within the FUDS. Mission Gorge Area is another area within MTRP that is also located within the FUDS, but it is not identified with potential UXO. Attachment C1 includes a photo log from the 2006 Five-Year Review with coordinates for existing sign locations. Discussion of three responses that DoD may initiate to include Emergency Response for immediate, unacceptable hazards, Time Critical Removal Action (TCRA), or Non-TCRA. The Review provides confirmation that the Five-Year Reviews facilitate and promote two-way communication between residents surrounding the Master Plan Study Area (MPSA) and encourage community awareness and educational involvement in site-related activities. The MPU proposed to amend the various Community Plans to adopt the MPU as the policy document for the MPSA. The Review reported that Community Plans do not list any specific guidelines or policies regarding safety hazards. Addition of safety hazard guidelines to the Community Plans would be imperative to avoid having a significant detrimental impact on the communities. The MPU does not include proposals to develop any habitable structures, but future projects would involve ground disturbance and grading activities and would potentially encounter and disrupt hazardous substances below ground surface.</p>



Table C1 New Information Sources Researched (continued)

Government Websites		
Name	Website Address	Documents Recovered
		<p><i>Mission Trails Regional Park Master Plan Update, City of San Diego Park and Recreation Department, February 2019</i></p> <p>Summary: The only mention of UXO is under 3.1.8 Defense Environmental Restoration Program (DERP) where it is stated that UXO has been found throughout the areas. The document includes discussions of the DERP details, cleanup and removal activities, and recurring reviews. The Fortuna Mountain and East Elliott areas of the park will continue to be monitored by the USACE for the foreseeable future. There is no mention of potential hazards or signage posted. The MTRP includes six distinct areas: Lake Murray, Cowles Mountain, Mission Gorge, Fortuna Mountain, East Elliott, and West Sycamore. Only two of the areas, Fortuna Mountain and Mission Gorge are included in the Mission Trails FUDS, and only a small portion of Mission Gorge is included. Mission Gorge is the area that includes the Visitor and Interpretative Center, the Old Mission Dam, and the Kumeyaay Lake Campground (not in either FUDS) and it encompasses over two miles of the San Diego River and includes the land between Mission Gorge Road and the river. MPU recommendations for Mission Gorge include the redirection of the river, construction of a parking lot and other improvements (proposed area does not appear to be in the FUDS), restroom construction at Old Mission Dam staging area, construction of a 2-acre nature park, realignment and construction of trails and a bridge crossing. The Fortuna Mountain area is bounded by Tierrasanta on the west and State Route (SR)-52 on the north, Mission Gorge area on the south and east, with the San Diego River acting as the dividing boundary. Fortuna Mountain is mainly within the Tierrasanta community plan area, with a small area in the southeast located within the Navajo community plan area. Recommendations for Fortuna Mountain include acquisition of 200+ acres on the eastern slopes of South Fortuna owned by the City of San Diego Public Utilities Department for parkland, and the San Diego Unified School District (SDUSD) parcel for public access easement. Further recommendations include construction of buildings, picnic areas, fire resistant shade structures, and new trailheads and trails, as well as the reconstruction of the Old Mission Dam overlook, and a new overlook of the San Diego River. Recommendations also included the rerouting of multiple trails due to erosion issues and steepness if localized improvements were inadequate or infeasible and providing rock climbing access to the eastern face of South Fortuna with a new hiking loop trail. This would include improvements for emergency response concerns that would necessitate improvements to vehicular access and/or designation of a helicopter landing area. The regrading of the access road into Spring Canyon to restore sheet flow drainage across the road was also recommended. The order of implementation should generally be: 1) maintenance and repair of existing facilities and trails; 2) enhancement of facilities and trails; and 3) construction of new facilities, trails, and/or access to new areas within the park. Phased implementation of trail closures recommended.</p>



Table C1 New Information Sources Researched (continued)

Government Websites		
Name	Website Address	Documents Recovered
		<p><i>Final Program Environmental Impact Report (PEIR) for the Mission Trails Regional Park Master Plan Update, City of San Diego, Planning Department, February 2019</i></p> <p>Summary: The Project is comprised of the implementation of the Plans (MPU, Natural Resources Management Plan [NRMP], and Community Plan Technical Amendments) for the MTRP. The MPU provides updated recommendations to the 1985 Master Plan. Evaluations analyze the ability of each alternative to further reduce or avoid significant environmental effects of the proposed Plans. Two alternatives evaluated include no project alternative and reduced project alternative. The study area represents an ongoing hazard due to the potential presence of UXO, and as a result, subsequent projects contemplated by the Plans could expose people to hazards associated with UXO. Impacts would be significant, and mitigation would be required. Mitigation: prior to initiating any projects that could involve subsurface disturbance within the FUDS, the City shall verify that the USACE has completed subsurface UXO clearance of the entire site, or a Remedial Action Work Plan (RAWP) will be prepared and implemented in consultation with the USACE. Details provided regarding the procedure for completing subsurface investigations and clearance, after which the impact level is reduced to less than significant. The report notes that the USACE has established the Public Involvement Plan and Five-Year Recurring Reviews to monitor UXO materials. The long-term monitoring plan addresses UXO issues, provides public outreach and education, and minimizes health hazards to the public. The report correctly identifies the portions of the former Camp Elliott included in the study area as both Fortuna Mountain and Mission Gorge. It also reports 23 UXO detections in the Fortuna Mountain and East Elliott areas. Any projects contemplated by the Plans that involve ground disturbing activities within the footprint of the former Camp Elliott have the potential to expose people to significant health hazards related to UXO. Rerouting of trails may be associated with land disturbance in areas with buried or uncovered UXO. Implementation of the Reduced Project Alternative would reduce the extent of grading and potential disturbance of UXO or other hazardous material sites due to fewer trails and associated amenities.</p>
Tierrasanta Community Council	https://www.tierrasantacc.org	<p><i>Interesting Tierrasanta Facts</i></p> <p>Summary: Fire Dept. personnel go to local schools annually to warn children of potential UXO hazards.</p>



Table C1 New Information Sources Researched (continued)

Government Websites		
Name	Website Address	Documents Recovered
San Diego County Water Authority (SDCWA)	https://www.sdcwa.org/mission-trails-FRS	<p><i>Mission Trails Flow Regulatory Structure II Project Website</i></p> <p>Summary: Habitat management and other pre-construction activities are ongoing in work areas in MTRP where construction is set to begin of a new underground reservoir, also called a flow regulatory structure. Habitat management work areas will be fenced, and trail users will need to use alternate trails to avoid those areas. Everything except the Flow Regulatory Structure II (FRSII) facility were constructed by 2010. The FRSII construction was delayed in 2011 due to increasing water rates and lowered short-term water demand. Construction of a new underground water reservoir and related regional water infrastructure is anticipated to begin in early March 2020 and last through early 2022. The SDCWA is upgrading its untreated water system in the northwest area of MTRP to deliver more water to treatment plants that serve the central and south sections of San Diego County. The underground reservoir will be constructed to help regulate the water system's flow of untreated water. The reservoir will be capable of holding up to 5 million gallons of untreated water and will be covered with soil and vegetation, with the exception of access hatches and above-ground vents to allow for air movement in and out of the reservoir. Construction anticipated to last 18 months. Trail closures map included.</p>
		<p><i>Mission Trails FRS II, Pipeline Tunnel, and Vent Demolition Project, Final CEQA Findings of Facts and Statement of Overriding Considerations for the Environmental Impact Report, San Diego County Water Authority, August 2006</i></p> <p>Summary: The project study area encompasses approximately 155 acres within MTRP, including areas proposed for new aboveground facilities, and existing developed and undeveloped areas that would be used as staging areas and access roads. The FRSII facilities would consist of an up to 18-million gallon buried reservoir, and aboveground control building, and appurtenant facilities. The facility would be constructed on a 12.78-acre parcel known as the Elliott 4 Parcel (Assessor's Parcel Number 371-010-1500), currently owned by SDUSD. The purpose is to increase delivery capabilities to match the increased water treatment capabilities of the City of San Diego and the Sweetwater Authority. Project objectives: increase water deliveries, remove most of the vents across MTRP, and improve surface of existing dirt roads to improve Water Authority, Park Ranger, Fire, Police, and Emergency vehicular access to MTRP from south of the San Diego River to north of the San Diego River. Mitigation measures are referenced in the Mitigation Monitoring and Reporting Program (MMRP) standalone document (see below) and will be effectuated through the process of constructing and implementing the project. Temporary parking areas would be required, of which most of the parking would be provided at the existing Clairemont Mesa Blvd staging area, which was constructed for the FRS I project. A site-specific hazardous materials survey has not been conducted for the project. MTRP was once part of Camp Elliott and has been identified as potentially having UXO from the historic military use. The impact of potential exposure of construction and maintenance workers to hazardous materials in the soil and/or UXO would be significant (Impact PS 1). Prior to the start of construction, a qualified contractor will survey all project construction sites, including</p>



Table C1 New Information Sources Researched (continued)

Government Websites		
Name	Website Address	Documents Recovered
		<p>access roads in MTRP, for the presence of UXO. The survey shall include identification of potential UXO locations and a determination of the presence or absence of UXO in the area. Once the survey is complete, a qualified contractor will arrange for the removal of any UXO found. The UXO contractor shall provide training, as needed, to construction contractors related to the identification of UXO. Section 2 details the buried reservoir which would consist of a concrete structure measuring up to 296 feet by 392 feet, with an overall height of up to 28 feet from floor to roof. The entire reservoir will be buried. Emergency overflow would be conveyed by a pipeline to the canyon on the north side of the buried reservoir. An energy dissipator would be constructed at the end of the pipeline to prevent erosion of the canyon. A 2-foot-thick layer of soil will be placed on top of the buried structure following construction. The aboveground access/control building will measure approximately 20 feet by 50 feet located at the south edge of the buried reservoir. Anticipate that the entire Clairemont Mesa Blvd. park entrance will be used for staging and there are additional developed and undeveloped staging areas proposed. Grading of staging areas will take place and will include a staging area for stockpiling of excavated soil, pipe, and other equipment and materials. Roads used for construction ingress and egress will be widened to 12 feet and one access road will be widened to 20 feet to allow for two-way traffic. Construction of the FRSII would require clearing and grubbing of the project site and the excavation of up to 105,000 cubic yards of rock and soil; 10,500 truck trips. Excavation expected to take 5 months. Topsoil and other soil needed for backfilling will be temporarily stockpiled on site. Excess material will be hauled off site for use as fill at other construction sites or as cover at a local landfill. Operations include the installation of silt fences and sedimentation ponds. The project area runs from SR 52 south to Mission Gorge Road on the western edge of MTRP and in some areas abuts Tierrasanta. Section 3 discusses land use and does provide some detail on the military history and UXO discoveries. All property included in the proposed project is managed by the City of San Diego Parks and Recreation Department as part of MTRP. No new trails or roads will be built during this project.</p>
		<p><i>Mitigation Monitoring and Reporting Program for the Mission Trails FRS II, Pipeline Tunnel, and Vent Demolition Project (SCH #2005041025), AECOM for SDCWA, July 2019</i></p> <p>Summary: The California Environmental Quality Act requires that public agencies adopting an EIR take affirmative steps to determine that approved mitigation measures and project design features are implemented subsequent to project approval. The lead agency must adopt a monitoring and reporting program for the mitigation measures incorporated into a project. The Mitigation Monitoring and Reporting Program will be used by the SDCWA to ensure compliance with adopted mitigation measures and project design features associated with the implementation of the proposed addendum to the Mission Trails FRSII project. Public Safety and Hazardous Materials section includes Mitigation Measure PS 1-3: Prior to the start of construction, a qualified contractor shall survey all project construction sites, including access roads in MTRP, for the presence of UXO. The survey shall include identification of potential UXO locations and a determination of the</p>



Table C1 New Information Sources Researched (continued)

Government Websites		
Name	Website Address	Documents Recovered
		presence or absence of UXO in the area. Once the survey is completed, a qualified contractor shall arrange for the removal of any UXO found. In addition, the UXO contractor shall provide training, as needed, to construction contractors related to the identification of UXO. The contractor is identified as the responsible party for the pre-construction verification.
		<p><i>Mitigation Monitoring and Reporting Program for the Mission Trails Regional Park Master Plan Update, Attachment C3, undated</i></p> <p>Summary: The Mitigation Monitoring and Reporting Program is designed to ensure compliance with Public Resources Code Section 21081.6 during implementation of mitigation measures. All applicable mitigation measures contained in the PEIR SCH No. 2014041011; Project Number 349988 shall be made conditions of future projects located within the project area. Subsequent projects implemented in accordance with the MPU for the MTRP would introduce additional recreational uses within or adjacent to the City of San Diego Multi-Habitat Planning Area (MHPA), which could result in conflicts with the MHPA Land Use Adjacency Guidelines. The study area represents an ongoing hazard due to the potential presence of UXO. As a result, subsequent projects contemplated by the Plans could expose people to hazards associated with UXO resulting in a significant impact. Mitigation Framework includes standard requirements and procedures that shall be implemented to ensure proper handling of the removal of UXO. Prior to initiating subsequent projects contemplated by the Plans that could involve subsurface disturbance within the former Camp Elliott FUDS, the City shall verify that the USACE has completed subsurface UXO clearance of the entire site, or a RAWP will be prepared and implemented in consultation with USACE. Prior to initiation of UXO clearance activities, all Park personnel and adjacent property owners will be notified. Details are provided to keep schools, Park personnel, recreational users, contract personnel safe that include the posting of signs, safe distance for detonation in place, and the identification of all UXO prior to disposal activities. The document provides details on completing subsurface investigations and clearance to include grids, detectors, and personnel training.</p>



Interviews and Requests for Information

BSX conducted interviews with local authorities, stakeholders, and interested parties in an effort to gather new information regarding site conditions at the two FUDS. **Table 2** identifies those members of the community that were interviewed along with a summary of the conversation. The interview records are included in **Attachment C17**.

Table C2
Mission Trails and Tierrasanta FUDS
Five-Year Review Interviews Conducted

Name/Title	Phone/Email	Summary of Discussion
Paul Garcia SDUSD Civil/ Environmental Coordinator	530.219.8935 pgarcia- craivanu@sandi.net	SDUSD has expanded their munitions awareness programs for internal personnel and contractors by providing briefings prior to any construction activity. There have been some school modernization efforts that included minor excavations; all with proper munitions safety training and without any observations. Mr. Garcia works directly with all SDUSD division directors to keep them informed. A follow-up call was placed to Mr. Garcia on 15 April 2020 to ask if he knew who was providing the munitions safety awareness training to the local schoolchildren, as it was understood that the Fire Department no longer does the training. He said he did not know and suggested I call each of the school principals and speak to them individually. Mr. Garcia provided the list of principals for the SDUSD of which eight were identified near the two FUDS. Refer to Table C3 below for a summary of those communications.
Matt Spicer San Diego Metro Arson Strike Team (MAST) Captain and Bomb Tech	619.236.6815 mspicer@sandiego.gov	Mr. Spicer indicated there have been some munitions findings in the past five years at the FUDS and he personally has been on a few of them. He provided a database query for a reporting of those calls. He also said there have been some pretty heavy rains and that is usually when they get the calls because the munitions items are unearthed. MAST response will generally include a call to MCAS Miramar Explosive Ordnance Disposal (EOD), if warranted. The database query provided to BSX by Mr. Spicer was provided to MCAS Miramar, Chief Warrant Officer (CWO) 4 Pete Scarlett to include any additional details that MCAS Miramar EOD might have on those calls that they responded to.



Table C2
Mission Trails and Tierrasanta FUDS
Five-Year Review Interviews Conducted (continued)

Name/Title	Phone/Email	Summary of Discussion
James Sanders Citizen of Tierrasanta and member of Friends of Tierrasanta Canyons	858.209.9082 Jamas2003@gmail.com	Mr. Sanders said that a few years ago there was a new small housing development at the end of Tierrasanta Blvd. (far east end) where the hillside was cut into. He said they also reworked the trail in the area. He was not aware of any findings at that time. (Note: Looking at Google Earth, it appears that is the Copperleaf development on Copperleaf Lane.)
Deanna Spehn Past President Tierrasanta Community Council & Planning Group and longtime member; Co- Publisher and Editor Tierra Times newspaper	619.368.4477 Dspehn1@san.rr.com	Ms. Spehn has been very active in the community with regard to UXO safety. She has written all the articles for the Tierra Times since 1983 and proper response actions to keep the community safe. Ms. Spehn indicated that despite repeated requests and consistent efforts in the Five-Year Review Reports, city officials and the USACE have not alerted the Tierrasanta community about any munitions findings. She believes that hearing about what items have been found only during the Five-Year Review process is unsatisfactory. According to Ms. Spehn, the Tierrasanta Open Space Committee replaces the MEC warning signs as needed.
Jan Whitacre Past-President Tierrasanta Community Council	858.335.6264	Mr. Whitacre indicated that the schools continue to teach the children of the potential hazards associated with the FUDS, saying that the Fire Department historically did the training, but he did not think they still did so. He did not know who did the training in the schools. He said he wasn't sure the local realtors were working consistently to deliver the message and thought more could be done there. Mr. Whitacre said that MTRP is heavily used by hikers and mountain bikers and they are exposed to some of the more remote areas. He suggested BSX contact local hiking and mountain biking organizations to see if we could share information.



Table C2
Mission Trails and Tierrasanta FUDS
Five-Year Review Interviews Conducted (continued)

Name/Title	Phone/Email	Summary of Discussion
Loren Boerboom Grounds Maintenance Manager City of San Diego Open Space	619.980.8108	Mr. Boerboom oversees the landscape maintenance contractor in Tierrasanta. He is responsible for the warning sign inventory and maintenance which is an ongoing process. A discussion of the current condition of some of the signs, based on the site visit (i.e., faded, covered by vegetation, broken) included providing him with the GPS coordinates and street location of a broken sign and an offer to provide him with the final complete Sign Condition Log when releasable.
Kristin Camper Community Plans and Liaison Officer MCAS Miramar	619.212.2676	Ms. Camper was not aware of any munitions findings over the last five years and suggested we speak to MCAS Miramar EOD and provided contact information for two EOD personnel.
Navy CWO 4 Pete “Misfire” Scarlett MCAS Miramar EOD	760.707.7889 mobile; 858.307.7398/7699/ 7801 Commercial	Mr. Scarlett offered to add what additional details he might have to the MAST database query table. He indicated that MCAS Miramar is not always called, but he was happy to provide what details EOD did have on file (included as Attachment C18). He also researched calls that were not included in the MAST database to see if any might be pertinent to this project; there were no additional calls. He indicated that they get quite a few calls from a mobile home park where residents are told repeatedly not to dig, but still they do, and they unearth munitions. He referred me to Chris Anthony, Navy EOD (below).
Greg Hampton San Diego Sheriff’s Department	619.550.8158	Completed the interview 29 April 2020. Sargent Hampton referred me to Jeff Ring (below).



Table C2
Mission Trails and Tierrasanta FUDS
Five-Year Review Interviews Conducted (continued)

Name/Title	Phone/Email	Summary of Discussion
Chris Anthony Navy EOD	703-606-1205	Lt. Anthony was assigned just three months ago to the region and he has not had any calls. He was aware of a call placed in October 2018 in which the Sheriff was called to a home where a Mark 76 practice bomb (with spotting charge) was being used for a vegetation planter in a Navy housing unit in Murphy's Canyon. There was some concern that the Sheriff was called and not Navy EOD, but the UXO warning signs say to call 911. Apparently, the concern was elevated to NAVFAC SW and Lt. Anthony suggested I speak with Christina Ferrari at NAVFAC SW who was involved in the discussions at the time. He felt strongly that a military EOD unit (preferably MCAS Miramar because of close proximity) be identified on the UXO warnings as the first to call rather than "911".
Jeff Ring, City of San Diego Fire Rescue Dept., Bomb Squad Commander and Fire Captain (SDFD/MAST)	cell 858.583.2320.	Mr. Ring confirmed that there have been munitions findings over the last five years and said the information provided by Matt Spicer would include all of those calls. He added that the calls are definitely decreasing and of the calls that they have gotten, nothing has been live. He did not know who might be providing munitions awareness training to the schoolchildren. He added that they would never say no to providing presentations, they just aren't asked.
Cristina Ferrari, NAVFAC SW Environmental	619-787-6137 Cristina.ferrari@navy.mil	Chris Anthony suggested I reach out to Ms. Ferrari for details on the map that was circulated in 2018 following the October 2018 munitions finding in Murphy Canyon Housing (MCH). Ms. Ferrari confirmed that the items included in the 2018 MEC map were those found during previous investigations, not new findings. She also indicated that a flare was found a year ago just outside MCH which was reported accordingly under the munitions response protocol.



Table C2
Mission Trails and Tierrasanta FUDS
Five-Year Review Interviews Conducted (continued)

Name/Title	Phone/Email	Summary of Discussion
Tom Calhoun Lead Project Manager for SDUSD Facilities Division	619.609.3431	<p>Mr. Calhoun assists Paul Garcia with the FUDS program training using a safety training template that they have expanded on. They schedule the training, conduct the training, provide briefings using a PowerPoint presentation, conduct tailgate safety briefings, and instruct personnel on the 3Rs and munitions safety awareness. They tell personnel to call 911 or MAST, or their supervisor, and move away from the item (at least the length of one football field). The program is very robust and is provided as annual training for all pertinent divisions (i.e., heavy equipment, electrical, plumbing, etc.). Tailgate sessions are held prior to initiating any work on a FUDS. He added too that they have signage that warns of the hazards in big red letters that this is a FUDS.</p> <p>He thought training still takes place for the schoolchildren but could not say for certain. He did say that the children aren't allowed to dig in the soil. If any gardening takes place with the children, above ground garden planters are used. He added that children are not put in harm's way. If children are around when any soil disturbance is to take place, they stop operations and wait for the children to leave. They schedule soil disturbance during school breaks or shutdowns.</p>
Mark Tegio Senior Water Resources Specialist for San Diego County Water Authority (SDCWA)	858.522.6753	<p>Mr. Tegio was provided an electronic copy of the interview form to complete. He indicated he was not aware of any munitions findings in the last five years. SDCWA is currently constructing a new water utility project. Mr. Tegio confirmed that USACE staff are consulted regarding existing and new Clean Water Act Section 404 permitting. With regard to UXO specifically, SDCWA consults with USACE and includes contract specification language notifying the contractor of UXO.</p>

Additionally, interview forms were submitted to the following, that included several follow-up attempts, with no response yet recorded:



1. Ryan Robertson, Senior Park Range, MTRP, submitted 27 March

Mr. Paul Garcia, SDUSD, provided a list of SDUSD principals from the schools located in the area of the two FUDS. Each of the principals was contacted regarding the status of annual munitions safety presentations provided to the schoolchildren and their responses are included in **Table C3**.

Table C3
Mission Trails and Tierrasanta FUDS
SDUSD Principal Responses Regarding Annual Presentations to Schoolchildren

Principal	SDUSD School	Response
Courtney Rizzo	Farb Middle School	Ms. Rizzo indicated they had not had a presentation in quite some time, maybe 5 years. There was at one time annual presentations, then they went to every other year, then they just stopped altogether.
Jamie Jaramillo	De Portola Middle School	<i>No response yet. Second request submitted 27 May 2020.</i>
Irene Hightower	Hancock Elementary School (Leased Navy Site)	Ms. Hightower indicated that Hancock as well as the other schools in the Tierrasanta area are still receiving the UXO Safety presentations annually. She said they have the assemblies traditionally every spring. They conducted the assembly last May and Jacobs was scheduled to come out this May to provide the training, but of course they are not on campus and they have decided to hold until they can return to school. Ms. Hightower provided the contact person at Jacobs; Rosa Esquivel, Rosa/SCO Rosa.Esquivel@jacobs.com , who is with: Naval Facilities Engineering Command (NAVFAC). BSX submitted an email to Ms. Esquivel on 18 May to see what other schools are provided with the training; <i>no response yet.</i>
Angela Zarzosa	Kumeyaay Elementary School	<i>No response yet. Second request submitted 27 May 2020.</i>
Jennifer O'Connor	Miller Elementary School (Leased Navy Site)	Ms. O'Connor indicated that the students receive the training every year. The name of the company that provides the training is Jacobs.



Table C3
Mission Trails and Tierrasanta FUDS
SDUSD Principal Responses Regarding Annual Presentations to Schoolchildren
(continued)

Principal	SDUSD School	Response
Erica Renfree	Serra High School	Ms. Renfree indicated that the students are not receiving the training.
Sally Viavada	Tierrasanta Elementary School	Ms. Viavada grew up in Tierrasanta and experienced firsthand the death of a friend from a munitions item in the canyon. When she returned to Tierrasanta as a principal in 2015, she was surprised to find that the presentations no longer occurred. Ms. Viavada felt that returning to the annual safety presentations was a great idea since many of the kids may not even know the history of the community or the dangers they could encounter in the canyons and on the trails. However, due to the Coronavirus disease 2019 they do not yet know what new policies will be in place in the fall and she thought that assembly-like settings won't be reestablished for some time and suggested a video presentation.
Nikki Mitchell	Vista Grande Elementary School	<i>No response yet. Second request submitted 27 May 2020.</i>

References

- USACE, 2011. *Five Year Reviews of Military Munitions Response Projects*. Engineer Pamphlet 200-1-18. 30 September.
- USACE, 2016. *Third Five-Year Review Report Former Camp Elliott - Tierrasanta (FUDS #J09CA006701) and Former Camp Elliott – Mission Trails (FUDS #J09CA006702)*, San Diego, San Diego County, California. August.
- USACE, 2018. *Final Land Use Control Implementation Plan for Former Camp Elliott – Tierrasanta (FUDS #J09CA006701) and Former Camp Elliott – Mission Trails (FUDS #J09CA006702)*, San Diego, California. July.
- USACE, 2018. *Trip Report to Former Camp Elliott-Tierrasanta, FUDS Project Number J09CA006701 and Former Camp Elliott-Mission Trails FUDS Project Number J09CA006702*, San Diego, California. August.

Attachments

1. Site Visit Summary



2. Site Visit Photo Log
3. North City Project Pure Water San Diego Program Environmental Impact Report /Environmental Impact Statement, 27 February 2018
4. North City Project Environmental Impact Report /Environmental Impact Statement Part 2, February 2018
5. City of San Diego Parks and Recreation Department Organization Chart, February 2020
6. Mission Trails Regional Master Plan Update and Natural Resources Management Plan Programmatic Environmental Impact Report: Cultural Resources Report, RECON Environmental, Inc., 14 June 2016
7. Tierrasanta Community Plan, The City of San Diego Planning Department and the Tierrasanta Community Council, 2011
8. Mission Trails Design District Ordinance and Design Manual, May 2013
9. Mission Trails Regional Park Master Plan Update Hazardous Materials/Unexploded Ordnance (UXO) Review, GHD Inc., May 2016
10. Mission Trails Regional Park Master Plan Update, City of San Diego Park and Recreation Department, February 2019
11. Final Program Environmental Impact Report for the Mission Trails Regional Park Master Plan Update, City of San Diego, Planning Department, February 2019
12. Interesting Tierrasanta Facts
13. Mission Trails Flow Regulatory Structure II Project Website
14. Mission Trails FRS II, Pipeline Tunnel, and Vent Demolition Project, Final CEQA Findings of Facts and Statement of Overriding Considerations for the Environmental Impact Report, San Diego County Water Authority, August 2006
15. Mitigation Monitoring and Reporting Program for the Mission Trails FRS II, Pipeline Tunnel, and Vent Demolition Project (SCH #2005041025), AECOM for SDCWA, July 2019
16. Mitigation Monitoring and Reporting Program for the Mission Trails Regional Park Master Plan Update, Attachment C3, undated
17. Interview Records
18. Expanded MAST database query

Attachment C1. Site Visit Summary

Site Visit

Former Camp Elliott – Tierrasanta, FUDS No. J09CA006701
Former Camp Elliott – Mission Trails, FUDS No. J09CA006702

Date(s): 6 – 7 November 2019 and 2 – 5 March 2020

Personnel: Jeffery Bryant (BSX), Patti De La O (BSX), S. Julia Liu (BSX)

Purpose: The purpose of the site visit was to visit each of the observation points from the previous five-year review, and to provide up-to-date photographs, including coordinates and direction facing for comparison; these photographs will be presented in the upcoming Fourth Five-Year Review Report. Warning sign locations were also visited to note their conditions.

Summary: During the previous five-year review, observations were collected at 85 locations from Tierrasanta and 60 locations from Mission Trails. These observation locations were visited and photographed by the BSX field team (unless otherwise noted below). A photo log will be included in the Fourth Five-Year Review as an appendix and will provide a side-by-side comparison of current site conditions to previous site conditions using photographs from the previous review.

In addition, Mark Jones (USACE, Sacramento District) provided locations of the munitions and explosives of concern (MEC) warning signs on 10 December 2019 (87 within Tierrasanta and 11 within Mission Trails). The MEC warning signs are part of the land use control (LUC) component of the remedy for the sites. As part of the site visit, the field team visited each of the warning sign locations and noted the absence or presence of a sign and the condition and visibility of the sign (if present). Additional site observations were made, as appropriate (i.e. erosion, physical barriers, etc.).

A summary of the site visit is provided below. A log of the observation and sign locations, including coordinates, is provided as Attachment C2.

6 November 2019

Twelve observation points were visited. Photos were collected from each of the locations to provide a comparison to site conditions from the previous five-year review. No significant changes were noted between current conditions and the previous five-year review at these observation points. MT49 and MT52 are duplicate observations (recommend one be deleted from future reviews).

TS37	MT50	MT53	MT56
TS83	MT51	MT54	MT57
MT49	MT52	MT55	MT59

Of the 98 sign locations provided by USACE, four were visited.

Following the collection of photographs, the field team drove to the Tierrasanta Branch Library where they requested to see the document repository for the sites. The following documents were available for the public to view: *Draft Public Involvement Plan, Tierrasanta and Mission*

Trails; Draft Five-Year Recurring Review, Munitions and Explosives Response Action, Former Camp Elliott, Tierrasanta (Second Five-Year Review); and Draft Five-Year Recurring Review, Munitions and Explosives Response Action, Former Camp Elliott, Mission Trails (Second Five-Year Review).

7 November 2019

Fifty-one observation points were visited at Tierrasanta and Mission Trails. Photos were collected from each of the locations to provide a comparison to site conditions from the previous five-year review.

TS01	TS28	TS47	TS63
TS02	TS29	TS48	TS64
TS03	TS30	TS49	TS66
TS06	TS31	TS50	TS69
TS07	TS32	TS51	TS78
TS12	TS33	TS52	TS85
TS13	TS34	TS53	MT32
TS14	TS36	TS54	MT41
TS15	TS38	TS55	MT42
TS16	TS39	TS56	MT43
TS19	TS40	TS60	MT44
TS20	TS41	TS61	MT58
TS27	TS46	TS62	

MT16 could not be located based on the coordinates provided in the Third Five-Year Review. Based on the description in the Second Five-Year Review, the observation was collected in Suycott Wash, but coordinates were not provided in the photograph log and the location could not be determined based on the photograph.

Additional observations were collected at TS86 through TS88. These observations were recorded to note the locations of warning signs (different from the brown MEC warning signs used at Tierrasanta and Mission Trails) and fencing/locked gates preventing access to TS17, TS18, and TS80 through TS82. TS17, TS18, and TS80 through TS82 were accessed during the last five-year review, and it's assumed these signs and fencing/locked gates were installed in the last five years. An observation was also collected at TS89 to show failing erosion control measures near TS47 and TS48. No other significant changes were noted.

Seven of the 98 sign locations provided by USACE were visited. Four additional signs were observed while driving between the observation and sign locations, and the field team recorded the coordinates of these signs. Based on coordinates provided by USACE, a sign is located at observation TS17. The sign and observation were not visited as noted above.

2 March 2020

Five observation locations were visited, all of which were located within Tierrasanta. No significant changes were noted between current conditions and the previous five-year review at these observation locations.

TS04	TS09	TS11
TS05	TS10	

Of the 98 sign locations provided by USACE on 10 December 2019, 24 locations were visited. Four additional signs were observed while driving between the observation and sign locations, and the field team recorded the coordinates of these signs. Most of the signs were visible and in good to excellent condition, with some appearing new. A few of the signs were showing age (i.e. fading, cracking) and may need to be replaced in the next couple of years. Some were obscured or were becoming obscured by vegetation. The attached site visit log notes the condition of each sign.

3 March 2020

Twenty observation locations were visited, all of which were located within Tierrasanta.

TS08	TS25	TS44	TS65
TS21	TS26	TS45	TS67
TS22	TS35	TS57	TS68
TS23	TS42	TS58	TS69
TS24	TS43	TS59	TS84

At TS43, the Copperleaf neighborhood was noted at the observation point. The Copperleaf neighborhood, completed in 2012-2013, was not present in photos taken for the previous five-year review. No other significant changes were noted between current conditions and the previous five-year review at these observation locations. A photo could not be collected at TS84 due to safety concerns (i.e. stopping a vehicle on a busy on-ramp); instead, the field team noted the condition of the area from the moving vehicle. For past reviews, the field team stopped on the on-ramp to I-15 south from Tierrasanta Boulevard for a photo.

Of the 98 sign locations provided by USACE on 10 December 2019, 34 locations were visited. Signs were not present at a few of these locations, and the absence of signs at these locations is noted on the site visit log. Nine additional signs were observed while driving between observation and sign locations, and the field team recorded the coordinates of these signs. Most of the signs were visible and in very good condition. A few of the signs were showing age (i.e. fading, cracking) and may need to be replaced in the next couple of years. Some signs were obscured or were becoming obscured by vegetation. The condition of each sign is noted in the attached site visit log.

4 March 2020

Twenty-nine observation locations were visited. The vegetation appears to be much healthier than in the previous five-year review. Several observations had to be collected several hundred feet from the original location due to thick vegetation in the area.

TS70	MT02	MT18	MT38
TS71	MT03	MT19	MT39

TS72	MT04	MT20	MT40
TS73	MT05	MT33	MT45
TS74	MT13	MT34	MT60
TS75	MT14	MT35	
TS76	MT15	MT36	
MT01	MT17	MT37	

Observations were collected at three additional locations (MT61 through MT63). At MT61, A 3Rs flier was observed on the ground near a trailhead kiosk (a blank spot was noted on the kiosk, and the flier likely fell off.) This was the first flier of this type observed at Mission Trails. A trail closure was noted at MT62 due to a SDCWA project. Information about the project was not provided on the sign, and site users were directed to a website for additional information (<http://www.sdcwa.org/mission-trails-FRS>). Due to safety concerns for the field team (terrain, heat, rattlesnakes), observation points MT21 through MT31 were not accessed. Instead, photos were collected at MT63 looking towards those observation points, which are located on North Fortuna Mountain and South Fortuna Mountain.

Twenty-five sign locations were visited. A few of the locations that did not have signs and are noted in the attached site visit log. Two additional signs were observed while driving between observation and sign locations, and the field team recorded the coordinates of these signs. Most of the signs were visible and in very good condition. A few of the signs were showing age (i.e. fading, cracking, peeling) and may need to be replaced in the next couple of years. Half of one sign was missing (S-TS 7). Some were obscured or were becoming obscured by vegetation. The condition of each sign is noted in the attached site visit log.

5 March 2020

Eleven observation locations were visited. The most notable change was vegetation growth in previous erosion areas. No other significant changes were observed.

TS77	MT08	MT11	MT47
MT06	MT09	MT12	MT48
MT07	MT10	MT46	

Three sign locations were visited. MEC warning signs were not present at two of these locations, and this is noted in the site visit log.

Visit Totals: At Tierrasanta, 80 of 85 observation locations were visited, and four additional observations were made. At Mission Trails, 53 of the 60 observations locations were visited and three additional observations were made. In addition, 97 of the 98 sign locations were visited, and the coordinates of 19 additional signs were recorded. The remaining observation locations and sign location could not be accessed, as noted above in the summary.



Follow-up Items: Based on the site visit, additional information should be acquired regarding the following items:



- 1) Replacement of signs within Tierrasanta community. How often are the signs inspected? What criteria is used to determine which ones are replaced?



- 2) 3Rs signage around the YMCA and Murphy Canyon Child Development Center. Who is responsible for these signs and fencing? How long has the signage been posted?
- 3) MEC information at trailhead kiosks. How was it determined which kiosk has MEC information? Why don't all trailhead kiosks include MEC information?
- 4) SDCWA Project. What kind of subsurface work will be conducted? What is the duration of the project? Is there any kind of UXO support, or have the workers been briefed on the hazards/potential to find MEC while digging?
- 5) Document repository. The repository at the Tierrasanta Branch Library should be updated with the most up-to-date documents for the sites. This is part of the implementation of the LUCIP portion of the project.)



Attachment C2. Site Visit Photo Log



Site Photographs
(including comparison to Third Five-Year Review photographs)



Current Five-Year Review		Previous Five-Year Review	
			
Observation ID:	TS01		
Date:	07 November 2019		
Latitude:	32.81963889		
Longitude:	-117.1021667		
Bearing (degrees):	260		
Project Area:	Tierrasanta (F-1)		
Description:	<p>Located north of Roadrunner Park, looking east. Field team could not find the configuration from the previous five-year review. Photo matches the configuration from the Second Five-Year Review.</p> <p>Vegetation appears drier on the canyon slope than in the previous review; minor erosion also noted.</p>		



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	TS02		
Date:	07 November 2019		
Latitude:	32.81855556		
Longitude:	-117.1008611		
Bearing (degrees):	190		
Project Area:	Tierrasanta (F-1)		
Description:	<p>Located at the north end of Roadrunner Park (near school fence in trees and brush).</p> <p>Sign S-002 is bent but still legible. TS85 provides a closeup of the sign. Vegetation is very dry in the area.</p>		



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:		TS03	
Date:		07 November 2019	
Latitude:		32.82236111	
Longitude:		-117.0845556	
Bearing (degrees):		160	
Project Area:		Tierrasanta (F-5N)	
Description:		<p>Located on Rueda Drive, between Temprano and Zorita Court.</p> <p>Good vegetation growth in the area with a faint trail; no erosion noted. Sign S-003 is in good condition.</p>	



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:		TS04	
Date:		02 March 2020	
Latitude:		32.81813889	
Longitude:		-117.0915278	
Bearing (degrees):		60	
Project Area:		Tierrasanta (F-3)	
Description:		<p>Located on Tierrasanta Blvd, west of Tambor Court.</p> <p>Vegetation has grown since the last review; no erosion observed. Sign S-004 is in good condition.</p>	



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	TS05		
Date:	02 March 2020		
Latitude:	32.81813889		
Longitude:	-117.0915833		
Bearing (degrees):	325		
Project Area:	Tierrasanta (F-3)		
Description:	Same location as TS04. Vegetation has grown since the previous review; no erosion observed.		



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	TS06		
Date:	07 November 2019		
Latitude:	32.83294444		
Longitude:	-117.1131111		
Bearing (degrees):	30		
Project Area:	Tierrasanta (F-8/F-9)		
Description:	Located on the north side of Clairemont Mesa Blvd, just west of Repecho Drive. Good vegetation growth in the area; no erosion noted.		

Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	TS07		
Date:	07 November 2019		
Latitude:	32.83277778		
Longitude:	-117.1133889		
Bearing (degrees):	200		
Project Area:	Tierrasanta (F-8E)		
Description:	Located on the south side of Clairemont Mesa Blvd, just west of Repecho Drive. Good vegetation in area; no erosion noted.		

Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	TS08		
Date:	03 March 2020		
Latitude:	32.82877778		
Longitude:	-117.0884167		
Bearing (degrees):	225		
Project Area:	Tierrasanta (F-2W)		
Description:	<p>Located off of Clairemont Mesa Blvd, across the street from the Tierrasanta Recreation Center.</p> <p>Vegetation growth is heavy and appears greener/healthier than the previous review; no erosion noted.</p>		



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	TS09		
Date:	02 March 2020		
Latitude:	32.82569444		
Longitude:	-117.08225		
Bearing (degrees):	290		
Project Area:	Tierrasanta (F-2W)		
Description:	<p>Located on Seda Drive, between Calle De Vida and Promesa Dr.</p> <p>Observation collected approximately 40 feet north from previous five-year review, at trailhead with sign S-022. Sign is in good condition and in a visible location. Vegetation on either side of paved trail is very thick and appears healthy; no erosion noted.</p>		



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	TS10		
Date:	02 March 2020		
Latitude:	32.82569444		
Longitude:	-117.08225		
Bearing (degrees):	315		
Project Area:	Tierrasanta (F-2W)		
Description:	Located on Seda Drive, between Calle De Vida and Promesa Dr. Closeup of sign S-022. Sign is in good condition and in a visible location.		



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	TS11		
Date:	02 March 2020		
Latitude:	32.82563889		
Longitude:	-117.0820556		
Bearing (degrees):	134		
Project Area:	Tierrasanta (F-2W)		
Description:	Located on Seda Drive, between Calle De Vida and Promesa Dr. Good vegetation, and no erosion noted in the area. Sign S-023 is located directly off a trail and is in good condition.		


Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	TS12		
Date:	07 November 2019		
Latitude:	32.81844444		
Longitude:	-117.0959444		
Bearing (degrees):	180		
Project Area:	Tierrasanta (F-1)		
Description:	<p>Located on Tierrasanta Blvd; observation was collected directly off the trail.</p> <p>Good heavy vegetation in canyon with no visible signs of erosion. Sign S-054 is located at trailhead.</p>		


Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	TS13		
Date:	07 November 2019		
Latitude:	32.81844444		
Longitude:	-117.0946111		
Bearing (degrees):	5		
Project Area:	Tierrasanta (F-2S)		
Description:	Located on the north side of Tierrasanta Blvd, ~125 feet down trail from sign S-035. Trees are no longer present, but otherwise heavy vegetation on either side of the trail and no erosion was observed.		



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	TS14		
Date:	07 November 2019		
Latitude:	32.81797222		
Longitude:	-117.1008333		
Bearing (degrees):	182		
Project Area:	Tierrasanta (F-1)		
Description:	Located west of Roadrunner Park at the top of the canyon, near MEC warning signs S-110 and S-113. Heavy vegetation and cholla cactus in area; no erosion observed.		


Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	TS15		
Date:	07 November 2019		
Latitude:	32.81672222		
Longitude:	-117.1014722		
Bearing (degrees):	90		
Project Area:	Tierrasanta (F-1)		
Description:	<p>Observation is located in a canyon. Field team did not access due to safety concerns (i.e., no clear trail, cholla cactus) and collected observation at 32.81724, -117.10066 and bearing 170°.</p> <p>Canyon is heavily vegetated; no erosion observed.</p>		



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	TS16		
Date:	07 November 2019		
Latitude:	32.81672222		
Longitude:	-117.1014722		
Bearing (degrees):	168		
Project Area:	Tierrasanta (F-1)		
Description:	<p>Observation is located in a canyon. Field team did not access due to safety concerns (i.e., no clear trail, cholla cactus) and observation collected at 32.81724, -117.10066 and bearing 270°.</p> <p>Canyon is heavily vegetated; no erosion observed.</p>		



Current Five-Year Review		Previous Five-Year Review	
<i>No photo collected.</i>			
Photo/Observation ID:	TS17		
Date:	07 November 2019		
Latitude:	32.80208333		
Longitude:	-117.10325		
Bearing (degrees):	22		
Project Area:	Tierrasanta (F-1)		
Description:	Observation point could not be accessed due to fencing. Coordinates and bearing above are from Third Five-Year Review. See TS87.		


Current Five-Year Review		Previous Five-Year Review	
<i>No photo collected.</i>			
Photo/Observation ID:	TS18		
Date:	07 November 2019		
Latitude:	32.80308333		
Longitude:	-117.1030278		
Bearing (degrees):	58		
Project Area:	Tierrasanta (F-1)		
Description:	Observation point could not be accessed due to fencing. Coordinates and bearing above are from Third Five-Year Review. See TS87.		



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:		TS19a	
Date:		07 November 2019	
Latitude:		32.80319444	
Longitude:		-117.1039722	
Bearing (degrees):		190	
Project Area:		Tierrasanta (OA-1)	
Description:		<p>Located off Santos Road, behind the YMCA playground.</p> <p>Good vegetation in the area with no erosion noted. Fencing along eastern perimeter with MEC warning sign (see TS19b). Observation collected at bearing 190 degrees.</p>	



Current Five-Year Review		Previous Five-Year Review	
		<i>No photo collected.</i>	
Photo/Observation ID:		TS19b	
Date:		07 November 2019	
Latitude:		32.80319444	
Longitude:		-117.1039722	
Bearing (degrees):		-	
Project Area:		Tierrasanta (OA-1)	
Description:		MEC warning sign on fencing along eastern perimeter of the YMCA playground.	



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	TS20		
Date:	07 November 2019		
Latitude:	32.80319444		
Longitude:	-117.1044167		
Bearing (degrees):	156		
Project Area:	Tierrasanta (OA-1)		
Description:	Located off Santos Road, taken from the fence by the YMCA. Vegetation appears dry; no erosion noted.		



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	TS21		
Date:	03 March 2020		
Latitude:	32.80158333		
Longitude:	-117.1005833		
Bearing (degrees):	0		
Project Area:	Tierrasanta (F-1)		
Description:	Located at Admiral Baker Golf Course, on Admiral Baker Road. Area F-1 and driving range in the background. Area is covered with vegetation and impervious surface (i.e., asphalt).		



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	TS22		
Date:	03 March 2020		
Latitude:	32.84080556		
Longitude:	-117.0850278		
Bearing (degrees):	213		
Project Area:	Tierrasanta (C-3)		
Description:	Located at San Diego Aqueduct Service Road, looking across Portobelo Drive; same location as TS23. Heavily vegetated with no erosion observed.		



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	TS23		
Date:	03 March 2020		
Latitude:	32.84080556		
Longitude:	-117.0850278		
Bearing (degrees):	251		
Project Area:	Tierrasanta (C-3)		
Description:	Located at San Diego Aqueduct Service Road, looking across Portobelo Drive; same location as TS22. Heavily vegetated with no erosion observed.		



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	TS24		
Date:	03 March 2020		
Latitude:	32.84108333		
Longitude:	-117.0897778		
Bearing (degrees):	13		
Project Area:	Tierrasanta (C-1)		
Description:	<p>Located on the north side of Portobelo Drive, next to a home at 10974 Portobelo Drive.</p> <p>Good vegetation and no erosion noted. Trail leads to Mission Trails Regional Park (~0.5 miles). No MEC warning sign observed at the trailhead.</p>		



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	TS25		
Date:	03 March 2020		
Latitude:	32.84097222		
Longitude:	-117.0899722		
Bearing (degrees):	242		
Project Area:	Tierrasanta (C-3)		
Description:	Location is across the street from TS24. Good vegetation growth and no erosion observed.		

Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	TS26		
Date:	03 March 2020		
Latitude:	32.83772222		
Longitude:	-117.0946667		
Bearing (degrees):	230		
Project Area:	Tierrasanta (F-10N)		
Description:	<p>Located on the southwest side of Villaricca Way, near the intersection of Corte Playa Barcelona.</p> <p>Heavy vegetation in the canyon; no erosion noted. MEC warning sign S-111 observed at the trailhead. Sign is in good condition and is in a visible location.</p>		


Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	TS27		
Date:	07 November 2019		
Latitude:	32.82486111		
Longitude:	-117.0763611		
Bearing (degrees):	230		
Project Area:	Tierrasanta (E-2)		
Description:	Located at the entrance to Mission Trails Regional Park on Clairemont Mesa Blvd. Heavily vegetated with no signs of erosion.		



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	TS28		
Date:	07 November 2019		
Latitude:	32.82486111		
Longitude:	-117.0763611		
Bearing (degrees):	140		
Project Area:	Tierrasanta (E-2)		
Description:	<p>View of Mission Trails Regional Park from the parking area at the end of Clairemont Mesa Blvd.</p> <p>Vegetation is much taller and thicker since previous review. No signs of erosion noted.</p>		



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	TS29		
Date:	07 November 2019		
Latitude:	32.82486111		
Longitude:	-117.07625		
Bearing (degrees):	69		
Project Area:	Tierrasanta (E-1)		
Description:	View of Mission Trails Regional Park from the parking area at the end of Clairemont Mesa Blvd. Vegetation is much taller and thicker since previous review. No signs of erosion noted.		

Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	TS30		
Date:	07 November 2019		
Latitude:	32.82497222		
Longitude:	-117.0761389		
Bearing (degrees):	110		
Project Area:	Tierrasanta (E-2CB)		
Description:	<p>View of Mission Trails Regional Park from the parking area at the end of Clairemont Mesa Blvd. Observation collected at 32.82501, -117.07630 with the same bearing as the previous review.</p> <p>Vegetation is much taller and thicker; no erosion noted. Looking at a trailhead with no MEC warning sign. The trail leads into the park.</p>		



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	TS31		
Date:	07 November 2019		
Latitude:	32.82488889		
Longitude:	-117.0763611		
Bearing (degrees):	50		
Project Area:	Tierrasanta		
Description:	<p>View of Mission Trails Regional Park from the parking area at the end of Clairemont Mesa Blvd.</p> <p>Vegetation is much taller and thicker since the previous review; no erosion noted.</p>		



Current Five-Year Review		Previous Five-Year Review			
		<i>No photo collected. Location not found.</i>			
Photo/Observation ID:				TS32	
Date:				07 November 2019	
Latitude:				32.82475	
Longitude:				-117.0760833	
Bearing (degrees):				15	
Project Area:				Tierrasanta	
Description:				Entrance to Mission Trails Regional Park at the end of Clairemont Mesa Blvd. Observation collected at 32.82478, -117.07610 with the same bearing as the previous review. Good vegetation and no erosion noted.	



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	TS33		
Date:	07 November 2019		
Latitude:	32.82502778		
Longitude:	-117.0767778		
Bearing (degrees):	115		
Project Area:	Tierrasanta		
Description:	Located at the entrance to Mission Trails Regional Park at the end of Clairemont Mesa Blvd. Vegetation is taller and thicker than previous review and no erosion noted.		



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	TS34		
Date:	07 November 2019		
Latitude:	32.82502778		
Longitude:	-117.0767778		
Bearing (degrees):	75		
Project Area:	Tierrasanta		
Description:	Located at the entrance to Mission Trails Regional Park at the end of Clairemont Mesa Blvd. Good vegetation and no erosion noted.		



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	TS35		
Date:	03 March 2020		
Latitude:	32.80194444		
Longitude:	-117.1005		
Bearing (degrees):	220		
Project Area:	Tierrasanta (F-11N)		
Description:	<p>Located at Admiral Baker Golf Course, on Admiral Baker Road, and includes the golf course putting green.</p> <p>Good vegetation and no erosion noted in area. Vegetation is much larger than previous review.</p>		



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	TS36		
Date:	07 November 2019		
Latitude:	32.82072222		
Longitude:	-117.0771111		
Bearing (degrees):	22		
Project Area:	Tierrasanta (E-2)		
Description:	<p>Located at the entrance to Mission Trails Regional Park, at the intersection of Colina Dorado Drive and Calle de Vida.</p> <p>Sign S-008 / S-093 observed at trailhead. Lower yellow portion of sign is faded (see MT42 and sign log). Observation collected with bearing at 0°.</p>		



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	TS37		
Date:	06 November 2019		
Latitude:	32.82541667		
Longitude:	-117.0753889		
Bearing (degrees):	350		
Project Area:	Tierrasanta (F-10A)		
Description:	Located on a wooden bridge at the entrance to Mission Trails Regional Park from Clairemont Mesa Blvd. Good vegetation with some bare ground observed on the hillside.		


Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	TS38		
Date:	07 November 2019		
Latitude:	32.82441667		
Longitude:	-117.0795556		
Bearing (degrees):	285		
Project Area:	Tierrasanta (F-2M)		
Description:	<p>Located on the west side of Rueda Drive, between Via Promesa and Palabra Circle. Observation collected at 32.82456, -117.07994 with a bearing of 130°.</p> <p>Good vegetation in the area and no erosion noted. Area is accessed by Seda Nature Trail. Sign S-016 observed at trailhead off of Rueda Drive. Sign is in good condition and is in a visible location.</p>		



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	TS39		
Date:	07 November 2019		
Latitude:	32.82447222		
Longitude:	-117.0795833		
Bearing (degrees):	110		
Project Area:	Tierrasanta (F-2E)		
Description:	Located on Rueda Drive, between Via Promesa and Palabra Circle. Good vegetation in area and no erosion noted.		



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	TS40		
Date:	07 November 2019		
Latitude:	32.82069444		
Longitude:	-117.0771111		
Bearing (degrees):	70		
Project Area:	Tierrasanta (E-2CB)		
Description:	Located at the intersection of Colina Dorada Drive and Calle de Vida. Good vegetation in the area and no erosion noted.		



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	TS41		
Date:	07 November 2019		
Latitude:	32.82072222		
Longitude:	-117.0770833		
Bearing (degrees):	150		
Project Area:	Tierrasanta (E-2)		
Description:	Located off Calle de Vida, near the intersection with Colina Dorado Drive. Good vegetation in the area and no erosion observed.		



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	TS42		
Date:	03 March 2020		
Latitude:	32.81577778		
Longitude:	-117.0869722		
Bearing (degrees):	22		
Project Area:	Tierrasanta (F-5N)		
Description:	<p>Located on Tierrasanta Blvd at the San Diego Gas & Electric (SDG&E) gate, under power lines.</p> <p>Service road includes MEC warning sign S-007. Sign is in good condition and is in a visible location. Area is vegetated with no erosion observed. Observation collected with a bearing of 35°.</p>		



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	TS43		
Date:	03 March 2020		
Latitude:	32.81169444		
Longitude:	-117.0829722		
Bearing (degrees):	100		
Project Area:	Tierrasanta (F-5S)		
Description:	Located at western terminus of Tierrasanta Blvd. Area is vegetated with a graded trail; no signs of erosion. Copperleaf neighborhood (completed in 2012-2013) observed (right side of photo). No MEC warning sign observed at trailhead or down trail.		



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	TS44		
Date:	03 March 2020		
Latitude:	32.83175		
Longitude:	-117.102		
Bearing (degrees):	150		
Project Area:	Tierrasanta (F-10E)		
Description:	Located on Santo Road, north of Remora Street and down trail from TS67 and sign S-036. Good vegetation on the slope with no erosion noted.		

Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	TS45		
Date:	03 March 2020		
Latitude:	32.83208333		
Longitude:	-117.0985		
Bearing (degrees):	180		
Project Area:	Tierrasanta (F-10E)		
Description:	<p>Located off the south side of Antigua Blvd and east of Santo Road, on an unpaved trail in Shepherd Canyon.</p> <p>Heavily vegetated slope looking up towards the back of homes. Orientation from previous review could not be duplicated; current photograph matches orientation from Second Five-Year Review.</p>		



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:		TS46	
Date:		07 November 2019	
Latitude:		32.83155556	
Longitude:		-117.1051667	
Bearing (degrees):		44	
Project Area:		Tierrasanta (F-7)	
Description:		<p>Located east of Antigua Blvd, off of Veracruz Court. Observation collected off paved concrete trail and near sign S-041.</p> <p>Erosion noted in the canyon approaching the observation point. Area is vegetated but appears thinner from previous review.</p>	


Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:		TS47	
Date:		07 November 2019	
Latitude:		32.83088889	
Longitude:		-117.1065556	
Bearing (degrees):		160	
Project Area:		Tierrasanta (F-7)	
Description:		<p>Located on the north side of Clairemont Mesa Blvd, between Antigua Blvd and Santo Road.</p> <p>Vegetation appears dry. Serious erosion observed, and erosion control measures appear to be failing on the hillside. See also TS48, TS49, and TS89.</p>	



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	TS48		
Date:	07 November 2019		
Latitude:	32.83088889		
Longitude:	-117.1063611		
Bearing (degrees):	188		
Project Area:	Tierrasanta (F-7)		
Description:	<p>Located on the north side of Clairemont Mesa Blvd, between Antigua Blvd and Santo Road.</p> <p>Vegetation appears dry. Serious erosion observed, and erosion control measures appear to be failing on the hillside. See also TS47, TS49, and TS89.</p>		



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	TS49		
Date:	07 November 2019		
Latitude:	32.83086111		
Longitude:	-117.1065		
Bearing (degrees):	220		
Project Area:	Tierrasanta (F-7)		
Description:	<p>Located on the north side of Clairemont Mesa Blvd, between Antigua Blvd and Santo Road.</p> <p>Vegetation appears dry. Serious erosion observed, and erosion control measures appear to be failing on the hillside. See also TS47 to TS49.</p>		



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	TS50		
Date:	07 November 2019		
Latitude:	32.82955556		
Longitude:	-117.1050556		
Bearing (degrees):	195		
Project Area:	Tierrasanta (F-6)		
Description:	Located on the south side of Clairemont Mesa Blvd, just west of Santo Road and across the street from a shopping center. Gated dirt road with no MEC warning sign. Heavy vegetation in area and no erosion noted.		



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	TS51		
Date:	07 November 2019		
Latitude:	32.81980556		
Longitude:	-117.1033333		
Bearing (degrees):	70		
Project Area:	Tierrasanta (F-1)		
Description:	<p>Located in the parking lot of Murphy Canyon Youth Center, off Santo Road and Orlec Street.</p> <p>Curb is preventing parking lot runoff from eroding hillside. The slope appears more vegetated than in the previous review. Fence not photographed in previous five-year review.</p>		



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	TS52		
Date:	07 November 2019		
Latitude:	32.81961111		
Longitude:	-117.1033611		
Bearing (degrees):	70		
Project Area:	Tierrasanta (F-1)		
Description:	<p>Located in the parking lot of Murphy Canyon Youth Center, off Santo Road and Orlec Street.</p> <p>Curb is preventing parking lot runoff from eroding the hillside. The slope appears more vegetated than in the previous review.</p>		



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	TS53		
Date:	07 November 2019		
Latitude:	32.81961111		
Longitude:	-117.1033611		
Bearing (degrees):	45		
Project Area:	Tierrasanta (F-1)		
Description:	Located in the parking lot of Murphy Canyon Youth Center, off Santo Road and Orlec Street. Curb is preventing parking lot runoff from eroding the hillside. The slope appears more vegetated than in the previous review.		



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	TS54		
Date:	07 November 2019		
Latitude:	32.81961111		
Longitude:	-117.1033611		
Bearing (degrees):	22		
Project Area:	Tierrasanta (F-1)		
Description:	<p>Located in the parking lot of Murphy Canyon Youth Center, off Santo Road and Orlec Street.</p> <p>Curb is preventing parking lot runoff from eroding the hillside. The slope appears more vegetated than in the previous review.</p>		

Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	TS55		
Date:	07 November 2019		
Latitude:	32.81980556		
Longitude:	-117.1033611		
Bearing (degrees):	125		
Project Area:	Tierrasanta (F-1)		
Description:	<p>Located in the parking lot of Murphy Canyon Youth Center, off Santo Road and Orlec Street. Observation collected at 32.81975, -117.10336 with same bearing as previous review.</p> <p>Curb is preventing parking lot runoff from eroding the hillside. Slope appears more vegetated than in the previous review.</p>		



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	TS56		
Date:	07 November 2019		
Latitude:	32.82002778		
Longitude:	-117.1033333		
Bearing (degrees):	70		
Project Area:	Tierrasanta (F-1)		
Description:	<p>Located in the parking lot of Murphy Canyon Youth Center, off Santo Road and Orlec Street.</p> <p>Curb is preventing parking lot runoff from eroding the hillside. Slope appears more vegetated than in the previous review.</p>		



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	TS57		
Date:	03 March 2020		
Latitude:	32.81672222		
Longitude:	-117.0863889		
Bearing (degrees):	56		
Project Area:	Tierrasanta (F-5N)		
Description:	Located down the service road from TS42. Heavy vegetation in the area and no erosion noted. (Note: Field team could not locate the exact orientation of the photo from previous review using coordinates and bearing provided.)		



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	TS58		
Date:	03 March 2020		
Latitude:	32.81730556		
Longitude:	-117.0858333		
Bearing (degrees):	290		
Project Area:	Tierrasanta (F-5N)		
Description:	Located down the service road from TS42. The area is heavily vegetated; no erosion noted.		



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	TS59		
Date:	03 March 2020		
Latitude:	32.81802778		
Longitude:	-117.0860833		
Bearing (degrees):	284		
Project Area:	Tierrasanta (F-2W)		
Description:	Located down the service road from TS42. Due to heavy vegetation in the area, the observation was collected off the service road ~180 feet south of coordinates provided in previous review at 32.817679, -117.985661 with the same bearing. No erosion noted.		



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	TS60		
Date:	07 November 2019		
Latitude:	32.82030556		
Longitude:	-117.0954167		
Bearing (degrees):	55		
Project Area:	Tierrasanta (F-2W)		
Description:	<p>Located behind apartments near the intersection of Ducos Place and Tierrasanta Blvd.</p> <p>MEC warning sign no longer present; bench and concrete pad have also been removed. Some erosion noted down the slope.</p>		



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	TS61		
Date:	07 November 2019		
Latitude:	32.82180556		
Longitude:	-117.0843611		
Bearing (degrees):	40		
Project Area:	Tierrasanta (F-5N)		
Description:	Observation collected on what appears to be a faint (social) trail on the canyon slope. Heavy vegetation prevented access to the exact location of the previous review.		



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	TS62		
Date:	07 November 2019		
Latitude:	32.82191667		
Longitude:	-117.07975		
Bearing (degrees):	182		
Project Area:	Tierrasanta (F-5N)		
Description:	<p>Located on the south side of Calle de Vida, off of a trail/service road that leads into Elanus Canyon.</p> <p>No MEC warning sign observed. Sides of canyon are vegetated. Survey stakes present at the observation point. Fog is obscuring the image.</p>		

Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	TS63		
Date:	07 November 2019		
Latitude:	32.82191667		
Longitude:	-117.07975		
Bearing (degrees):	150		
Project Area:	Tierrasanta (F-5N)		
Description:	<p>Located on the south side of Calle de Vida, off of trail/service road that leads into Elanus Canyon.</p> <p>No MEC warning sign observed. Sides of canyon are vegetated, but minor erosion noted below the house across canyon from observation point.</p>		



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:		TS64	
Date:		07 November 2019	
Latitude:		32.83038889	
Longitude:		-117.1061667	
Bearing (degrees):		70	
Project Area:		Tierrasanta (F-7)	
Description:		<p>Located on the north side of Clairemont Mesa Blvd, about halfway between Santo Road and Antigua Blvd.</p> <p>Erosion control measure installed on slope west of observation point is failing (see TS47, TS48, TS49, and TS89). Vegetation much denser than previous review.</p>	



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:		TS65	
Date:		03 March 2020	
Latitude:		32.83141667	
Longitude:		-117.10275	
Bearing (degrees):		240	
Project Area:		Tierrasanta (F-7)	
Description:		<p>Taken from sidewalk off of Santo Road, north of intersection with Remore Street.</p> <p>Heavy vegetation with no signs of erosion. A faint (social) trail observed going into the canyon.</p>	



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	TS66		
Date:	07 November 2019		
Latitude:	32.83236111		
Longitude:	-117.1021944		
Bearing (degrees):	255		
Project Area:	Tierrasanta (F-7)		
Description:	Taken from sidewalk off of Santo Road, south of intersection with Antigua Blvd; looking at West Shepherd Canyon Trail. Vegetation is heavier on canyon sides than previous review; no erosion noted.		



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	TS67		
Date:	03 March 2020		
Latitude:	32.83161111		
Longitude:	-117.10225		
Bearing (degrees):	40		
Project Area:	Tierrasanta (F-10E)		
Description:	Located off of Santo Road, at a trailhead for Shepherd Canyon. Good vegetation in the area with no erosion noted. Sign S-036 is in good condition. Location of sign is visible.		



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	TS68		
Date:	03 March 2020		
Latitude:	32.83255556		
Longitude:	-117.0993056		
Bearing (degrees):	150		
Project Area:	Tierrasanta (F-10E)		
Description:	Area on either side of the trail is heavily vegetated and no erosion noted. Observation collected just past sign S-104		



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	TS69		
Date:	03 March 2020		
Latitude:	32.83347222		
Longitude:	-117.09975		
Bearing (degrees):	355		
Project Area:	Tierrasanta (EF-10E)		
Description:	<p>Located at a trailhead for Lower North Shepherd Canyon Trail, next to Villa Colina housing complex.</p> <p>Trail is no longer covered in mulch, as shown in the previous review. Vegetation on both sides of the trail; no erosion observed. Sign S-112 is in a visible location but is fading.</p>		

Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	TS70		
Date:	04 March 2020		
Latitude:	32.82925		
Longitude:	-117.0828333		
Bearing (degrees):	45		
Project Area:	Tierrasanta (F-10M)		
Description:	Located at the intersection of Via Valarta and Via Dominique. Area appears to be newly landscaped as part of the Villa Dominique townhome development. There are signs of erosion in the canyon along with large amounts of trash.		



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	TS71		
Date:	04 March 2020		
Latitude:	32.83013889		
Longitude:	-117.0836944		
Bearing (degrees):	310		
Project Area:	Tierrasanta (F-10E)		
Description:	<p>Located on an unpaved trail off of Via Valarta, next to Seventh Day Adventist Church.</p> <p>The areas surrounding the trail are covered with grassy vegetation and eucalyptus trees. Heavy vegetation noted in the canyon. Erosion was noted on the trail. This location is down trail from sign S-021.</p>		



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	TS72		
Date:	04 March 2020		
Latitude:	32.83427778		
Longitude:	-117.08375		
Bearing (degrees):	185		
Project Area:	Tierrasanta (C-5)		
Description:	Photo taken in the cul-de-sac of Corte Playa De Cortes at 32.834091, -117.083992, approximately 100 feet southwest from previous five-year review, due to heavy vegetation and slope of hillside. The hillside behind photo is heavily vegetated (see TS73).		



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	TS73		
Date:	04 March 2020		
Latitude:	32.83422222		
Longitude:	-117.08425		
Bearing (degrees):	10		
Project Area:	Tierrasanta (C-5)		
Description:	Photo taken in same area as TS72. Hillside is heavily vegetated and no erosion noted. Vegetation appears much denser than the previous review.		



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	TS74		
Date:	04 March 2020		
Latitude:	32.83705556		
Longitude:	-117.0844167		
Bearing (degrees):	190		
Project Area:	Tierrasanta (C-4)		
Description:	Located on a gravel trail between Avenida Playa Cancun and Via Playa De Cortes. Good vegetation in area and no erosion noted.		


Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	TS75		
Date:	04 March 2020		
Latitude:	32.83705556		
Longitude:	-117.0844167		
Bearing (degrees):	40		
Project Area:	Tierrasanta (C-4)		
Description:	Same area as TS74. Good vegetation and no erosion noted.		


Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	TS76		
Date:	04 March 2020		
Latitude:	32.83772222		
Longitude:	-117.0825278		
Bearing (degrees):	35		
Project Area:	Tierrasanta (C-4)		
Description:	Located near the intersection of Playa De Cortes and Corte Playa San Juan. Heavily vegetated area; no erosion observed.		


Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	TS77		
Date:	05 March 2020		
Latitude:	32.84280556		
Longitude:	-117.0825		
Bearing (degrees):	210		
Project Area:	Tierrasanta (C-2)		
Description:	Located near the Portobelo entrance to Mission Trails Regional Park. Vegetation growth has improved in area; no erosion noted.		



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:		TS78	
Date:		07 November 2019	
Latitude:		32.83041667	
Longitude:		-117.1068611	
Bearing (degrees):		212	
Project Area:		Tierrasanta (F-6)	
Description:		<p>Located off Clairemont Mesa Blvd between Antigua Blvd and Santo Rd.</p> <p>Good vegetation in the area; no erosion noted.</p>	


Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:		TS79	
Date:		07 November 2019	
Latitude:		32.82941667	
Longitude:		-117.1041667	
Bearing (degrees):		230	
Project Area:		Tierrasanta (F-6)	
Description:		<p>Located on the south side of Clairemont Mesa Blvd, just west of Santo Road.</p> <p>Good vegetation growth; denser than the previous review. No erosion noted.</p>	

Current Five-Year Review		Previous Five-Year Review	
<i>No photo collected. Observation point could not be accessed.</i>			
Photo/Observation ID:	TS80		
Date:	07 November 2019		
Latitude:	32.81816667		
Longitude:	-117.1036111		
Bearing (degrees):	352		
Project Area:	Tierrasanta (F-1)		
Description:	Located behind a fence and locked gate; observation point could not be accessed. See TS88, which is ~251 feet north of observation point.		


Current Five-Year Review		Previous Five-Year Review	
<i>No photo collected. Observation point could not be accessed.</i>			
Photo/Observation ID:	TS81		
Date:	07 November 2019		
Latitude:	32.81816667		
Longitude:	-117.1034444		
Bearing (degrees):	270		
Project Area:	Tierrasanta (F-1)		
Description:	Located behind a fence and locked gate; observation point could not be accessed. See TS88, which is ~228 feet north of observation point.		


Current Five-Year Review		Previous Five-Year Review	
<i>No photo collected. Observation point could not be accessed.</i>			
Photo/Observation ID:	TS82		
Date:	07 November 2019		
Latitude:	32.81819444		
Longitude:	-117.1033889		
Bearing (degrees):	352		
Project Area:	Tierrasanta (F-1)		
Description:	Located behind a fence and locked gate; observation point could not be accessed. See TS88, which is ~220 feet north of observation point.		


Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	TS83		
Date:	06 November 2019		
Latitude:	32.82088889		
Longitude:	-117.0980556		
Bearing (degrees):	-		
Project Area:	Tierrasanta		
Description:	Munitions display at Tierrasanta Branch Library. Display is located inside library near the main entrance.		


Current Five-Year Review		Previous Five-Year Review	
<i>No photo collected.</i>			
Photo/Observation ID:	TS84		
Date:	03 March 2019		
Latitude:	32.81888889		
Longitude:	-117.1160278		
Bearing (degrees):	90		
Project Area:	Tierrasanta (OA-4)		
Description:	<p>Location is an on-ramp to I-15 south, looking east.</p> <p>Due to safety concerns, the team did not stop and observations were collected as the field team entered the interstate. The hillside is vegetated and no erosion was observed.</p>		



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	TS85		
Date:	07 November 2019		
Latitude:	32.81855556		
Longitude:	-117.1008611		
Bearing (degrees):	190		
Project Area:	Tierrasanta (F-1)		
Description:	Closeup of sign in TS02. Sign is bent but still legible.		



Current Five-Year Review	
	
Photo/Observation ID:	TS86
Date:	07 November 2019
Latitude:	32.80183
Longitude:	-117.10454
Bearing (degrees):	90°
Project Area:	Tierrasanta (OA-1)
Description:	New observation collected to document fenced area at Murphy Canyon Child Development Center with UXO warning sign.



Current Five-Year Review	
	
Photo/Observation ID:	TS87
Date:	07 November 2019
Latitude:	32.80320
Longitude:	-117.10462
Bearing (degrees):	135°
Project Area:	Tierrasanta (OA-1)
Description:	New observation collected to document fence and locked gate with UXO warning sign next to YMCA blocking access to TS17 or TS18.



Current Five-Year Review	
	
Photo/Observation ID:	TS88
Date:	07 November 2019
Latitude:	32.81878
Longitude:	-117.10332
Bearing (degrees):	90°
Project Area:	Tierrasanta (F-1)
Description:	New observation collected to document fence and locked gate with UXO warning sign. From the observation point, TS80 is located 251 feet to the south, TS81 is located 228 feet to the south, and TS82 is located 220 feet to the south.



Current Five-Year Review	
	
Photo/Observation ID:	TS89
Date:	07 November 2019
Latitude:	32.83058
Longitude:	-117.10661
Bearing (degrees):	10°
Project Area:	Tierrasanta (F-7)
Description:	Photo taken from sidewalk off Clairemont Mesa Boulevard. Preventative soil control measure is failing (see TS47 and TS48).



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	MT01		
Date:	04 March 2020		
Latitude:	32.84111111		
Longitude:	-117.0788889		
Bearing (degrees):	125		
Project Area:	Mission Trails		
Description:	Due to tall grass and ground slope, observation collected from trail at 32.841363, -117.079161 (~120 feet northwest from previous review). Improved vegetation in area; no erosion observed.		



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	MT02		
Date:	04 March 2020		
Latitude:	32.84163889		
Longitude:	-117.0791389		
Bearing (degrees):	240		
Project Area:	Mission Trails		
Description:	Due to tall grass and ground slope, observation collected from trail at 32.841507, -117.079114 (~50 feet south from previous review). Improved vegetation in area; no erosion noted.		



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	MT03		
Date:	04 March 2020		
Latitude:	32.84163889		
Longitude:	-117.0791389		
Bearing (degrees):	240		
Project Area:	Mission Trails		
Description:	Due to tall grass and ground slope, observation collected from trail (approximately ~50 feet south from previous review). Improved vegetation in area; no erosion noted.		



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	MT04		
Date:	04 March 2020		
Latitude:	32.84027778		
Longitude:	-117.0804167		
Bearing (degrees):	162		
Project Area:	Mission Trails		
Description:	Improved vegetation in Shepherd Canyon; no erosion noted.		



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	MT05		
Date:	04 March 2020		
Latitude:	32.84002778		
Longitude:	-117.0800278		
Bearing (degrees):	340		
Project Area:	Mission Trails		
Description:	Improved vegetation in former erosion area.		



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	MT06		
Date:	05 March 2020		
Latitude:	32.84227778		
Longitude:	-117.0824167		
Bearing (degrees):	18		
Project Area:	Mission Trails		
Description:	Field team could not access location of observation from previous review due to heavy vegetation around culvert; observation collected at 32.841965, -117.082491 with the same bearing.		



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	MT07		
Date:	05 March 2020		
Latitude:	32.84227778		
Longitude:	-117.0824167		
Bearing (degrees):	135		
Project Area:	Mission Trails		
Description:	Bridge with intact culvert. Healthy vegetation in area. Observation collected at 32.842115, -117.082481.		

Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	MT08		
Date:	05 March 2020		
Latitude:	32.84844444		
Longitude:	-117.0735		
Bearing (degrees):	128		
Project Area:	Mission Trails		
Description:	Good vegetation on sloped hillside; no erosion noted.		


Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	MT09		
Date:	05 March 2020		
Latitude:	32.84844444		
Longitude:	-117.0735		
Bearing (degrees):	90		
Project Area:	Mission Trails		
Description:	Located in Shepherd Canyon. Heavily vegetated hillside. Some erosion noted on slopes of drainage ditch.		



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	MT10		
Date:	05 March 2020		
Latitude:	32.84841667		
Longitude:	-117.0730833		
Bearing (degrees):	0		
Project Area:	Mission Trails		
Description:	<p>Observation collected from trail, ~110 feet west from washout shown in previous review with bearing 62°.</p> <p>The drainage way was observed in the distance; improved vegetation overall in area.</p>		

Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	MT11		
Date:	05 March 2020		
Latitude:	32.84555556		
Longitude:	-117.0781944		
Bearing (degrees):	40		
Project Area:	Mission Trails		
Description:	Observation collected from trail looking towards foot/bike bridge with a bearing of 62°.		
	Improved vegetation in drainage way and surrounding area.		



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	MT12		
Date:	05 March 2020		
Latitude:	32.84522222		
Longitude:	-117.0788056		
Bearing (degrees):	135		
Project Area:	Mission Trails		
Description:	Alternate view of MT11 at a bearing of 205°.		
	Drainage way with improved vegetation in area.		



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	MT13		
Date:	04 March 2020		
Latitude:	32.83069444		
Longitude:	-117.0675833		
Bearing (degrees):	270		
Project Area:	Mission Trails		
Description:	No change in terrain and the vegetation appears healthier; no erosion noted.		



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	MT14		
Date:	04 March 2020		
Latitude:	32.83019444		
Longitude:	-117.0674167		
Bearing (degrees):	270		
Project Area:	Mission Trails		
Description:	No change in terrain and the vegetation appears healthier; no erosion noted.		



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	MT15		
Date:	04 March 2020		
Latitude:	32.82894444		
Longitude:	-117.0658611		
Bearing (degrees):	270 (40)		
Project Area:	Mission Trails		
Description:	Observation collected from trail at 32.828859, -117.065998 at a bearing of 40° (~40 feet southwest of and looking down at the location from previous review). Sloped area with good vegetation appears healthier; no erosion noted.		


Current Five-Year Review		Previous Five-Year Review	
<i>No photo collected.</i>		<i>This sign has been removed; area where sign was previously located was not found. Recommend removing from further five-year reviews.</i>	
Photo/Observation ID:	MT16		
Date:	-		
Latitude:	32.818565		
Longitude:	-117.100675		
Bearing (degrees):	-		
Project Area:	Mission Trails		
Description:	Field team could not locate observation point using coordinates from previous review (Third Five-Year Review). Based on description from the Second Five-Year Review, the observation point is located in Suycott Wash South, but no coordinates were provided.		


Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	MT17		
Date:	04 March 2020		
Latitude:	32.83380556		
Longitude:	-117.0624167		
Bearing (degrees):	135		
Project Area:	Mission Trails		
Description:	Observation collected from trail at 32.833772, -117.063313 (~275 feet west from previous review). Slightly improved vegetation in area; no erosion noted.		


Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	MT18		
Date:	04 March 2020		
Latitude:	32.83230556		
Longitude:	-117.0615		
Bearing (degrees):	135		
Project Area:	Mission Trails		
Description:	Observation collected off South Fortuna Trail, ~465 feet west of previous review. Vegetation in area has improved and appears healthier; no erosion or other changes in terrain noted.		


Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	MT19		
Date:	04 March 2020		
Latitude:	32.82933333		
Longitude:	-117.0626667		
Bearing (degrees):	135		
Project Area:	Mission Trails		
Description:	Observation collected directly off South Fortuna Trail, approximately 15 feet west of previous five-year review, due to thick vegetation. Improved vegetation in area. Wood fence is visible in previous five-year review.		


Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	MT20		
Date:	04 March 2020		
Latitude:	32.84038889		
Longitude:	-117.0702778		
Bearing (degrees):	105		
Project Area:	Mission Trails		
Description:	Located along the Rim Trail near its intersection with Corte Playa Catalina Trail. View across canyon; much improved vegetation.		


Current Five-Year Review		Previous Five-Year Review	
<i>No photo collected.</i>			
Photo/Observation ID:	MT21		
Date:	04 March 2020		
Latitude:	32.8486944		
Longitude:	-117.066056		
Bearing (degrees):	135		
Project Area:	Mission Trails		
Description:	Due to safety concerns related to heat and terrain, the field team did not visit this observation point. See MT63.		


Current Five-Year Review		Previous Five-Year Review	
<i>No photo collected.</i>			
Photo/Observation ID:	MT22		
Date:	04 March 2020		
Latitude:	32.847		
Longitude:	-117.0609167		
Bearing (degrees):	315		
Project Area:	Mission Trails		
Description:	Due to safety concerns related to heat and terrain, the field team did not visit this observation point. See MT63.		


Current Five-Year Review	Previous Five-Year Review
<i>No photo collected.</i>	
Photo/Observation ID:	MT23
Date:	04 March 2020
Latitude:	32.84708333
Longitude:	-117.0612778
Bearing (degrees):	225
Project Area:	Mission Trails
Description:	Due to safety concerns related to heat and terrain, the field team did not visit this observation point. See MT63.


Current Five-Year Review	Previous Five-Year Review
<i>No photo collected.</i>	
Photo/Observation ID:	MT24
Date:	04 March 2020
Latitude:	32.84708333
Longitude:	-117.0615278
Bearing (degrees):	225
Project Area:	Mission Trails
Description:	Due to safety concerns related to heat and terrain, the field team did not visit this observation point. See MT63.


Current Five-Year Review		Previous Five-Year Review	
<i>No photo collected.</i>			
Photo/Observation ID:		MT25	
Date:		04 March 2020	
Latitude:		32.84661111	
Longitude:		-117.0609722	
Bearing (degrees):		180	
Project Area:		Mission Trails	
Description:		Due to safety concerns related to heat and terrain, the field team did not visit this observation point. See MT63.	


Current Five-Year Review		Previous Five-Year Review	
<i>No photo collected.</i>			
Photo/Observation ID:		MT26	
Date:		04 March 2020	
Latitude:		32.84711111	
Longitude:		-117.0609722	
Bearing (degrees):		337	
Project Area:		Mission Trails	
Description:		Due to safety concerns related to heat and terrain, the field team did not visit this observation point. See MT63.	

Current Five-Year Review		Previous Five-Year Review	
<i>No photo collected.</i>			
Photo/Observation ID:	MT27		
Date:	04 March 2020		
Latitude:	32.84833333		
Longitude:	-117.0624444		
Bearing (degrees):	180		
Project Area:	Mission Trails		
Description:	Due to safety concerns related to heat and terrain, the field team did not visit this observation point. See MT63.		



Current Five-Year Review		Previous Five-Year Review	
<i>No photo collected.</i>			
Photo/Observation ID:	MT28		
Date:	04 March 2020		
Latitude:	32.83477778		
Longitude:	-117.05575		
Bearing (degrees):	0		
Project Area:	Mission Trails		
Description:	Due to safety concerns related to heat and terrain, the field team did not visit this observation point. See MT63.		



Current Five-Year Review		Previous Five-Year Review	
<i>No photo collected.</i>			
Photo/Observation ID:		MT29	
Date:		04 March 2020	
Latitude:		32.83144444	
Longitude:		-117.0553611	
Bearing (degrees):		90	
Project Area:		Mission Trails	
Description:		Due to safety concerns related to heat and terrain, the field team did not visit this observation point. See MT63.	



Current Five-Year Review		Previous Five-Year Review	
<i>No photo collected.</i>			
Photo/Observation ID:		MT30	
Date:		04 March 2020	
Latitude:		32.83097222	
Longitude:		-117.0553889	
Bearing (degrees):		67	
Project Area:		Mission Trails	
Description:		Due to safety concerns related to heat and terrain, the field team did not visit this observation point. See MT63.	



Current Five-Year Review		Previous Five-Year Review	
<i>No photo collected.</i>			
Photo/Observation ID:	MT31		
Date:	04 March 2020		
Latitude:	32.83777778		
Longitude:	-117.0554444		
Bearing (degrees):	157		
Project Area:	Mission Trails		
Description:	Due to safety concerns related to heat and terrain, the field team did not visit this observation point. See MT63.		



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	MT32		
Date:	07 November 2019		
Latitude:	32.82080556		
Longitude:	-117.0771389		
Bearing (degrees):	90		
Project Area:	Mission Trails		
Description:	Gate to Mission Trails Regional Park at Colina Dorado Drive. Observation is located near sign S-008 / S-093.		



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:		MT33	
Date:		04 March 2020	
Latitude:		32.84136111	
Longitude:		-117.0753333	
Bearing (degrees):		225	
Project Area:		Mission Trails	
Description:		Observation collected from the trail, ~500 feet east-northeast from the previous review due to tall grass and slope. Improved vegetation in the area appears healthier; no erosion noted.	



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:		MT34	
Date:		04 March 2020	
Latitude:		32.84136111	
Longitude:		-117.0753333	
Bearing (degrees):		60	
Project Area:		Mission Trails	
Description:		Observation collected from the trail, ~500 feet east-northeast from the previous review due to tall grass and slope. Improved vegetation in area appears healthier; no erosion noted.	



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:		MT35	
Date:		04 March 2020	
Latitude:		32.84194444	
Longitude:		-117.0766667	
Bearing (degrees):		35	
Project Area:		Mission Trails	
Description:		Observation collected from the trail, ~450 feet northwest from the previous review due to tall grass and slope. Improved vegetation in the area appears healthier; no erosion noted.	



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:		MT36	
Date:		04 March 2020	
Latitude:		32.84194444	
Longitude:		-117.0767222	
Bearing (degrees):		350	
Project Area:		Mission Trails	
Description:		Observation collected from the trail, ~450 feet northwest from the previous review due to tall grass and slope. Improved vegetation in area appears healthier; no erosion noted.	



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	MT37		
Date:	04 March 2020		
Latitude:	32.83972222		
Longitude:	-117.0788889		
Bearing (degrees):	310		
Project Area:	Mission Trails		
Description:	Observation collected from sloped area with heavy vegetation; no erosion noted.		



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	MT38		
Date:	04 March 2020		
Latitude:	32.84036111		
Longitude:	-117.079		
Bearing (degrees):	0		
Project Area:	Mission Trails		
Description:	Vegetation has grown since last review; no erosion noted.		



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	MT39		
Date:	04 March 2020		
Latitude:	32.83913889		
Longitude:	-117.0795278		
Bearing (degrees):	340		
Project Area:	Mission Trails		
Description:	Observation collected on the trail, ~75 ft east of the previous review with the same bearing. Heavy vegetation observed on the slope; no erosion noted.		



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	MT40		
Date:	04 March 2020		
Latitude:	32.83994444		
Longitude:	-117.079		
Bearing (degrees):	135		
Project Area:	Mission Trails		
Description:	Hillside with good vegetative coverage; no erosion noted. Wood fence present was installed for the protection of the vegetation.		



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	MT41		
Date:	07 November 2019		
Latitude:	32.82052778		
Longitude:	-117.07725		
Bearing (degrees):	0		
Project Area:	Mission Trails		
Description:	South Gate to Mission Trails Regional Park at Colina Dorado Drive.		



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	MT42		
Date:	07 November 2019		
Latitude:	32.82052778		
Longitude:	-117.07725		
Bearing (degrees):	90		
Project Area:	Mission Trails		
Description:	Sign S-008 / S-093 is faded is located inside of the gate in MT41; location is not very visible.		



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	MT43		
Date:	07 November 2019		
Latitude:	32.821055		
Longitude:	-117.077197		
Bearing (degrees):	0		
Project Area:	Mission Trails		
Description:	<p>Located just inside of the south gate.</p> <p>The kiosk at the coordinates is no longer present; the field team believes the kiosk was moved up the gravel road to 32.821759, -117.075655 (shown in picture). No MEC information is present on the kiosk. Based on the coordinates provided, the photo in the previous review is incorrect and is the same kiosk shown at MT58.</p>		


Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	MT44		
Date:	07 November 2019		
Latitude:	32.82052778		
Longitude:	-117.07725		
Bearing (degrees):	0		
Project Area:	Mission Trails		
Description:	Observation taken just north of MT41 of gravel service road leading to Mission Trails Regional Park. No MEC warning sign posted.		

Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:		MT45	
Date:		04 March 2020	
Latitude:		32.83908333	
Longitude:		-117.0785278	
Bearing (degrees):		240	
Project Area:		Mission Trails	
Description:		View from top of hill down to neighborhood; good vegetation and no erosion observed on hillside.	



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:		MT46	
Date:		05 March 2020	
Latitude:		32.84272222	
Longitude:		-117.0825833	
Bearing (degrees):		60	
Project Area:		Mission Trails	
Description:		Observation collected with a bearing of 100°. Healthy vegetation in the area; no erosion noted.	



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	MT47		
Date:	05 March 2020		
Latitude:	32.84277778		
Longitude:	-117.0825278		
Bearing (degrees):	40		
Project Area:	Mission Trails		
Description:	Observation collected with a bearing of 100°. Healthy vegetation in the area; no erosion noted.		



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	MT48		
Date:	05 March 2020		
Latitude:	32.84280556		
Longitude:	-117.0825		
Bearing (degrees):	30		
Project Area:	Mission Trails		
Description:	<p>Vegetation in the area has filled in and appears healthy; no erosion noted. A chain linked fence with a gate is observed in the background.</p> <p>A trail kiosk is located ~50 ft northeast of the observation point with a 3Rs flyer.</p>		


Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	MT49		
Date:	06 November 2019		
Latitude:	32.84731389		
Longitude:	-117.0314278		
Bearing (degrees):	90		
Project Area:	Mission Trails		
Description:	Observation located at North Trailhead of the equestrian staging area. Sign S-088 is located just past the kiosk and is in very good condition. No additional 3Rs information was found on the kiosk.		



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	MT50		
Date:	06 November 2019		
Latitude:	32.84590833		
Longitude:	-117.0304083		
Bearing (degrees):	90		
Project Area:	Mission Trails		
Description:	Observation located at South Trailhead of the equestrian staging area. Sign S-089 is present and in very good condition. No additional 3Rs information was found on the kiosk.		



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	MT51		
Date:	06 November 2019		
Latitude:	32.83958611		
Longitude:	-117.0333111		
Bearing (degrees):	0		
Project Area:	Mission Trails		
Description:	Observation located at the entrance to Kumeyaay Campground. No MEC warning sign or information posted on the kiosk.		



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	MT52		
Date:	06 November 2019		
Latitude:	32.84731389		
Longitude:	-117.0314278		
Bearing (degrees):	90		
Project Area:	Mission Trails		
Description:	Observation located at North Trailhead of the equestrian staging area. Duplicate of MT49. Sign S-088 is located just past the kiosk and is in very good condition. No additional 3Rs information was found on the kiosk.		



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	MT53		
Date:	06 November 2019		
Latitude:	32.84071389		
Longitude:	-117.0344194		
Bearing (degrees):	0		
Project Area:	Mission Trails		
Description:	<p>Observation located in Kumeyaay Campground, at the west entrance to Kumeyaay Nature Trail and amphitheater.</p> <p>No MEC warning sign and the welcome sign has been removed. No erosion noted.</p>		



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	MT54		
Date:	06 November 2019		
Latitude:	32.84054444		
Longitude:	-117.0378333		
Bearing (degrees):	0		
Project Area:	Mission Trails		
Description:	Observation located at the trailhead for Grasslands Crossing Trail off of Father Junipero Serra Trail. Sign S-091 has been added of which the last line of text is covered by a mountain lion sign.		



Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	MT55		
Date:	06 November 2019		
Latitude:	32.83967222		
Longitude:	-117.041875		
Bearing (degrees):	90		
Project Area:	Mission Trails		
Description:	Observation located at the trailhead to Old Mission Dam off Father Junipero Serra Trail. No MEC warning sign or information available on the kiosk.		


Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	MT56		
Date:	06 November 2019		
Latitude:	32.81972222		
Longitude:	-117.0563333		
Bearing (degrees):	0		
Project Area:	Mission Trails		
Description:	Kiosk located at the entrance path to the Visitor Center for Mission Trails Regional Park. No MEC information is provided on the kiosk.		


Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	MT57		
Date:	06 November 2019		
Latitude:	32.81788889		
Longitude:	-117.0600833		
Bearing (degrees):	315		
Project Area:	Mission Trails		
Description:	Observation located at the trailhead for the South Fortuna Mountain Trail and Suycott Wash. No MEC sign and no information provided on the kiosk.		

Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	MT58		
Date:	07 November 2019		
Latitude:	32.8227767		
Longitude:	-117.079185		
Bearing (degrees):	15		
Project Area:	Mission Trails		
Description:	Observation located at the trailhead off of Calle De Vida beneath overhead power lines. Sign S-077 / S-094 is located directly off the sidewalk.		

Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	MT59		
Date:	06 November 2019		
Latitude:	32.82527778		
Longitude:	-117.0744444		
Bearing (degrees):	90		
Project Area:	Mission Trails		
Description:	<p>Located within Mission Trails Regional Park off Clairemont Mesa Blvd, east of wood bridge and at a major trail junction.</p> <p>No MEC warning sign posted, but the 3Rs flyer is present on the kiosk (see S-078). Also, sign S-095 located on the other end of wood bridge.</p>		

Current Five-Year Review		Previous Five-Year Review	
			
Photo/Observation ID:	MT60		
Date:	04 March 2020		
Latitude:	32.83744167		
Longitude:	-117.0768639		
Bearing (degrees):	340		
Project Area:	Mission Trails		
Description:	Observation located at the entrance to the Mission Trails Regional Park from Corte Playa Catalina. No MEC warning sign present and the nearby kiosk has the 3Rs flyer which was found on the ground (see MT61).		

Current Five-Year Review	
	
Photo/Observation ID:	MT61
Date:	04 March 2020
Latitude:	32.838008
Longitude:	-117.076714
Bearing (degrees):	-
Project Area:	Mission Trails
Description:	New observation collected to show the first 3Rs flyer to be observed. Kiosk is located near MT60. The 3Rs flyer was found on the ground.

Current Five-Year Review	
	
Photo/Observation ID:	MT62
Date:	04 March 2020
Latitude:	32.83784
Longitude:	-117.07684
Bearing (degrees):	-
Project Area:	Mission Trails
Description:	New observation collected to document trail closure for a San Diego County Water Authority project located near MT60. Site visitors are directed to the project website for additional information.

Current Five-Year Review



Photo/Observation ID:	MT63
Date:	04 March 2020
Latitude:	32.829704
Longitude:	-117.068642
Bearing (degrees):	n/a
Project Area:	Mission Trails
Description:	New observation collected. Due to safety concerns (i.e., heat, terrain, rattlesnakes), the field team did not visit MT21 through MT31. Panoramic phot collected to provide a view towards those observations locations, which are all located on the saddle of the mountain.

Attachment C17. Interview Records

INTERVIEW RECORD		
Site Name: Tierrasanta and Mission Trails FUDS		
Subject: Five-Year Review		
Type: New Information	Date and Time: 4 May 2020, 12:52 p.m.	
Contact Made By:		
Name: Joni Jorgensen-Risk	Title: Environmental Scientist	Organization: BSX, LLC
Individual Contacted:		
Name: Christopher Anthony	Title: Lieutenant Chris Anthony EOD Detachment Southwest	Organization: Navy EOD
Telephone No: 703.606.1205	Email address: Christopher.j.anthon@navy.mil	
Summary of Conversation		
<p>1) Optional: What is your title? <i>Lieutenant (Lt.) Chris Anthony EOD Detachment Southwest. Lt. Anthony will respond to potential munitions calls associated with Naval housing in Tierrasanta.</i></p> <p>2) How familiar are you with the site and its history (specifically, related to military use and cleanup)? <i>He is not personally familiar with the FUDS, as he was assigned just three months ago and has not had any calls yet. He is aware that there have been reports historically of UXO findings. Back in October 2018 there was an incident where a call was placed to the Sheriff for a Mark 76 practice bomb, spotting charge intact, that was being used for a vegetation planter in a Navy housing unit located in Murphy's Canyon. There was an incident investigation and after action discussions within NAVFAC SW as to why the Sheriff was called and not a military EOD detachment. The Sheriff was called because that is what is provided on the UXO warning signs. NAVFAC SW takes care of policy related to naval housing and naval bases in San Diego. The Sheriff would be quickest to respond because of the resources available to them. However, because the munitions were used by DoD, and they originated with the DoD, the DoD should respond. It makes sense policy-wise that Naval Base San Diego, specifically, Naval Base Coronado (NBC) respond, but given limited resources and delayed response time due to logistics, it makes sense that MCAS Miramar would be the first called for a response action and quick mitigation.</i></p> <p>3) Do you know how to recognize UXO? Do you know what to do if you find UXO? <i>Most definitely.</i></p> <p>4) Are you aware of any munitions findings at the site in the past five years (i.e. since the last five-year review), or have you personally observed any munitions at the site since then? <i>He has not personally observed any munitions at the site, but he was informed by his predecessor of the incident in October 2018. He mentioned that he had spoken with Pete Scarlett, MCAS Miramar EOD, and provided him with a map that was the product of discussions in 2018 with NAVFAC SW related to the October 2018 munition findings at the Navy housing in Murphy Canyon. The map was also provided to BSX by Pete Scarlett. I mentioned that it looked as though the map was reporting findings from past subsurface surveys and investigations, not from potential munitions reporting in the community. He</i></p>		

was not sure as the map was provided to him by his predecessor. The map was a result of NAVFAC discussions with local responders and he suggested that I contact Cristina Ferrari at NAVFAC SW; cristina.ferrari@navy.mil, (619) 532-4143.

- 5) Are you aware of any natural events at the site since the last five-year review that would cause UXO to become unearthed (i.e. fire, coastal action/erosion, frost heave, storm damage, earthquakes)?

No, but he did say that there has been some pretty aggressive rains in the last few months, but he did not hear of any UXO being unearthed.

- 6) Do you know about the public awareness program and institutional controls (i.e. signage) that are in place at the site?

Yes, he is aware of the signs and is also aware of the USACE campaign to make the general public aware of the potential munitions hazards at these formerly used defense site (FUDS). He has not personally seen any signs. He does believe that the signs should list a military EOD unit (MCAS Miramar makes sense due to close proximity to the FUDS) rather than "911". He suggested that USACE would have to get permission from MCAS Miramar to include their number on the sign. He thought having NBC as the backup would be prudent also (that too would require USACE to get permission from NBC).

Would you consider them effective in minimizing contact with munitions by the public?
What can be done to make them more effective?

Yes, based on his understanding.

- 7) Has there been any new development at the site in the last five years (i.e. since the last five-year review)?

Not to his knowledge.

- 8) Have there been any changes in the accessibility to the site?

No, not to his knowledge.

- 9) Do you have any concerns or other comments regarding the site?

No.

- 10) Is there anyone else you think should be contacted regarding the site?

Cristina Ferrari could be a good source of information from NAVFAC SW for Navy policies and details from the 2018 incident in Murphy Canyon.

- 11) We recently photographed a UXO warning sign near the Murphy Canyon Child Development Center and YMCA that included a "Naval Base San Diego" insignia on it. Who or what is the source of this sign?

His understanding is that Lincoln housing places the signs in the Murphy Canyon housing area under the "Naval Base San Diego" command, who technically owns the housing. He thought that Cristina Ferrari might have some insight into the details about the placement of the signs. The sign located near the Murphy Canyon Child Development Center requests that calls be placed to "911". This although the preferred policy discussed in 2018 after the

incident was to include a phone number for MCAS Miramar EOD first and then a phone number for NBC EOD. He suggested that I speak to Christina about what policy was determined after the 2018 incident.

INTERVIEW RECORD		
Site Name: Mission Trails and Tierrasanta FUDS		
Subject: Five-Year Review		
Type: New information	Date and Time: 8 April 2020 left vm 3:00 pm,	
Contact Made By:		
Name: Joni Jorgensen-Risk	Title: Environmental Scientists	Organization: BSX, LLC
Individual Contacted:		
Name: Loren Boerboom	Title: Grounds Maintenance Manager	Organization: City of San Diego Open Space
Telephone No: 619-980-8108	Email address: lboerboom@sandiego.gov	
Summary of Conversation		
<p>1) Optional: What is your title? <i>Grounds Maintenance Manager</i></p> <p>2) How familiar are you with the site and its history (specifically, related to military use and cleanup)? <i>He is very familiar with the site history.</i></p> <p>3) Do you know how to recognize UXO? Do you know what to do if you find UXO? <i>Yes, he knows how to recognize UXO and knows not to touch it and call 911 immediately.</i></p> <p>4) Are you aware of any munitions findings at the site in the past five years (i.e. since the last five-year review), or have you personally observed any munitions at the site since then? <i>No.</i></p> <p>5) Are you aware of any natural events at the site since the last five-year review that would cause UXO to become unearthed (i.e. fire, coastal action/erosion, frost heave, storm damage, earthquakes)? <i>He said they have experienced some very heavy rains, especially last year when the rain total was approximately 20 inches. They have also experienced some heavy rains more recently.</i></p> <p>6) Do you know about the public awareness program and institutional controls (i.e. signage) that are in place at the site? <i>Yes, he is very aware of the program to educate the children and for the children to take the message home and share with the household. He is very aware of the signage as he is responsible for their maintenance and care.</i></p> <p>Would you consider them effective in minimizing contact with munitions by the public? What can be done to make them more effective? <i>Yes, he considers these measures somewhat effective. He also thought additional measures could prove effective, indicating that it has been a number of years since information has been released. He was not aware of when the last fliers were sent out to the community. He had a concern that privately held lands were not swept sufficiently and suggested I speak with Deanna Spehn.</i></p>		

7) Has there been any new development at the site in the last five years (i.e. since the last five-year review)?

No.

8) Have there been any changes in the accessibility to the site?

No.

9) Do you have any concerns or other comments regarding the site?

No.

10) Is there anyone else you think should be contacted regarding the site?

He suggested that we speak to Deanna Spehn because of her vast knowledge and long history with the site.

11) What is the process for inspecting the MEC warning signs in Tierrasanta?

Mr. Boerboom indicated that he oversees the landscape maintenance contractor in Tierrasanta for the City of San Diego. He is also responsible for the sign inventory and maintenance. He indicated his assessment of the signs is an ongoing process and he is responsible for their maintenance, replacement, care and cleaning, as well as maintaining the vegetation in and around the signs. He has an inventory of approximately 20 signs presently. When his inventory starts to run down, he is responsible for reaching out to the U.S. Army Corps of Engineers for funding. We discussed the current condition of some of the signs, as was noted during the site visit associated with this project and that some are covered by vegetation, faded, and one was broken in half. He asked where that sign was located, saying he would get that replaced immediately. A subset of the draft Sign Condition Log showing an image of the sign, the GPS coordinates, and the street location was provided to Mr. Boerboom via email. An offer was also made to provide him with the final full Sign Condition Log when that can be released.

INTERVIEW RECORD		
Site Name: Tierrasanta and Mission Trails FUDS		
Subject: Five-Year Review		
Type: New information	Date and Time: 15 April 2020 1:20 p.m.	
Contact Made By:		
Name: Joni Jorgensen-Risk	Title: Environmental Scientists	Organization: BSX, LLC
Individual Contacted:		
Name: Tom Calhoun	Title: Lead PM for SDUSD Facilities Division	Organization: SDUSD
Telephone No: 619.609.3431	Email address: tcalhoun@sandi.net	
Summary of Conversation		
<p>1) Optional: What is your title? <i>Lead Project Manager for SDUSD Facilities Division</i></p> <p>2) How familiar are you with the site and its history (specifically, related to military use and cleanup)? <i>Fairly familiar with both because SDUSD does have schools in the area. He has been with the district off and on since 1993.</i></p> <p>3) Do you know how to recognize UXO? Do you know what to do if you find UXO? <i>He sure does and immediately mentioned the 3Rs. He and Paul Garcia give regular munitions safety training for SDUSD personnel and contractors.</i></p> <p>4) Are you aware of any munitions findings at the site in the past five years (i.e. since the last five-year review), or have you personally observed any munitions at the site since then? <i>He was not aware of any findings at these two sites; only at Rosedale.</i></p> <p>5) Are you aware of any natural events at the site since the last five-year review that would cause UXO to become unearthed (i.e. fire, coastal action/erosion, frost heave, storm damage, earthquakes)? <i>He said they have had some heavy rains, but not of biblical proportions.</i></p> <p>6) Do you know about the public awareness program and institutional controls (i.e. signage) that are in place at the site? <i>Yes, he is very familiar with the program.</i></p> <p>Would you consider them effective in minimizing contact with munitions by the public? What can be done to make them more effective? <i>He indicated the program was a good one and very effective, especially at MTRP where they have the information center with actual displays and training. He added the schools are made aware every year of the potential hazards present. He feels the amount of resources spent on the program is commensurate with its effectiveness.</i></p>		

- 7) Has there been any new development at the site in the last five years (i.e. since the last five-year review)?

SDUSD has done work at all schools over the last 5 years ranging from whole site modernizations to moderate renovations and have added mobile classrooms throughout.

- 8) Have there been any changes in the accessibility to the site?

Any accessibility changes that have been made were related to the Americans with Disabilities Act (ADA) access requirements. He said the ADA codes are always improving and code enforcement require upgrades to the schools as ADA modifies requirements. He added that any ADA accessibility changes completed at the schools should be considered minor.

- 9) Do you have any concerns or other comments regarding the site?

No.

- 10) Is there anyone else you think should be contacted regarding the site?

Paul Garcia may know who does the awareness training for the SDUSD schoolchildren.

- 11) Please explain the SDUSD munitions safety program and your role in it.

Mr. Calhoun assists Paul Garcia with the SDUSD FUDS program training using a safety training template that they have expanded on. They schedule the training, conduct the training, provide briefings using a PowerPoint presentation, conduct tailgate safety briefings, and instruct personnel on the 3Rs and munitions safety awareness. They tell personnel to call 911 or MAST, or their supervisor and move away from the item (at least the length of one football field). The program is very robust and is provided as annual training for all pertinent divisions (i.e., heavy equipment, electrical, plumbing, etc.) and then tailgate sessions are held prior to initiating any work on the site. He added too that they have signage that warns of the hazards in big red letters and that this is a FUDS.

He thinks training still takes place for the schoolchildren but could not say for certain. He suggested Paul Garcia might know. He did say that the children aren't allowed to dig in the soil. If any gardening takes place with the children, above ground garden planters are used for that. He added that children are not put in harm's way. If children are around when any soil disturbance is to take place, they stop operations and wait for the children to leave. They schedule soil disturbance during school breaks or shutdowns.

INTERVIEW RECORD		
Site Name: Tierrasanta and Missions Trails FUDS		
Subject: Five-Year Review		
Type: New information	Date and Time: 20 April 2020, 9:00 am	
Contact Made By:		
Name: Joni Jorgensen-Risk	Title: Environmental Scientists	Organization: BSX, LLC
Individual Contacted:		
Name: Kristin Camper	Title: Community Plans and Liaison Officer	Organization: MCAS Miramar
Telephone No: (619) 212-2676	Email address: Kristin.camper@usmc.mil	
Summary of Conversation		
<p>1) Optional: What is your title? <i>Community Plans and Liaison Officer</i></p> <p>2) How familiar are you with the site and its history (specifically, related to military use and cleanup)? <i>She is aware of the history and the removal actions.</i></p> <p>3) Do you know how to recognize UXO? Do you know what to do if you find UXO? <i>Yes, she knows to mark the area, don't touch the suspicious item, and call authorities.</i></p> <p>4) Are you aware of any munitions findings at the site in the past five years (i.e. since the last five-year review), or have you personally observed any munitions at the site since then? <i>She is not personally aware of any munitions findings but said that MCAS Miramar EOD would most certainly know of any findings. She suggested that she would be surprised if there had been no findings over the last five years.</i></p> <p>5) Are you aware of any natural events at the site since the last five-year review that would cause UXO to become unearthed (i.e. fire, coastal action/erosion, frost heave, storm damage, earthquakes)? <i>Ms. Camper said there have been some pretty heavy rains over the last five years and a few brush fires and added that most of the brush fires are along the freeways.</i></p> <p>6) Do you know about the public awareness program and institutional controls (i.e. signage) that are in place at the site? <i>Yes.</i></p> <p>Would you consider them effective in minimizing contact with munitions by the public? What can be done to make them more effective? <i>She thinks they are effective and mentioned that when she talks to local community groups in the area, they are very sensitive to the potential for munitions at the sites. She did not feel that more needed to be done to be more effective.</i></p>		

- 7) Has there been any new development at the site in the last five years (i.e. since the last five-year review)?

Ms. Camper said there was some new development near MAST and Santee. She indicated the development was called Weston and included a blend of single family homes and townhouses and has been two years in development. She thought they must be close to wrapping up the multi-phase development.

- 8) Have there been any changes in the accessibility to the site?

No.

- 9) Do you have any concerns or other comments regarding the site?

No.

- 10) Is there anyone else you think should be contacted regarding the site?

Yes, MCAC Miramar EOD. She said she would be forwarding the contact information for two EOD personnel and they should be able to provide the details regarding any munitions findings.

INTERVIEW RECORD		
Site Name: Mission Trails and Tierrasanta FUDS		
Subject: Five-Year Review		
Type: New information	Date and Time: 9 April 2020 10:00 a.m.	
Contact Made By:		
Name: Joni Jorgensen-Risk	Title: Environmental Scientist	Organization: BSX, LLC
Individual Contacted:		
Name: Paul Garcia	Title: Civil/Environmental Coordinator	Organization: SDUSD
Telephone No: 530-219-8935 (cell)	Email address: Pgarcia-craivanu@sandi.net	
Summary of Conversation		
<p>1) Optional: What is your title? <i>Civil/Environmental Coordinator for SDUSD</i></p> <p>2) How familiar are you with the site and its history (specifically, related to military use and cleanup)? <i>He is not very familiar with Mission Trails, but is definitely with Tierrasanta because of the schools. He is very familiar with the military history and the more recent history. He actually grew up in San Diego, left for college and returned in 2015.</i></p> <p>3) Do you know how to recognize UXO? Do you know what to do if you find UXO? <i>Yes, he has used the 3 R's munitions guidance and develops Munitions Response Plans for the school district as needed. He also gives the briefings to contractors and internal personnel, as needed.</i></p> <p>4) Are you aware of any munitions findings at the site in the past five years (i.e. since the last five-year review), or have you personally observed any munitions at the site since then? <i>No, not at either Tierrasanta or Mission Trails.</i></p> <p>5) Are you aware of any natural events at the site since the last five-year review that would cause UXO to become unearthed (i.e. fire, coastal action/erosion, frost heave, storm damage, earthquakes)? <i>Not to his knowledge.</i></p> <p>6) Do you know about the public awareness program and institutional controls (i.e. signage) that are in place at the site? <i>Yes, he is very familiar with the public awareness program and the signage at the sites.</i></p> <p>7) Would you consider them effective in minimizing contact with munitions by the public? What can be done to make them more effective? <i>Yes, they seem to be effective. As an employee of a public agency he sees that SDUSD has expanded on munitions awareness programs for internal personnel as well as contractors by providing briefings prior to any construction activity. He couldn't think of what more could be done.</i></p>		

- 8) Has there been any new development at the site in the last five years (i.e. since the last five-year review)?

Yes, there has been some school modernization efforts that include minor excavations at some of the schools and a 15-foot storm drain trench installed at Serra High. They have constructed some new buildings and an elevator shaft at one of the schools. All without any observations.

- 9) Have there been any changes in the accessibility to the site?

Related to the schools, there have been no changes.

- 10) Do you have any concerns or other comments regarding the site?

He thinks SDUSD has a good program in place and they give briefings as needed to be proactive. Much of this proactivity was triggered by the incident at Lafayette (in Rosedale) last year.

- 11) Is there anyone else you think should be contacted regarding the site?

He is the POC for the SDUSD for environmental concerns (including UXO), working directly with all division directors within SDUSD to keep them informed.

Follow-up call placed to Mr. Garcia on 15 April 2020 at 4:00 p.m. at the suggestion of Tom Calhoun.

I asked Paul if he knew who was providing the munitions safety awareness training to the schoolchildren, as I understood that the Fire Department no longer does it. He said he did not know and suggested I call each of the school principals and speak to each individually. He offered to put together a list of those principals for me but could not have it until the 24th as he is working on the computer distribution right now. I agreed that would be fine. The list of principals was submitted in early May and BSX has reached out to each principal; several have responded.

INTERVIEW RECORD		
Site Name: Tierrasanta and Mission Trails FUDS		
Subject: Five-Year Review		
Type: New Information	Date and Time: 29 April 2020, 4:10 p.m.	
Contact Made By:		
Name: Joni Jorgensen-Risk	Title: Environmental Scientist	Organization: BSX, LLC
Individual Contacted:		
Name: Greg Hampton	Title: Sheriff Sargent Bomb Squad Command	Organization: San Diego Sheriff
Telephone No: 619.550.8158	Email address: greg.hampton@sdsheiff.org	
Summary of Conversation		
<p>1) Optional: What is your title? <i>Sheriff Sargent Bomb Squad Command</i></p> <p>2) How familiar are you with the site and its history (specifically, related to military use and cleanup)? <i>He indicated he was a little familiar, but both sites are in the City of San Diego and they don't respond to most items in the city. He usually responds to calls in the desert. .</i></p> <p>3) Do you know how to recognize UXO? Do you know what to do if you find UXO? <i>Yes he does, but sometimes they do get some curve balls and they have to reach out to others to identify items.</i></p> <p>4) Are you aware of any munitions findings at the site in the past five years (i.e. since the last five-year review), or have you personally observed any munitions at the site since then? <i>The only finding that Sargent Hampton could recall was when someone found something either at Mission Trails or Tierrasanta and placed a call to him outside of the City of San Diego. He did not recall what the item was or if it was live and he said there was no report on it.</i></p> <p>5) Are you aware of any natural events at the site since the last five-year review that would cause UXO to become unearthed (i.e. fire, coastal action/erosion, frost heave, storm damage, earthquakes)? <i>He was not aware of any natural events but suggested heavy rains could certainly expose UXO at the FUDS as they do in the desert.</i></p> <p>6) Do you know about the public awareness program and institutional controls (i.e. signage) that are in place at the site? <i>Sargent Hampton is slightly aware of the program and the signs.</i></p> <p>Would you consider them effective in minimizing contact with munitions by the public? What can be done to make them more effective? <i>He did not have enough familiarity with the program or signs to really have an opinion.</i></p>		

7) Has there been any new development at the site in the last five years (i.e. since the last five-year review)?

No.

8) Have there been any changes in the accessibility to the site?

Not that he is aware of.

9) Do you have any concerns or other comments regarding the site?

Sargent Hampton expressed a concern that everyone needs to know the potential hazards at the FUDS.

10) Is there anyone else you think should be contacted regarding the site?

Jeff Ring, City of San Diego Bomb Squad Commander (SDFD/MAST) cell 858.583.2320. Jeff is Greg's counterpart at the City of San Diego and he would have much more information.

INTERVIEW RECORD		
Site Name: Tierrasanta and Mission Trails FUDS		
Subject: Five-Year Review		
Type: New information	Date and Time: 14 April 2020 4:05p.m.	
Contact Made By:		
Name: Joni Jorgensen-Risk	Title: Environmental Scientist	Organization: BSX, LLC
Individual Contacted:		
Name: Matt Spicer	Title: Captain and Bomb Tech	Organization: Metro Arson Strike Team (MAST)
Telephone No: 619.236.6815	Email address: mspicer@sandiego.gov	
Summary of Conversation		
<p>1) Optional: What is your title? <i>Captain and Bomb Tech</i></p> <p>2) How familiar are you with the site and its history (specifically, related to military use and cleanup)? <i>He is familiar with the site history and removal actions.</i></p> <p>3) Do you know how to recognize UXO? Do you know what to do if you find UXO? <i>Most certainly, it's in his job description. Their policy is to call EOD.</i></p> <p>4) Are you aware of any munitions findings at the site in the past five years (i.e. since the last five-year review), or have you personally observed any munitions at the site since then? <i>Yes, and he has personally been on some of the calls. He will submit a request for a database query once I can provide him with the appropriate zip codes for the two FUDS sites. He will have the query report sent directly to me. Post-call note: The zip codes were sent to Matt at 4:29 pm and included 92124 for Tierrasanta and 92119 for Mission Trails. The database query was provided by Captain Spicer and expanded on based on details from MCAS Miramar EOD.</i></p> <p>5) Are you aware of any natural events at the site since the last five-year review that would cause UXO to become unearthed (i.e. fire, coastal action/erosion, frost heave, storm damage, earthquakes)? <i>They have had quite a bit of rain and that is usually when they get calls. He said the last call was on a service road under SDG&E transmission line during grading activities.</i></p> <p>6) Do you know about the public awareness program and institutional controls (i.e. signage) that are in place at the site? <i>He is aware of the signage.</i></p> <p>Would you consider them effective in minimizing contact with munitions by the public? What can be done to make them more effective? <i>Not applicable.</i></p>		

7) Has there been any new development at the site in the last five years (i.e. since the last five-year review)?

Not that he is aware of.

8) Have there been any changes in the accessibility to the site?

Not that he is aware of.

9) Do you have any concerns or other comments regarding the site?

No.

10) Is there anyone else you think should be contacted regarding the site?

No.

INTERVIEW RECORD		
Site Name: Tierrasanta and Mission Trails FUDS		
Subject: New Information		
Type: Five-Year Review	Date and Time: 7 May 2020, 1:20 p.m.	
Contact Made By:		
Name: Joni Jorgensen-Risk	Title: Environmental Scientist	Organization: BSX, LLC
Individual Contacted:		
Name: Jeff Ring	Title: Fire Captain and Bomb Squad Commander	Organization: San Diego Fire Rescue Dept.
Telephone No: 858-583-2320	Address:	
Summary of Conversation		
<p>1) Optional: What is your title? <i>Fire Captain and Bomb Squad Commander</i></p> <p>2) How familiar are you with the site and its history (specifically, related to military use and cleanup)? <i>Very familiar.</i></p> <p>3) Do you know how to recognize UXO? Do you know what to do if you find UXO? <i>Yes ma'am.</i></p> <p>4) Are you aware of any munitions findings at the site in the past five years (i.e. since the last five-year review), or have you personally observed any munitions at the site since then? <i>Yes, there have been findings over the past five years and the database query that Matt Spicer provided would include all of those calls.</i></p> <p>5) Are you aware of any natural events at the site since the last five-year review that would cause UXO to become unearthed (i.e. fire, coastal action/erosion, frost heave, storm damage, earthquakes)? <i>No, nothing significant.</i></p> <p>6) Do you know about the public awareness program and institutional controls (i.e. signage) that are in place at the site? <i>Yes.</i></p> <p>Would you consider them effective in minimizing contact with munitions by the public? What can be done to make them more effective? <i>Yes, the calls are definitely decreasing and of those calls that they have gotten, nothing has been live. He added that the squad is not overtaxed with the few calls they do get.</i></p> <p>7) Has there been any new development at the site in the last five years (i.e. since the last five-year review)? <i>Not that he is aware of.</i></p>		

8) Have there been any changes in the accessibility to the site?

Not that he is aware of.

9) Historically, the Fire Department would provide annual presentations to the schools and apparently that is no longer happening. Do you know who is providing munitions awareness training to the school children?

No, he did not. He did say that every few years they do provide training for city personnel (i.e., landfill). He also added that the Fire Rescue Department would never say no to providing presentations, they are just not asked to do them.

10) Do you have any concerns or other comments regarding the site?

No.

11) Is there anyone else you think should be contacted regarding the site?

No. I identified for Mr. Ring the people that BSX has made contact with and he thought that we had very good coverage.

INTERVIEW RECORD		
Site Name: Tierrasanta and Mission Trails FUDS		
Subject: Five-Year Review		
Type: New information	Date and Time: 14 April 2020 1:10 p.m.	
Contact Made By:		
Name: Joni Jorgensen-Risk	Title: Environmental Scientist	Organization: BSX, LLC
Individual Contacted:		
Name: James Sanders	Title: Retired	Organization: Friends of Tierrasanta Canyons
Telephone No: 858.209.9082	Email address: jamas2003@gmail.com	
Summary of Conversation		
<p>1) Optional: What is your title? <i>Retired</i></p> <p>2) How familiar are you with the site and its history (specifically, related to military use and cleanup)? <i>He was familiar with the military history and knew that the site had been used for military training purposes. He was also aware that some removal actions had taken place.</i></p> <p>3) Do you know how to recognize UXO? Do you know what to do if you find UXO? <i>Yes, he knew that if he were to find a rusty piece of metal out on the trails to leave it alone and call Parks and Rec. I suggested a more appropriate call would be to the Fire Department and he added that Parks and Rec would contact the Fire Department immediately.</i></p> <p>4) Are you aware of any munitions findings at the site in the past five years (i.e. since the last five-year review), or have you personally observed any munitions at the site since then? <i>He was not and said the last time he had heard of any findings was a couple of decades ago.</i></p> <p>5) Are you aware of any natural events at the site since the last five-year review that would cause UXO to become unearthed (i.e. fire, coastal action/erosion, frost heave, storm damage, earthquakes)? <i>He indicated that the region has had some pretty heavy rains and added that most of the native, untouched areas in the canyons are not impacted by erosion.</i></p> <p>6) Do you know about the public awareness program and institutional controls (i.e. signage) that are in place at the site? <i>He said there are warning signs distributed throughout the canyons and at MTRP. He also added that the Tierrasanta Times will occasionally run an informational article.</i></p> <p>Would you consider them effective in minimizing contact with munitions by the public? What can be done to make them more effective? <i>He said they are definitely providing the public with warnings and they seem to be effective.</i></p>		

- 7) Has there been any new development at the site in the last five years (i.e. since the last five-year review)?

A couple of years ago there was a very small housing development at the end of Tierrasanta Blvd. (far east end) where they cut into hillside. These were very small homes that he considered more like condos. He was not aware of any findings at that time. He said they reworked the hiking trail a bit at that time.

- 8) Have there been any changes in the accessibility to the site?

There has been a push in the works to reduce accessibility for years, starting with the changing of the rules in the mid-90s. Apparently, many of the trails in place at that time were not approved and were subsequently closed. Over the last 5 or 6 years, the community has paid for studies of those trails and petitioned the community leaders to open up the trails. Essentially, they are stuck on the approval process within a bureaucracy of 13 government agencies. The public still has access to the trails and they just walk around the closed signs. Some of the trails are storm drain access roads and they remain open.

- 9) Do you have any concerns or other comments regarding the site?

He asked how much longer the signs might be present, to which I replied they were there in perpetuity.

- 10) Is there anyone else you think should be contacted regarding the site?

No.

INTERVIEW RECORD		
Site Name: Mission Trails and Tierrasanta FUDS		
Subject: Five-Year Review		
Type: New information	Date and Time: 1 May 2020, 7:00 a.m.	
Contact Made By:		
Name: Joni Jorgensen-Risk	Title: Environmental Scientist	Organization: BSX, LLC
Individual Contacted:		
Name: Pete "Misfire" Scarlett, EOD	Title: Officer in Charge MCAS Miramar	Organization: MCAS Miramar, EOD
Telephone No: 760.707.7889 iPhone; 858.307.7398/7699/7801 Commercial		Email address: peter.scarlett@usmc.mil
Summary of Conversation		
<p>1) Optional: What is your title? <i>Officer in Charge MCAS Miramar</i></p> <p>2) How familiar are you with the site and its history (specifically, related to military use and cleanup)? <i>He has been briefed and he and the EOD team have responded when asked to in the last year. He has been stationed at MCAS Miramar just about one year and he thought they responded 1 or 2 times in that one year's time.</i></p> <p>3) Do you know how to recognize UXO? Do you know what to do if you find UXO? <i>Yes.</i></p> <p>4) Are you aware of any munitions findings at the site in the past five years (i.e. since the last five-year review), or have you personally observed any munitions at the site since then? <i>Yes.</i></p> <p>5) Are you aware of any natural events at the site since the last five-year review that would cause UXO to become unearthed (i.e. fire, coastal action/erosion, frost heave, storm damage, earthquakes)? <i>He knows that heavy rains have uncovered UXO.</i></p> <p>6) Do you know about the public awareness program and institutional controls (i.e. signage) that are in place at the site? <i>He is not familiar with the program or the signs, but he said that Chris Anthony, Navy EOD, is very familiar with the program and the signs. In fact, Chris Anthony wants to see those signs updated.</i></p> <p>Would you consider them effective in minimizing contact with munitions by the public? What can be done to make them more effective? <i>He thought Chris Anthony would be more helpful with regard to this question. But he does feel that it would be beneficial if some radio or TV spots were provided to the public as more people move into the area. He thought it would be a good investment in TV and radio spots to get the word out about the potential hazards present. A lot of the calls that they are</i></p>		

getting are from homeowners and in particular, a mobile home park where the residents are repeatedly told not to dig, but they still do.

- 7) Has there been any new development at the site in the last five years (i.e. since the last five-year review)?

Not that he is aware.

- 8) Have there been any changes in the accessibility to the site?

Not that he is aware.

- 9) Do you have any concerns or other comments regarding the site?

He wanted to make sure that the public is aware of the problems and potential hazards, and who to call. This is an EOD centric problem as they are the parties responsible for making the situation safe. Local bomb squads can oftentimes make the situation safe, but it rolls back to the military more often.

- 10) Is there anyone else you think should be contacted regarding the site?

Christopher Anthony, Navy EOD, 703-606-1205, email Christopher.j.anthon@navy.mil. Navy EOD will be the first to respond on Lincoln Navy housing findings. There is Lincoln Navy housing within Tierrasanta.

Note: Chris Anthony provided Pete with some mapped data that Pete forwarded to BSX. The mapped data appear to be UXO findings during surface sweeps; these may not be new findings. The MCAS Miramar EOD database can't link up to the MAST database. Pete will build upon the original MAST database query that BSX provided to him. MCAS Miramar EOD is not always called, but what he will do is add a column that will include any additional details for the MAST calls from his reports on file. He will also check any other calls that may not have been included in the MAST database query to see if any additional findings were reported to MCAS Miramar EOD that did not go through MAST. He will add any that he thinks might be included in our two FUDS.

If MAST is the first to respond and they feel the item is safe to move, they will take it to shop and then call MCAS Miramar EOD for disposition at a later date.

Pete was able to update the MAST database query with additional details on three of the munitions findings. No additional findings were found that did not go through MAST.

INTERVIEW RECORD		
Site Name: Tierrasanta and Mission Trails FUDS		
Subject: Five-Year Review		
Type:	Date and Time: 14 April 2020	
Contact Made By:		
Name: Joni Jorgensen-Risk	Title: Environmental Scientist	Organization: BSX, LLC
Individual Contacted:		
Name: Deanna Spehn	Title: Co-Publisher and Editor	Organization: Tierra Times (newspaper)
Telephone No: 619-368-4477	Address: 10371 Matador Court San Diego CA 92124	
Summary of Conversation		
<p>1) Optional: What is your title? Past President Tierrasanta Community Council & Planning Group, also Past Vice President and Past Secretary and longtime member. Co-Publisher and Editor of Tierra Times newspaper delivered free to all homes and businesses in Tierrasanta community (10,250 approximately)</p> <p>2) How familiar are you with the site and its history (specifically, related to military use and cleanup)? Since the two 8 year old boys died in 1983, I have been the official point of contact for the local planning group/civic organization on the unexploded ordnance issue, representing the Tierrasanta Community Council & Planning Group in meetings with the Army Corps of Engineers, City of San Diego, State of California, and in meetings with members of Congress representing our community. This includes both the Tierrasanta and Mission Trails ordnance removal efforts.</p> <p>3) Do you know how to recognize UXO? Do you know what to do if you find UXO? I helped design the signs that have been installed in the open space areas of Tierrasanta explaining what to do if you encounter a piece of unexploded ordnance. I have written all the articles for the Tierra Times since 1983 on what happened, why it happened, what to do if you find a piece of unexploded ordnance, etc. Don't touch it, mark its location, call 9-1-1 and wait for the Fire Department to respond.</p> <p>4) Are you aware of any munitions findings at the site in the past five years (i.e. since the last five-year review), or have you personally observed any munitions at the site since then? Since 1983 despite repeated requests and despite consistent efforts in the 5-year reports the City of San Diego, the Fire Department and the Army Corps of Engineers have not alerted the Tierrasanta community about any pieces of unexploded ordnance that have been found. I usually find out from something on TV or (very rarely) in the San Diego Union-Tribune. During each 5-year review for both Tierrasanta and the Mission Trails ordnance sweeps I make the same request: tell the community when a piece is found. Hearing what was found only during the 5-year reviews is unsatisfactory.</p> <p>5) Are you aware of any natural events at the site since the last five-year review that would cause UXO to become unearthed (i.e. fire, coastal action/erosion, frost heave, storm</p>		

damage, earthquakes)?

Wildfires in Mission Trails in the last 5 years. Wildfires along the I-15 freeway have scorched some areas. Heavy rains at times which lead to erosion in some locations in the community.

- 6) Do you know about the public awareness program and institutional controls (i.e. signage) that are in place at the site?

I helped design them and wrote the statement that is printed on the signs. I chair the Tierrasanta Open Space Committee and all the signs are in the official city-owned open space that the Committee makes recommendations on regarding maintenance and management of the open space area – approximately 1000 acres. The committee is advisory to the Open Space Division of the City of San Diego's Parks and Recreation Department.

Would you consider them effective in minimizing contact with munitions by the public? What can be done to make them more effective?

They are effective. We replace them as needed. They are not subject to vandalism, etc.

- 7) Has there been any new development at the site in the last five years (i.e. since the last five-year review)?

No

- 8) Have there been any changes in the accessibility to the site?

No significant changes. There are many natural and man-made paths in the open space and it is a robust wildlife area with mountain lions, deer, coyotes, snakes, raccoons, foxes, rabbits, field mice, etc.

- 9) Do you have any concerns or other comments regarding the site?

Text

- 10) Is there anyone else you think should be contacted regarding the site?

Text.

- 11) During our phone conversation, you reported that there have been no UXO reported. Were there any observations made when they removed the palm trees from Rueda Canyon?

There were no official observations made – no concerted effort to look for unexploded ordnance. There were several workers involved in the tree removal and they had been reminded about the potential to find unexploded ordnance in the area and cautioned about what to do. That is what happens whenever the city authorizes work in the Tierrasanta or Mission Trails open space. The full time Inspector for the Tierrasanta Open Space and Maintenance Assessment District is charged with advising workers about the potential open space in the Maintenance Assessment District.

INTERVIEW RECORD		
Site Name: Tierrasanta and Mission Trails FUDS		
Subject: Five-Year Review		
Type: New information	Date and Time: 9 April 2020, 9:00 am	
Contact Made By:		
Name: Joni Jorgensen-Risk	Title: Environmental Scientist	Organization: BSX, LLC
Individual Contacted:		
Name: Jan Whitacre	Title: past-President	Organization: Tierrasanta Community Council
Telephone No: 858-335-6264	Address:	
Summary of Conversation		
<p>1) Optional: What is your title? <i>Past-president of the Tierrasanta Community Council. His term was up at the end of March and they have not gathered to elect a new president because of stay-at-home orders. He thought they may gather in May for the election.</i></p> <p>2) How familiar are you with the site and its history (specifically, related to military use and cleanup)? <i>Jan was present at the TPP meeting for this project and has lived in Tierrasanta since 1980. He was in Tierrasanta when the two boys were killed and knows the parents. He has a long-standing history in Tierrasanta and he is familiar with historical activities.</i></p> <p>3) Do you know how to recognize UXO? Do you know what to do if you find UXO? <i>Like everyone in Tierrasanta, he knows how to recognize UXO and to not touch it and call authorities (usually the Fire Department). He also said that realtors are required to notify potential buyers of the potential hazards associated with UXO. He said that the schools continue to teach children of the potential hazards present. The Fire Department use to do the teaching, but he does not believe they do it any longer. He did not know who did the teaching in the schools.</i></p> <p>4) Are you aware of any munitions findings at the site in the past five years (i.e. since the last five-year review), or have you personally observed any munitions at the site since then? <i>No, he is not aware of any. He did say that he had an inquiry from a citizen of something suspicious in the canyon, which he checked out and said it was only a piece of plastic. I asked if any ordnance was exposed during the removal of the palm trees from Rueda Canyon and he said he was not aware of any and he was involved in the meetings for that activity.</i></p> <p>5) Are you aware of any natural events at the site since the last five-year review that would cause UXO to become unearthed (i.e. fire, coastal action/erosion, frost heave, storm damage, earthquakes)? <i>They have had some significant rains in the past that have caused erosion on all the trails.</i></p>		

- 6) Do you know about the public awareness program and institutional controls (i.e. signage) that are in place at the site?

He is aware of signs at trail entrances and he noticed that many have been replaced. He is also aware that the MTRP conducts public education efforts at their facility.

Would you consider them effective in minimizing contact with munitions by the public? What can be done to make them more effective?

He said that you don't really see a lot of kids in the canyons and woods playing as they once did (he thought that they were likely on their electronic devices). He did feel that the efforts appear to be helpful. I asked if he thought more could be done and he mentioned that he did not know how hard the realtors are working to deliver the message and thought more might be needed in this area. He said it is the responsibility of the parents to stress to their children the need to avoid any suspicious items. He said that he thought Deanna Spehn was still publishing a notice in the Tierra Times as a simple reminder to the community to be safe. He also thought that the Tierrasanta Community Council may have posted simple reminders on their website but wasn't sure if they still did. Apparently, the website does not get a great deal of traffic.

- 7) Has there been any new development at the site in the last five years (i.e. since the last five-year review)?

Yes, San Diego County is currently working on the construction of a new water project and there is increased truck traffic. They are currently clearing brush. He was certain that the county is familiar with the need for protective measures and the potential presence of UXO.

- 8) Have there been any changes in the accessibility to the site?

Due to the coronavirus, the park is closed, and no one is allowed in. Prior to the closure there was no increase in accessibility leading up to the shut-down. He was not aware of any new trails being developed in the park. The only other change was a mapping change in the northeast corner of park associated with Santee.

- 9) Do you have any concerns or other comments regarding the site?

He thinks it's great that the government is still involved in reviewing the safety concerns and he is much in favor of doing something on the ground every 5 years (as is being done).

- 10) Is there anyone else you think should be contacted regarding the site?

He suggested that the park is heavily used by hikers and mountain bikers that really know all areas of the park. He thought it might be a good idea to reach out to local hiking and mountain biking organizations to see if we could share information. Mr. Whitacre later texted me with a suggestion to contact James and Maria Sanders of Friends of Tierrasanta Canyons at jamas2003@gmail.com.

Attachment C18. Expanded MAST database query

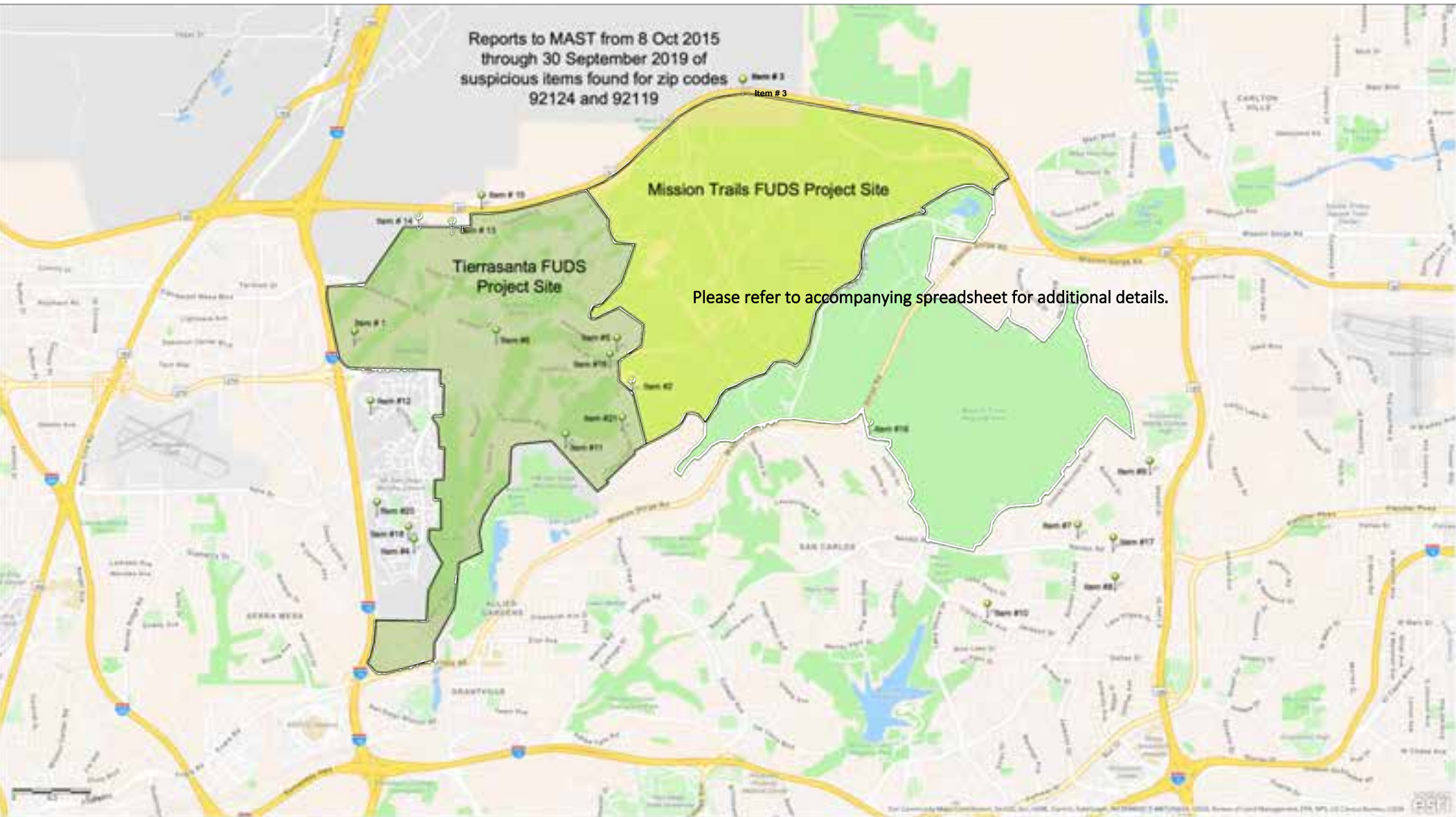
[illegible]

Reports to MAST from 8 Oct 2015
through 30 September 2019 of
suspicious items found for zip codes
92124 and 92119

Mission Trails FUDS Project Site

Tierrasanta FUDS
Project Site


Please refer to accompanying spreadsheet for additional details.




APPENDIX D
Sign Condition Log

**Note: See Appendix C, Attachment C2 for
additional photos as referenced within this log.**

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-001	32.80206	-117.10339	No photo.	Sign location could not be accessed due to fencing to determine condition; See also TS17.	Determine condition of sign if location can be accessed during future LUC audit.


Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-002	32.81856	-117.10086	<p>TS02 S-002.jpg</p>  <p>TS85 S-002.jpg</p> 	<p>Located at the north end of Roadrunner Park (near school fence near trees and brush); See also TS02 and TS85.</p> <p>The sign is bent but legible and visible.</p>	None.



Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-003	32.82244	-117.08456	TS03 S-003 S-069.jpg 	Located on Rueda Drive, between Temprano and Zorita Court; See also TS03. Duplicate of S-069. Sign is in good condition.	None.


Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-004	32.81814	-117.09153	TS04 S-004.jpg 	On Tierrasanta Blvd, west of Tambor Court; See also TS04. Sign is in good condition.	None.

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-005	32.81142	-117.08297	No photo.	Located at the west end of Tierrasanta Blvd, along a trail. No sign is present.	Add a sign at the trailhead.

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-006	32.81611	-117.08403	S-006.jpg 	Located on Pediente Ct. at a trailhead. Description of project area provided on sign is fading.	Replace sign.

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-007	32.81578	-117.08697	TS42 S-007.jpg 	Located on the north side of Tierrasanta Blvd between Tambor Rd and Colina Dorado Dr, behind a San Diego Gas & Electric (SDG&E) gate. Sign is in a visible location. It has been graffitied but is still legible.	None.

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-008	32.82083	-117.07706	<p>MT42 S-008 S-093.jpg</p>  <p>S-008 S-093.jpg</p> 	<p>Located inside of the south gate to Mission Trails Regional Park at Colina Dorado Drive; See also MT42 and TS36.</p> <p>Description of project area is still legible on the sign, but the bottom yellow portion, which contains instructions if MEC item is found, is completely faded. The sign is not in a very visible location. Duplicate of S-093.</p>	<p>Recommend replacing sign and moving to a more visible location, such as MT44.</p>

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-009	32.82897	-117.07653	S-009 S-096.jpg 	Located just outside of a fenced area, near a trailhead. Sign is legible and in a very visible location. Duplicate of S-096.	None.

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-010	32.83391	-117.07960	No photo.	Located at the end of Lugar Playa Catalina. No sign is present, but wood post observed on the ground.	Consider adding a sign at location or S-011.

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-011	32.83384	-117.07955	No photo.	Located at the end of Lugar Playa Catalina, at the top of a vegetated sloped hillside. No sign is present.	Consider adding a sign at location or S-010.

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-012	32.83874	-117.07993	No photo.	<p>Located at the end of Corte Playa Las Brisas.</p> <p>Sign is showing signs of wear but is still legible; sign is in a very visible location.</p>	None.

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-013	32.84106	-117.08483	No photo.	<p>Located off of San Diego Aqueduct Service Road, leads to Portobelo entrance to Mission Trails Regional Park.</p> <p>No sign is present.</p>	Consider adding a sign near the eastern end of the San Diego Aqueduct Service Road (32.841930, -117.82399).

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-014	32.83731	-117.08450	S-014.jpg 	Located at trailhead, accessed from Avenida Playa Cancun. Sign is legible and is in a very visible location. The bottom yellow portion of sign, which contains instructions if MEC item is found, is beginning to peel.	Replace sign.

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-015	32.82431	-117.07917	No photo.	Located on the east side of Rueda Drive, between Via Promesa and Palabra Circle. Sign is legible but partially obscured by vegetation.	Trim vegetation around the sign.

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-016	32.82414	-117.08007	S-016.jpg 	Located off of Rueda Drive, opposite Palabra Circle, at the trailhead for Seda Nature Trail. Sign is in good condition and legible.	None.

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-017	32.82261	-117.07928	No photo.	Located on the south side of Calle de Vida at the entrance to gated service road/trailhead, under powerlines; across the street from MT58 and S-077/S-094. No sign present. Site user stated he has never seen a sign at the location.	Consider adding a sign at this location; leads into canyon trail system.

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-018	32.83664	-117.08397	S-018a.jpg 	Located approximately 60 feet off the trail, accessed from Via Playa De Cortes. Sign is difficult to read due to worn condition and location.	Replace sign and relocate to trailhead.
			S-018b.jpg 		

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-019	32.83331	-117.08558	No photo.	<p>Located off of Via Valarta, next to the Chinese Community Church (opened in 2006 according to staff member).</p> <p>No sign observed on property or outside fenced area. Area outside of fencing slopes down into canyon.</p>	None.

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-020	32.83033	-117.08272	No photo.	<p>Located on the east side of Via Valarta.</p> <p>No sign is present.</p>	None.

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-021	32.82987	-117.08331	S-021a.jpg 	<p>Sign is near trailhead for East Shephard Canyon, located on the west side of Via Valarta.</p> <p>Project area description is legible but the bottom yellow portion, which contains instructions if MEC item is found, is beginning to peel. Coordinates have been updated with actual location of sign (~100 feet from coordinates provided).</p>	Replace sign.



Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-022	32.82583	-117.08228	TS09 S-022.jpg 	Located on the west side of Seda Drive, between Clairemont Mesa Blvd and Calle de Vida; See also TS09 and TS10. Sign is legible and in good condition.	None.
			TS10 S-022.jpg 		

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-023	32.82564	-117.08206	TS11 S-023.jpg 	Located on the east side of Seda Drive, between Clairemont Mesa Blvd and Calle de Vida; see also TS11. Sign is legible and in good condition.	None.



Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-024	32.82664	-117.08645	S-024.jpg 	Located off of Calle de Vida near home at 4474 Calle de Vida, on a trail. Sign is legible but starting to show signs of age.	Monitor condition of sign; may need to be replaced prior to next review.

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-025	32.82817	-117.08797	No photo.	Located at the end of Promesa Dr at a trailhead. No sign observed.	Add sign at location.



Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-026	32.82556	-117.09044	S-026.jpg 	Located at the end of Vivaracho Way, on a trail between two homes. Sign is legible but partially obscured by vegetation.	Trim vegetation around the sign.

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-027	32.82639	-117.08920	<p>S-027a.jpg</p>  <p>S-027b.jpg</p> 	<p>Located at the north end of Vivaracho Ct.</p> <p>Sign is in good condition and is legible but partially obscured by vegetation.</p>	Trim vegetation around the sign.

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-028	32.82397	-117.09064	<p>S-028 S-076.jpg</p> 	<p>Located at the end of Cartulina Road.</p> <p>Project area description is legible on sign but the bottom yellow portion, which contains instructions if MEC item is found, is beginning to fade. Duplicate of S-076.</p>	<p>Monitor condition of sign; may need to be replaced prior to next review.</p>

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-029	32.82376	-117.09162	S-029a.jpg 	<p>Located at the end of Via del Cosira on a canyon slope.</p> <p>Sign is partially obscured by vegetation and is very faded.</p>	<p>Replace sign and trim vegetation in area; consider moving the sign up slope of canyon.</p>
			S-029b.jpg 		


Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-030	32.82301	-117.09158	S-030.jpg 	Located at the end of Cosira Ct. Sign is fading and has patches of illegible text.	Replace sign.


Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-031	32.82239	-117.09192	S-031a.jpg 	<p>Located at the end of Cascajo Court on canyon slope.</p> <p>Sign is completely obscured by vegetation and is upside down.</p>	<p>It is possible the sign needs to be replaced, but the condition of the sign could not be assessed because of the vegetation around it. Trim vegetation around the sign, and re-install with correct orientation; consider moving up slope of canyon.</p>
			S-031b.jpg 		

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-032	32.82133	-117.09194	No photo.	<p>Located at the west end of Valiente Ct.</p> <p>Sign is in good condition and legible but is not at a trailhead or on a trail.</p>	None.


Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-033	32.82119	-117.09058	No photo.	<p>Located at the east end of Valiente Ct, between two homes and next to play area.</p> <p>Sign is in excellent condition.</p>	None.

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-034	32.82156	-117.08583	No photo.	<p>Located at the end of Tambor Ct.</p> <p>No sign at this location. Sign was found ~150 feet northeast of coordinates provided, on the side of a home at 4296 Tambor Ct. and along a concrete stormwater drain. See S-101.</p>	Relocate sign S-101 to coordinates provided for S-034.

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-035	32.81819	-117.09456	<p>S-035.jpg</p> 	<p>Located on the north side of Tierrasanta Blvd, between Ducos Pl and Rueda Dr, at a trailhead for Canyon Trail.</p> <p>Sign is in good condition.</p>	None.

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-036	32.83161	-117.10225	TS67 S-036.jpg 	Located on the east side of Santo Rd, between Antigua Blvd and Clairemont Mesa Blvd, at a trailhead for East Shephard Canyon; see also TS67. Sign in good condition and visible at its current location.	None.

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-037	32.83017	-117.10533	No photo.	<p>Located on the north side of Clairemont Mesa Blvd, behind the strip mall.</p> <p>No sign is present. Location is at the top of a very steep hill with what appears to be a faint (social) trail leading to West Shephard Canyon trails. Easier access to trail system is provided off of Clairemont Mesa Blvd (S-038) and Santo Rd.</p>	None.

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-038	32.83092	-117.10747	S-038.jpg 	Located on the north side of Clairemont Mesa Blvd, at a trailhead for West Shepard Canyon. Sign has some illegible text with grafitti. Bottom yellow portion, which contains instructions if MEC item is found, is beginning to fade.	Replace sign.

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-039	32.82958	-117.10494	No photo.	Located on the south side of Clairemont Mesa Blvd, across from the strip mall; see also TS50. No sign present.	Add sign.

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-040	32.83058	-117.10739	No photo.	Located on the south side of Clairemont Mesa Blvd. No sign is present.	None.

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-041	32.83258	-117.10522	S-041.jpg 	Located off of a paved trail between Totuga Ct and Veracruz Ct. Sign is visible and in good condition.	None.

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-042	32.83192	-117.10547	No photo.	<p>Located at the end of Vera Cruz Ct, off of a paved trail.</p> <p>No sign is present but the paved trail leads to S-041 location.</p> <p>Vegetation is well maintained in the area.</p>	None.

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-043	32.83222	-117.10481	No photo.	<p>Located at the end of Tortuga Ct, off of a paved trail.</p> <p>No sign is present but the paved trail leads to S-041 location.</p>	None.

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-044	32.83275	-117.10589	No photo.	<p>Located at the end of Carioca Ct, off of a paved trail.</p> <p>No sign is present but S-041 is visible from the location and the paved trail leads to S-041.</p>	None.

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-045	32.83331	-117.10514	No photo.	<p>Located at the end of Bravo Ct.</p> <p>No sign is present.</p>	Add a sign at or near this location.



Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-046	32.83381	-117.10589	No photo.	<p>Located at the end of Matador Ct, off of a paved trail.</p> <p>No sign is present at location but double sided sign is located ~200 feet down trail (see S-103).</p>	None.

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-047	32.83400	-117.10511	No photo.	<p>Located at the end of Guincho Ct.</p> <p>No sign is present.</p>	Add a sign at or near this location.

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-048	32.83300	-117.10183	No photo.	<p>Located on west side of Santo Rd, south of the intersection with Antigua Blvd, at a trailhead for West Shephard Canyon. No sign is present.</p>	Add a sign.

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-049	32.83581	-117.10767	No photo.	<p>Located at Villa Montserate Park.</p> <p>No sign is present at this location, but there is a sign in the park in close proximity (see S-050).</p>	None.

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-050	32.83536	-117.10831	No photo.	<p>Located at Villa Montserate Park, just off playground at the top of the canyon slope.</p> <p>Sign is visible and in good condition.</p>	None.

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-051	32.83894	-117.10592	<p>S-051a.jpg</p>  <p>S-051b.jpg</p> 	<p>Located at the end of the cul de sac at La Morada Dr.</p> <p>No sign is present, but location is at a trailhead.</p>	<p>Add a sign to the gate.</p>

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-052	32.83875	-117.09525	No photo.	<p>Located on the south side of Villarica Way, between Portobelo and Corte Playa Barcelona, at a trailhead for North Shephard Canyon.</p> <p>Sign is visible and in good condition.</p>	None.

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-053	32.83864	-117.09469	No photo.	<p>Located on the north side of Villarica Way, between Portobelo and Corte Playa Barcelona, at a trailhead for North Shepherd Canyon.</p> <p>Sign is visible and in good condition.</p>	None.

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-054	32.81856	-117.09600	S-054.jpg 	Located on the south side of Tierrasanta Blvd, between Rueda Dr and Ducos Pl, at a trailhead. Sign is in good condition and location is very visible.	None.



Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-055	32.83178	-117.09608	No photo.	Located at the end of La Cuenta Drive at a trailhead. Sign is legible but the surface is starting to crack. Location of sign is visible.	Monitor condition of sign; may need to be replaced prior to next review.

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-056	32.81550	-117.09969	No photo.	<p>Located on the west side of La Cuenta Drive, between Baroque Lane and Valdemosa Lane.</p> <p>Sign is in excellent condition and appears new but is obscured by vegetation.</p>	Trim vegetation around the sign.

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-057	32.81236	-117.09936	No photo.	<p>Located at the southern terminus of La Cuenta Drive.</p> <p>Sign is legible and in good condition.</p>	None.

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-058	32.83536	-117.09569	No photo.	<p>Located off of Camino Playa Portofino.</p> <p>No sign is present. Location is not within the canyon or at a trailhead.</p>	None.

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-059	32.83572	-117.09650	No photo.	<p>Located at the terminus of Calle Mariselda.</p> <p>Sign is in good condition and visible but is ~200 feet east of the trailhead.</p>	Move the sign to the trailhead.

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-060	32.83694	-117.07958	<p>S-060a.jpg</p>  <p>S-060b.jpg</p> 	<p>Located at the end of Callejon Quintana.</p> <p>Sign is partially obscured by vegetation but is in good condition. Location is near what appears to be a social trail that runs behind the homes.</p>	Trim vegetation around sign at current location or move closer to sidewalk.

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-061	32.83622	-117.08089	No photo.	No sign observed at location or it was completely obscured by vegetation.	Add a sign at or near this location.


Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-062	32.82914	-117.08800	No photo.	Located on the south side of Clairemont Mesa Blvd, across from the Tierrasanta Recreation Center, along a paved trail. Sign in good condition and is visible.	None.

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-063	32.83410	-117.08425	No photo.	Located off of Corte Playa de Cortes. Sign is in good condition.	None.

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-064	32.83611	-117.08189	No photo.	Located at the end of Corte Playa San Juan. No sign is present.	Add a sign at or near this location.


Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-065	32.83147	-117.09886	No photo.	<p>Located off of Gabacho Drive, near home located at 10720 Gabacho Drive.</p> <p>Sign is beginning to fade but is currently visible. Location is at the top of a heavily vegetated canyon slope.</p>	Monitor condition of sign; may need to be replaced prior to next review.

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-066	32.81969	-117.08703	No photo.	<p>Located off of Pallon Way.</p> <p>Sign is legible and visible.</p>	None.

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-067	32.83936	-117.09614	S-067.jpg 	Located at the pocket park off of Portobelo Dr. No sign is present. The coordinates provided are for a location behind a fenced area. A worker was asked about the presence of a sign; he has never seen a warning sign at the location in 20 years.	None.

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-068	32.84097	-117.09044	No photo.	Located on the south side of Portobelo Dr, near a home at 10921 Portobelo Dr, at a trailhead for Upper North Shephard Canyon. No sign present at this location, but a sign was observed down trail (see S-107).	None.

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-069	32.82239	-117.08453	TS03 S-003 S-069.jpg 	Located on the south side of Rueda Drive, opposite Zorita Ct; see also TS03. Sign is in good condition. Duplicate of S-003.	None.

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-070	32.83606	-117.08039	S-070.jpg 	Located at the end of Terraza Playa Catalina. Sign is very faded and not legible and obscured by vegetation. Should be moved and replaced.	Replace sign and relocate closer to the end of the road.

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-071	32.83619	-117.07978	S-071.jpg 	Located at the end of Playa Catalina. Sign is faded and description of project area is no longer legible. Location is very visible.	Replace sign.

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-072	32.83644	-117.07894	No photo.	Located off of Via Playa Los Santos. No sign is present; however, a sign was found ~115 feet southwest of this location, next to a home at 5092 Via Playa Los Santos (see S-117).	None.

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-073	32.81022	-117.09714	No photo.	Located on the west side of Viacha Dr. Sign is legible but is obscured by vegetation.	Trim vegetation around sign.

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-074	32.81000	-117.09675	No photo.	Located on the east side of Viacha Dr, at the top of a steep slope overlooking the Admiral Baker Golf Course. No sign is present.	None.


Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-075	32.81758	-117.09733	No photo.	Located off of Baroque Lane, on an unpaved trail. Color of sign is a little faded but is legible; overall good condition.	Monitor condition of sign; may need to be replaced prior to next review.



Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-076	32.82397	-117.09064	<p>S-028 S-076.jpg</p> 	<p>Located at the end of Cartulina Road.</p> <p>Project area description is legible on sign but the bottom yellow portion, which contains instructions if MEC item is found, is beginning to fade. Duplicate of S-028.</p>	<p>Monitor condition of sign; may need to be replaced prior to next review.</p>

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-077	32.82294	-117.07899	<p>S-077 S-094 a.jpg</p>  <p>S-077 S-094 b.jpg</p> 	<p>Located on the north side of Calle de Vida at an entrance to Mission Trails Regional Park; See also MT58.</p> <p>Sign is in good condition, and the locaiton is very visible. Duplicate of S-094.</p>	None.

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-078	32.82528	-117.07444	S-078.jpg 	Located at a major intersection near the entrance to Mission Trails Regional Park from Clairemont Mesa Blvd. No sign is present, but a 3Rs flyer is posted on the kiosk.	None. Sign is located at the entrance to Mission Trails Regional Park from Clairemont Mesa Blvd, at the end of the wood bridge (see S-095).

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-079	32.82971	-117.07826	S-079.jpg 	Located at the end of Valdina Way, at the top of a steep slope. Only half of the sign is present.	Replace sign.

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-080	32.82997	-117.07879	S-080.jpg 	Located at the end of Tinasa Way, down a steep slope. Sign is in very good condition and visible but is becoming obscured by vegetation.	Trim vegetation around the sign. Consider moving to the top of the slope.

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-081	32.83744	-117.07686	<p>MT60 S-081 S-097.jpg</p>  <p>MT61.jpg</p> 	<p>Located at the end of Corte Playa Catalina, at a trailhead to Mission Trails Regional Park; see also MT60 and MT61.</p> <p>The 3Rs flyer was not attached to the kiosk.</p> <p>No sign is present. Duplicate of S-097.</p>	<p>Reattach 3Rs flyer to kiosk or add sign to kiosk at MT61.</p>


Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-082	32.83943	-117.08061	No photo.	<p>Located on a trail that leads to Mission Trails Regional Park.</p> <p>No sign is present in the vicinity of the coordinates provided. Trail user stated he has never observed a sign at this location, and he "hasn't seen the signs in a few years" but he "probably doesn't pay attention to them anymore".</p>	Add sign.



Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-083	32.83403	-117.08583	No photo.	<p>Located on the east side of Via Valarta, between Camino Playa Norte and Corte Playa Laguna, at a trailhead.</p> <p>No sign is present.</p>	Add sign.



Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-084	32.83642	-117.10822	No photo.	<p>Located at Villa Montserate Park.</p> <p>Sign is faded and ~30 feet from the start of the path. Partially obscured by vegetation.</p>	Replace sign and trim vegetation in area (or relocate close to start of path).

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-085	32.83458	-117.10639	No photo.	<p>Located off of Antigua Blvd, at paved trailhead.</p> <p>No sign is present but site user would encounter double sided sign at S-103 as s/he travels down the trail.</p>	None.


Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-086	32.82919	-117.10942	No photo.	<p>Located at the end of Outlook Point. No sign at coordinates provided.</p> <p>Sign is present ~60 feet south of location (see S-109).</p>	None.


Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-087	32.82772	-117.11208	<p>S-087.jpg</p> 	<p>Located at a trail junction between Park Crest Ln and Lemonwood Ln.</p> <p>General warning sign at coordinates provided. MEC warning sign located at S- 108, ~600 feet down trail.</p>	None.



Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-088	32.84728	-117.03141	MT49a S-088.jpg 	Located at the trailhead of the equestrian center; see also MT49. Sign is in very good condition and the location is very visible.	None.
			MT49b S-088.jpg 		

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-089	32.84591	-117.03056	<p>MT50a S-089.jpg</p>  <p>MT50b S-089.jpg</p> 	<p>Located at the trailhead of the equestrian center; see also MT50.</p> <p>Sign is in very good condition and the location is very visible.</p>	None.

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-090	32.84060	-117.03290	<p>S-090.jpg</p> 	<p>Located in Kumeyaay Camground.</p> <p>Sign is in good condition and in a very visible location.</p>	None.


Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-091	32.84054	-117.03786	<p>MT54 S-091.jpg</p> 	<p>Located off of Father Junipero Serra Trail at the trailhead for Grasslands Crossing; see also MT54.</p> <p>Sign is in very good condition and is very visible. The last line of text on the sign is covered by mountain lion warning sign.</p>	Move sign to another post so all of it is visible.



Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-092	32.83882	-117.04538	S-092.jpg 	Located down Oak Canyon Trail. No sign located at coordinates provided or in the vicinity (walked ~200 feet past location). "Area Closed" signs at this location.	Add sign or include 3Rs flyer on trail kiosk.

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-093	32.82085	-117.07706	<p>MT42 S-008 S-093.jpg</p>  <p>TS36b S-008 S-093.jpg</p> 	<p>Located inside of the south gate to Mission Trails Regional Park at Colina Dorado Drive; see also MT42 and TS36.</p> <p>Description of project area is still legible on the sign, but the bottom yellow portion is completely faded. The sign is not in a very visible location. Duplcate of S-008.</p>	<p>Recommmed replacing sign and moving to a more visible location, such as MT44.</p>


Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-094	32.82296	-117.07901	<p>S-077 S-094 a.jpg</p>  <p>S-077 S-094 b.jpg</p> 	<p>Located on the north side of Calle de Vida at an entrance to Mission Trails Regional Park; see also MT58.</p> <p>Sign is in good condition, and the location is very visible. Duplicate of S-077.</p>	None.

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-095	32.82534	-117.07573	S-095.jpg 	Located on the east end of a wood bridge at Mission Trails Regional Park entrance off of Clairemont Mesa Blvd. Sign is in good condition and location is very visible.	None.

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-096	32.82902	-117.07648	S-009 S-096.jpg 	Located just outside of a fenced area, near a trailhead. Sign is legible and in a very visible location. Duplicate of S-009.	None.


Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-097	32.83748	-117.07687	<p>MT60 S-081 S-097.jpg</p>  <p>MT61.jpg</p> 	<p>Located at the end of Corte Playa Catalina, at a trailhead to Mission Trails Regional Park; see also MT60 and MT61.</p> <p>The 3Rs flyer is not attached to the kiosk.</p> <p>No sign is present. Duplicate of S-081.</p>	Reattach 3Rs flyer to kiosk or add sign to kiosk at MT61.

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-098	32.84086	-117.08493	No photo.	Located at the San Diego Aqueduct Service Road. No sign is present.	None.

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-099	32.81596	-117.09971	S-099.jpg 	Located on the west side of La Cuenta Drive, between Baroque Lane and Valldemosa Lane. Description of project area is legible, but yellow portion, which contains instructions if MEC item is found, is faded.	Monitor condition of sign; may need to be replaced prior to next review.

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-100	32.82512	-117.08240	S-100.jpg 	Located on west side of Seda Drive, between Promesa Dr and Calle De Vida, at a trailhead. Sign is in very good condition.	None.

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-101	32.82184	-117.08552	S-101.jpg 	Located at the end of Tambor Ct, on the side of the home at 4296 Tambor Ct and along a concrete stormwater drain. Sign is very faded. Location is ~150 feet from S-034 (where there is no sign).	Replace sign and consider relocating to coordinates provided for S-034.

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-102	32.81801	-117.09200	S-102.jpg 	Located on the north side of Tierrasanta Blvd, between Rueda Dr and Tambor Rd. Sign is legible and visible.	None.

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-103	32.83414	-117.10566	S-103a.jpg (bearing = 335°)	<p>Double sided sign along paved trail.</p> <p>Sign at bearing 335° has a small amount of graffiti but is in very good condition. Yellow portion of sign at bearing 145° is peeling but is still completely legible.</p>	Monitor condition of sign; may need to be replaced prior to next review.
			<p>S-103b.jpg (bearing = 145°)</p> 		

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-104	32.83263	-117.09963	S-104.jpg 	Located on a trail in Shephard Canyon. Sign is legible but is partially obscured by vegetation.	Trim vegetation around the sign.

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-105	32.83316	-117.09427	S-105.jpg 	Located on the north side of Villaricca Way. Description of project area is very faded but yellow portion, which contains instructions if MEC item is found, is in good condition.	Replace sign.

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-106	32.839697	-117.093195	No photo.	Located on the south side of Portobelo Dr, on an unpaved trail. Sign in good condition and is visible.	None.


Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-107	32.840569	-117.090794	No photo.	Located on trail for Upper North Shephard Canyon. Sign is visible and legible, but the yellow is beginning to peel.	Monitor condition of sign; may need to be replaced prior to next review.

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-108	32.82753	-117.111417	No photo.	Located on a trail in Shephard Canyon. Sign is in good condition and legible.	None.

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-109	32.829017	-117.109375	No photo.	Located at the end of Outlook Point. Sign in good condition and visible from street.	None.

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-110	32.81786	-117.10059	S-110.jpg 	MEC warning sign observed at Roadrunner Park, at the top of the canyon. Sign is in good condition and is in a visible location.	None.

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-111	32.83772222	-117.0946667	No photo.	<p>Located on the southwest side of Villaricca Way, near the intersection of Corte Playa Barcelona, near a trailhead; See also TS26.</p> <p>Sign is in good condition and is in a visible location.</p>	None.

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-112	32.83347222	-117.09975	<p>TS69 S-112.jpg</p> 	<p>Located at a trailhead for Lower North Shepherd Canyon Trail, next to a Villa Colina housing complex; see also TS69.</p> <p>Project description is fading on sign and the location is very visible.</p>	Monitor condition of sign; may need to be replaced prior to next review.

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-113	32.81844	-117.10072	S-113.jpg 	Located at Roadrunner Park, at the top of the canyon slope. Sign is in good condition and is in a visible location.	None.

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-114	32.81916	-117.09612	S-114.jpg 	Located on the north side of Tierrasanta Blvd, between Ducos Pl and Rueda Dr, at a trailhead. Sign is in good condition and is visible.	None.

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-115	32.84056	-117.03612	S-115.jpg 	Located in Kumeyaay Campground. Sign is in good condition and is in a visible location.	None.

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-116	32.83080	-117.08337	S-116.jpg 	Located on the west side of Via Valarta. Sign is at a trailhead for East Shephard Canyon. Project area description is legible but the bottom yellow portion, which contains instructions if MEC item is found, is faded.	Replace sign.

Sign ID	Coordinates		Photo	Description	Recommendation
	Latitude	Longitude			
S-117	32.83622	-117.07926	<p>S-117.jpg</p> 	<p>Located off of Via Playa Los Santos.</p> <p>Sign is located next to a home at 5092 Via Playa Los Santos, ~115 feet southwest of S-072.</p> <p>Sign is visible and legible, but is beginning to show signs of wear.</p>	<p>Monitor condition of sign; may need to be replaced prior to next review. Consider moving to intended location (S-072).</p>

APPENDIX E

Site Inspection Checklist

I. SITE INFORMATION	
Site name: Former Camp Elliott, Tierrasanta and Former Camp Elliott, Mission Trails	Date of inspection: 5-7 November 2019, 2-5 March 2020
Location and Region: San Diego, CA	EPA ID:
Agency, office, or company leading the five-year review: USACE, Los Angeles District / BSX, LLC	Weather/temperature: 70s; sunny and warm
Remedy Includes: (Check all that apply) <div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;"> <input type="checkbox"/> Landfill cover/containment <input type="checkbox"/> Access controls <input checked="" type="checkbox"/> Institutional controls <input type="checkbox"/> Groundwater pump and treatment <input type="checkbox"/> Surface water collection and treatment <input type="checkbox"/> Other _____ </div> <div style="width: 50%;"> <input type="checkbox"/> Monitored natural attenuation <input type="checkbox"/> Groundwater containment <input type="checkbox"/> Vertical barrier walls </div> </div>	
Attachments: <input checked="" type="checkbox"/> Inspection team roster attached <input checked="" type="checkbox"/> Site map attached	

II. INTERVIEWS (Check all that apply)			
1. O&M site manager	<div style="display: flex; justify-content: space-between; border-bottom: 1px solid black; margin-bottom: 5px;"> Name Title Date </div> <p>Interviewed <input type="checkbox"/> at site <input type="checkbox"/> at office <input type="checkbox"/> by phone Phone no. _____</p> <p>Problems, suggestions; <input type="checkbox"/> Report attached _____</p> <p>_____</p>		
2. O&M staff	<div style="display: flex; justify-content: space-between; border-bottom: 1px solid black; margin-bottom: 5px;"> Name Title Date </div> <p>Interviewed <input type="checkbox"/> at site <input type="checkbox"/> at office <input type="checkbox"/> by phone Phone no. _____</p> <p>Problems, suggestions; <input type="checkbox"/> Report attached _____</p> <p>_____</p>		
<p>3. Local regulatory authorities and response agencies (i.e., State and Tribal offices, emergency response office, police department, office of public health or environmental health, zoning office, recorder of deeds, or other city and county offices, etc.) Fill in all that apply.</p> <div style="margin-bottom: 20px;"> <p>Agency <u>Navy EOD</u></p> <div style="display: flex; justify-content: space-between;"> <div> <p>Contact <u>Christopher Anthony</u></p> <p style="text-align: center;">Name</p> </div> <div> <p><u>EOD Detachment Southwest</u></p> <p style="text-align: center;">Title</p> </div> <div> <p><u>4 May 2020</u></p> <p style="text-align: center;">Date</p> </div> <div> <p><u>703-606-1205</u></p> <p style="text-align: center;">Phone no.</p> </div> </div> <p>Problems; suggestions; <input type="checkbox"/> Report attached <u>See Appendix C for the interview record.</u></p> </div> <div style="margin-bottom: 20px;"> <p>Agency <u>MCAS Miramar</u></p> <div style="display: flex; justify-content: space-between;"> <div> <p>Contact <u>Kristin Camper</u></p> <p style="text-align: center;">Name</p> </div> <div> <p><u>Community Plans and Liaison Officer</u></p> <p style="text-align: center;">Title</p> </div> <div> <p><u>20 April 2020</u></p> <p style="text-align: center;">Date</p> </div> <div> <p><u>619-212-2676</u></p> <p style="text-align: center;">Phone no.</p> </div> </div> <p>Problems; suggestions; <input type="checkbox"/> Report attached <u>See Appendix C for the interview record.</u></p> </div> <div style="margin-bottom: 20px;"> <p>Agency <u>San Diego Sheriff</u></p> <div style="display: flex; justify-content: space-between;"> <div> <p>Contact <u>Greg Hampton</u></p> <p style="text-align: center;">Name</p> </div> <div> <p><u>Sheriff Sargent Bomb Squad Command</u></p> <p style="text-align: center;">Title</p> </div> <div> <p><u>29 April 2020</u></p> <p style="text-align: center;">Date</p> </div> <div> <p><u>619-550-8158</u></p> <p style="text-align: center;">Phone no.</p> </div> </div> <p>Problems; suggestions; <input type="checkbox"/> Report attached <u>See Appendix C for the interview record.</u></p> </div> <div style="margin-bottom: 20px;"> <p>Agency <u>Metro Arson Strike Team</u></p> <div style="display: flex; justify-content: space-between;"> <div> <p>Contact <u>Matt Spicer</u></p> <p style="text-align: center;">Name</p> </div> <div> <p><u>Captain and Bomb Tech</u></p> <p style="text-align: center;">Title</p> </div> <div> <p><u>14 April 2020</u></p> <p style="text-align: center;">Date</p> </div> <div> <p><u>619-236-6915</u></p> <p style="text-align: center;">Phone no.</p> </div> </div> <p>Problems; suggestions; <input type="checkbox"/> Report attached <u>See Appendix C for the interview record.</u></p> </div> <div style="margin-bottom: 20px;"> <p>Agency <u>San Diego Fire Rescue Department</u></p> <div style="display: flex; justify-content: space-between;"> <div> <p>Contact <u>Jeff Ring</u></p> <p style="text-align: center;">Name</p> </div> <div> <p><u>Fire Captain and Bomb Squad Commander</u></p> <p style="text-align: center;">Title</p> </div> <div> <p><u>7 May 2020</u></p> <p style="text-align: center;">Date</p> </div> <div> <p><u>858-583-2320</u></p> <p style="text-align: center;">Phone no.</p> </div> </div> <p>Problems; suggestions; <input type="checkbox"/> Report attached <u>See Appendix C for the interview record.</u></p> </div> <div> <p>Agency <u>MCAS Miramar EOD</u></p> <div style="display: flex; justify-content: space-between;"> <div> <p>Contact <u>Pete Scarlett, EOD</u></p> <p style="text-align: center;">Name</p> </div> <div> <p><u>Officer in Charge MCAS Miramar</u></p> <p style="text-align: center;">Title</p> </div> <div> <p><u>1 May 2020</u></p> <p style="text-align: center;">Date</p> </div> <div> <p><u>760-707-7889</u></p> <p style="text-align: center;">Phone no.</p> </div> </div> <p>Problems; suggestions; <input type="checkbox"/> Report attached <u>See Appendix C for the interview record.</u></p> </div>			

4. Other interviews (optional) <input type="checkbox"/> Report attached.
Other interviews conducted with the following individuals listed below. See Appendix C for interview records. <ul style="list-style-type: none">• James Sanders, Friends of Tierrasanta Canyons (Date: 14 April 2020; Phone: 858-209-9082)• Deanna Spehn, Co-Publisher and Editor of Tierra Times (Date: 14 April 2020; Phone: 619-368-4477)• Jan Whitacre, President of Tierrasanta Community Council (Date 9 April 2020; Phone: 858-335-6264)• Loren Boerboom, Grounds Maintenance Manager, City of San Diego Open Space (Date 8 April 2020; Phone: 619-980-8108)• Tom Calhoun, Lead PM for SDUSD Facilities Division (Date 15 April 2020; Phone: 619-609-3431)• Paul Garcia, Civil/Environmental Coordinator for SDUSD ((Date 9 April 2020; Phone: 530-219-8935)

III. ON-SITE DOCUMENTS & RECORDS VERIFIED (Check all that apply)				
1.	O&M Documents <input type="checkbox"/> O&M manual <input type="checkbox"/> As-built drawings <input type="checkbox"/> Maintenance logs Remarks_____	<input type="checkbox"/> Readily available <input type="checkbox"/> Readily available <input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date <input type="checkbox"/> Up to date <input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A <input type="checkbox"/> N/A <input type="checkbox"/> N/A
2.	Site-Specific Health and Safety Plan <input type="checkbox"/> Contingency plan/emergency response plan Remarks_____	<input type="checkbox"/> Readily available <input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date <input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A <input checked="" type="checkbox"/> N/A
3.	O&M and OSHA Training Records Remarks_____	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
4.	Permits and Service Agreements <input type="checkbox"/> Air discharge permit <input type="checkbox"/> Effluent discharge <input type="checkbox"/> Waste disposal, POTW <input type="checkbox"/> Other permits_____ Remarks_____	<input type="checkbox"/> Readily available <input type="checkbox"/> Readily available <input type="checkbox"/> Readily available <input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date <input type="checkbox"/> Up to date <input type="checkbox"/> Up to date <input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A <input checked="" type="checkbox"/> N/A <input checked="" type="checkbox"/> N/A <input checked="" type="checkbox"/> N/A
5.	Gas Generation Records Remarks_____	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
6.	Settlement Monument Records Remarks_____	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
7.	Groundwater Monitoring Records Remarks_____	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
8.	Leachate Extraction Records Remarks_____	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
9.	Discharge Compliance Records <input type="checkbox"/> Air <input type="checkbox"/> Water (effluent) Remarks_____	<input type="checkbox"/> Readily available <input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date <input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A <input checked="" type="checkbox"/> N/A
10.	Daily Access/Security Logs Remarks_____	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A

IV. O&M COSTS			
1.	O&M Organization <div><input type="checkbox"/> State in-house <input type="checkbox"/> Contractor for State</div> <div><input type="checkbox"/> PRP in-house <input type="checkbox"/> Contractor for PRP</div> <div><input type="checkbox"/> Federal Facility in-house <input type="checkbox"/> Contractor for Federal Facility</div> <div><input type="checkbox"/> Other _____</div> <div>_____</div>		
2.	O&M Cost Records <div><input type="checkbox"/> Readily available <input type="checkbox"/> Up to date</div> <div><input type="checkbox"/> Funding mechanism/agreement in place</div> <div>Original O&M cost estimate _____ <input type="checkbox"/> Breakdown attached</div> <div><div>Total annual cost by year for review period if available</div><div><div><div>From _____ To _____ _____ <input type="checkbox"/> Breakdown attached</div><div>Date Date Total cost</div></div><div><div>From _____ To _____ _____ <input type="checkbox"/> Breakdown attached</div><div>Date Date Total cost</div></div><div><div>From _____ To _____ _____ <input type="checkbox"/> Breakdown attached</div><div>Date Date Total cost</div></div><div><div>From _____ To _____ _____ <input type="checkbox"/> Breakdown attached</div><div>Date Date Total cost</div></div><div><div>From _____ To _____ _____ <input type="checkbox"/> Breakdown attached</div><div>Date Date Total cost</div></div></div></div>		
3.	Unanticipated or Unusually High O&M Costs During Review Period Describe costs and reasons: _____ _____ _____ _____ _____		

V. ACCESS AND INSTITUTIONAL CONTROLS <input checked="" type="checkbox"/> Applicable <input type="checkbox"/> N/A			
A. Fencing			
1.	Fencing damaged <input type="checkbox"/> Location shown on site map <input type="checkbox"/> Gates secured <input checked="" type="checkbox"/> N/A Remarks _____ _____		
B. Other Access Restrictions			
1.	Signs and other security measures <input checked="" type="checkbox"/> Location shown on site map <input type="checkbox"/> N/A Remarks: <u>Signs have been installed at both sites. These signs provide a warning of the potential hazards at the sites, but do not prevent access to the sites. At the Former Camp Elliott, Mission Trails site, munitions warning signs were observed at some trailheads but not all of them. The signs that were present were observed to be in good condition, and the Inspection Team did not note an immediate need to replace any of the signs within the site. The Inspection Team also observed a safety warning flyer (related to munitions safety) posted on some of the kiosks. At the Former Camp Elliott, Tierrasanta site, munitions warning signs were observed throughout the site (i.e. trailheads, hillsides, parks, etc). The condition of the signs ranged from very good condition to poor and needing immediate replacement. Vegetation obscured some of the signs. A Sign Condition Log is provided in Appendix D of this Fourth Five-Year Report.</u>		
C. Institutional Controls (ICs)			
1.	Implementation and enforcement Site conditions imply ICs not properly implemented <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A Site conditions imply ICs not being fully enforced <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A Type of monitoring (e.g., self-reporting, drive by) <u>Audits (in-person)</u> Frequency <u>Annual, per the Land Use Control Implementation Plan (USACE, 2018)</u> Responsible party/agency <u>USACE, Los Angeles District</u> Contact _____ <div style="display: flex; justify-content: space-between; margin-top: 5px;"> Name Title Date Phone no. </div> Reporting is up-to-date <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A Reports are verified by the lead agency <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A Specific requirements in deed or decision documents have been met <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A Violations have been reported <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A Other problems or suggestions: <input type="checkbox"/> Report attached <u>The 2018 audit identified several issues with the land use controls (LUCs) at the site.</u> <u>Actions were taken to implement the recommendations from the audit (BSX, 2020c)</u>		
2.	Adequacy <input checked="" type="checkbox"/> ICs are adequate <input type="checkbox"/> ICs are inadequate <input type="checkbox"/> N/A Remarks <u>ICs are adequate if employed as intended. Continue with annual audits, per the Land Use Control Implementation Plan (USACE, 2018).</u>		

D. General	
1.	Vandalism/trespassing <input type="checkbox"/> Location shown on site map <input type="checkbox"/> No vandalism evident Remarks <u>Minor vandalism (i.e. graffiti) was noted on some of the signs located within Tierrasanta. The vandalism does not have an effect on the effectiveness of the signs. See Appendix D for the Sign Condition Log. No other vandalism was observed at the sites (in regards to the LUCs).</u>
2.	Land use changes on site <input checked="" type="checkbox"/> N/A Remarks _____ _____
3.	Land use changes off site <input checked="" type="checkbox"/> N/A Remarks _____ _____

VI. GENERAL SITE CONDITIONS			
A. Roads <input checked="" type="checkbox"/> Applicable <input type="checkbox"/> N/A			
1.	Roads damaged	<input type="checkbox"/> Location shown on site map	<input checked="" type="checkbox"/> Roads adequate <input type="checkbox"/> N/A
Remarks _____ _____			
B. Other Site Conditions			
Remarks <u>The Former Camp Elliott, Tierrasanta project area has been developed into a community and contains homes, businesses, and educational facilities. The Former Camp Elliott, Mission Trails project area is part of the MTRP. The sites are very accessible to the general public (i.e. residents, visitors, workers) via roads and official trail systems. Several unofficial/social trails were also observed at the sites that provided access into the canyons.</u>			

VII. LANDFILL COVERS <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A			
A. Landfill Surface			
1.	Settlement (Low spots) Areal extent _____ Depth _____ Remarks _____	<input type="checkbox"/> Location shown on site map Depth _____	<input type="checkbox"/> Settlement not evident
2.	Cracks Lengths _____ Remarks _____	<input type="checkbox"/> Location shown on site map Widths _____ Depths _____	<input type="checkbox"/> Cracking not evident
3.	Erosion Areal extent _____ Remarks _____	<input type="checkbox"/> Location shown on site map Depth _____	<input type="checkbox"/> Erosion not evident
4.	Holes Areal extent _____ Remarks _____	<input type="checkbox"/> Location shown on site map Depth _____	<input type="checkbox"/> Holes not evident
5.	Vegetative Cover <input type="checkbox"/> Grass <input type="checkbox"/> Cover properly established <input type="checkbox"/> No signs of stress <input type="checkbox"/> Trees/Shrubs (indicate size and locations on a diagram) Remarks _____		
6.	Alternative Cover (armored rock, concrete, etc.) <input type="checkbox"/> N/A Remarks _____		
7.	Bulges Areal extent _____ Remarks _____	<input type="checkbox"/> Location shown on site map Height _____	<input type="checkbox"/> Bulges not evident
8.	Wet Areas/Water Damage <input type="checkbox"/> Wet areas/water damage not evident <input type="checkbox"/> Wet areas <input type="checkbox"/> Location shown on site map Areal extent _____ <input type="checkbox"/> Ponding <input type="checkbox"/> Location shown on site map Areal extent _____ <input type="checkbox"/> Seeps <input type="checkbox"/> Location shown on site map Areal extent _____ <input type="checkbox"/> Soft subgrade <input type="checkbox"/> Location shown on site map Areal extent _____ Remarks _____		
9.	Slope Instability <input type="checkbox"/> Slides <input type="checkbox"/> Location shown on site map <input type="checkbox"/> No evidence of slope instability Areal extent _____ Remarks _____		

B. Benches <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A (Horizontally constructed mounds of earth placed across a steep landfill side slope to interrupt the slope in order to slow down the velocity of surface runoff and intercept and convey the runoff to a lined channel.)		
1.	Flows Bypass Bench Remarks _____ _____	<input type="checkbox"/> Location shown on site map <input type="checkbox"/> N/A or okay
2.	Bench Breached Remarks _____ _____	<input type="checkbox"/> Location shown on site map <input type="checkbox"/> N/A or okay
3.	Bench Overtopped Remarks _____ _____	<input type="checkbox"/> Location shown on site map <input type="checkbox"/> N/A or okay
C. Letdown Channels <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A (Channel lined with erosion control mats, riprap, grout bags, or gabions that descend down the steep side slope of the cover and will allow the runoff water collected by the benches to move off of the landfill cover without creating erosion gullies.)		
1.	Settlement Areal extent _____ Depth _____ Remarks _____ _____	<input type="checkbox"/> Location shown on site map <input type="checkbox"/> No evidence of settlement
2.	Material Degradation <input type="checkbox"/> Location shown on site map <input type="checkbox"/> No evidence of degradation Material type _____ Areal extent _____ Remarks _____ _____	
3.	Erosion Areal extent _____ Depth _____ Remarks _____ _____	<input type="checkbox"/> Location shown on site map <input type="checkbox"/> No evidence of erosion
4.	Undercutting <input type="checkbox"/> Location shown on site map <input type="checkbox"/> No evidence of undercutting Areal extent _____ Depth _____ Remarks _____ _____	
5.	Obstructions Type _____ <input type="checkbox"/> No obstructions <input type="checkbox"/> Location shown on site map Areal extent _____ Size _____ Remarks _____ _____	

6.	Excessive Vegetative Growth <input type="checkbox"/> No evidence of excessive growth <input type="checkbox"/> Vegetation in channels does not obstruct flow <input type="checkbox"/> Location shown on site map	Type _____ Areal extent _____ Remarks _____ _____
D. Cover Penetrations <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A		
1.	Gas Vents <input type="checkbox"/> Properly secured/locked <input type="checkbox"/> Functioning <input type="checkbox"/> Routinely sampled <input type="checkbox"/> Good condition <input type="checkbox"/> Evidence of leakage at penetration <input type="checkbox"/> Needs Maintenance <input type="checkbox"/> N/A Remarks _____ _____	<input type="checkbox"/> Active <input type="checkbox"/> Passive
2.	Gas Monitoring Probes <input type="checkbox"/> Properly secured/locked <input type="checkbox"/> Functioning <input type="checkbox"/> Routinely sampled <input type="checkbox"/> Good condition <input type="checkbox"/> Evidence of leakage at penetration <input type="checkbox"/> Needs Maintenance <input type="checkbox"/> N/A Remarks _____ _____	
3.	Monitoring Wells (within surface area of landfill) <input type="checkbox"/> Properly secured/locked <input type="checkbox"/> Functioning <input type="checkbox"/> Routinely sampled <input type="checkbox"/> Good condition <input type="checkbox"/> Evidence of leakage at penetration <input type="checkbox"/> Needs Maintenance <input type="checkbox"/> N/A Remarks _____ _____	
4.	Leachate Extraction Wells <input type="checkbox"/> Properly secured/locked <input type="checkbox"/> Functioning <input type="checkbox"/> Routinely sampled <input type="checkbox"/> Good condition <input type="checkbox"/> Evidence of leakage at penetration <input type="checkbox"/> Needs Maintenance <input type="checkbox"/> N/A Remarks _____ _____	
5.	Settlement Monuments <input type="checkbox"/> Located <input type="checkbox"/> Routinely surveyed <input type="checkbox"/> N/A Remarks _____ _____	

E. Gas Collection and Treatment <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A		
1.	Gas Treatment Facilities <input type="checkbox"/> Flaring <input type="checkbox"/> Thermal destruction <input type="checkbox"/> Collection for reuse <input type="checkbox"/> Good condition <input type="checkbox"/> Needs Maintenance Remarks _____ _____	
2.	Gas Collection Wells, Manifolds and Piping <input type="checkbox"/> Good condition <input type="checkbox"/> Needs Maintenance Remarks _____ _____	
3.	Gas Monitoring Facilities (<i>e.g.</i> , gas monitoring of adjacent homes or buildings) <input type="checkbox"/> Good condition <input type="checkbox"/> Needs Maintenance <input type="checkbox"/> N/A Remarks _____ _____	
F. Cover Drainage Layer <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A		
1.	Outlet Pipes Inspected <input type="checkbox"/> Functioning <input type="checkbox"/> N/A Remarks _____ _____	
2.	Outlet Rock Inspected <input type="checkbox"/> Functioning <input type="checkbox"/> N/A Remarks _____ _____	
G. Detention/Sedimentation Ponds <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A		
1.	Siltation Areal extent _____ Depth _____ <input type="checkbox"/> N/A <input type="checkbox"/> Siltation not evident Remarks _____ _____	
2.	Erosion Areal extent _____ Depth _____ <input type="checkbox"/> Erosion not evident Remarks _____ _____	
3.	Outlet Works <input type="checkbox"/> Functioning <input type="checkbox"/> N/A Remarks _____ _____	
4.	Dam <input type="checkbox"/> Functioning <input type="checkbox"/> N/A Remarks _____ _____	

H. Retaining Walls <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A		
1.	Deformations <input type="checkbox"/> Location shown on site map <input type="checkbox"/> Deformation not evident Horizontal displacement_____ Vertical displacement_____ Rotational displacement_____ Remarks_____	
2.	Degradation <input type="checkbox"/> Location shown on site map <input type="checkbox"/> Degradation not evident Remarks_____	
I. Perimeter Ditches/Off-Site Discharge <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A		
1.	Siltation <input type="checkbox"/> Location shown on site map <input type="checkbox"/> Siltation not evident Areal extent_____ Depth_____ Remarks_____	
2.	Vegetative Growth <input type="checkbox"/> Location shown on site map <input type="checkbox"/> N/A <input type="checkbox"/> Vegetation does not impede flow Areal extent_____ Type_____ Remarks_____	
3.	Erosion <input type="checkbox"/> Location shown on site map <input type="checkbox"/> Erosion not evident Areal extent_____ Depth_____ Remarks_____	
4.	Discharge Structure <input type="checkbox"/> Functioning <input type="checkbox"/> N/A Remarks_____	
VIII. VERTICAL BARRIER WALLS <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A		
1.	Settlement <input type="checkbox"/> Location shown on site map <input type="checkbox"/> Settlement not evident Areal extent_____ Depth_____ Remarks_____	
2.	Performance Monitoring Type of monitoring_____ <input type="checkbox"/> Performance not monitored Frequency_____ <input type="checkbox"/> Evidence of breaching Head differential_____ Remarks_____	

IX. GROUNDWATER/SURFACE WATER REMEDIES <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A	
A. Groundwater Extraction Wells, Pumps, and Pipelines <input type="checkbox"/> Applicable <input type="checkbox"/> N/A	
1.	Pumps, Wellhead Plumbing, and Electrical <input type="checkbox"/> Good condition <input type="checkbox"/> All required wells properly operating <input type="checkbox"/> Needs Maintenance <input type="checkbox"/> N/A Remarks _____ _____ _____
2.	Extraction System Pipelines, Valves, Valve Boxes, and Other Appurtenances <input type="checkbox"/> Good condition <input type="checkbox"/> Needs Maintenance Remarks _____ _____
3.	Spare Parts and Equipment <input type="checkbox"/> Readily available <input type="checkbox"/> Good condition <input type="checkbox"/> Requires upgrade <input type="checkbox"/> Needs to be provided Remarks _____ _____
B. Surface Water Collection Structures, Pumps, and Pipelines <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A	
1.	Collection Structures, Pumps, and Electrical <input type="checkbox"/> Good condition <input type="checkbox"/> Needs Maintenance Remarks _____ _____
2.	Surface Water Collection System Pipelines, Valves, Valve Boxes, and Other Appurtenances <input type="checkbox"/> Good condition <input type="checkbox"/> Needs Maintenance Remarks _____ _____
3.	Spare Parts and Equipment <input type="checkbox"/> Readily available <input type="checkbox"/> Good condition <input type="checkbox"/> Requires upgrade <input type="checkbox"/> Needs to be provided Remarks _____ _____

C. Treatment System		<input type="checkbox"/> Applicable	<input checked="" type="checkbox"/> N/A
1.	Treatment Train (Check components that apply) <input type="checkbox"/> Metals removal <input type="checkbox"/> Oil/water separation <input type="checkbox"/> Bioremediation <input type="checkbox"/> Air stripping <input type="checkbox"/> Carbon adsorbers <input type="checkbox"/> Filters _____ <input type="checkbox"/> Additive (e.g., chelation agent, flocculent) _____ <input type="checkbox"/> Others _____ <input type="checkbox"/> Good condition <input type="checkbox"/> Needs Maintenance <input type="checkbox"/> Sampling ports properly marked and functional <input type="checkbox"/> Sampling/maintenance log displayed and up to date <input type="checkbox"/> Equipment properly identified <input type="checkbox"/> Quantity of groundwater treated annually _____ <input type="checkbox"/> Quantity of surface water treated annually _____ Remarks _____ _____		
2.	Electrical Enclosures and Panels (properly rated and functional) <input type="checkbox"/> N/A <input type="checkbox"/> Good condition <input type="checkbox"/> Needs Maintenance Remarks _____ _____		
3.	Tanks, Vaults, Storage Vessels <input type="checkbox"/> N/A <input type="checkbox"/> Good condition <input type="checkbox"/> Proper secondary containment <input type="checkbox"/> Needs Maintenance Remarks _____ _____		
4.	Discharge Structure and Appurtenances <input type="checkbox"/> N/A <input type="checkbox"/> Good condition <input type="checkbox"/> Needs Maintenance Remarks _____ _____		
5.	Treatment Building(s) <input type="checkbox"/> N/A <input type="checkbox"/> Good condition (esp. roof and doorways) <input type="checkbox"/> Needs repair <input type="checkbox"/> Chemicals and equipment properly stored Remarks _____ _____		
6.	Monitoring Wells (pump and treatment remedy) <input type="checkbox"/> Properly secured/locked <input type="checkbox"/> Functioning <input type="checkbox"/> Routinely sampled <input type="checkbox"/> Good condition <input type="checkbox"/> All required wells located <input type="checkbox"/> Needs Maintenance <input type="checkbox"/> N/A Remarks _____ _____		
D. Monitoring Data			
1.	Monitoring Data <input type="checkbox"/> Is routinely submitted on time <input type="checkbox"/> Is of acceptable quality		
2.	Monitoring data suggests: <input type="checkbox"/> Groundwater plume is effectively contained <input type="checkbox"/> Contaminant concentrations are declining		

D. Monitored Natural Attenuation			
1.	Monitoring Wells (natural attenuation remedy)		
	<input type="checkbox"/> Properly secured/locked	<input type="checkbox"/> Functioning	<input type="checkbox"/> Routinely sampled
	<input type="checkbox"/> All required wells located	<input type="checkbox"/> Needs Maintenance	<input type="checkbox"/> Good condition
	<input checked="" type="checkbox"/> N/A		
Remarks _____			

X. OTHER REMEDIES
<p>If there are remedies applied at the site which are not covered above, attach an inspection sheet describing the physical nature and condition of any facility associated with the remedy. An example would be soil vapor extraction.</p>

XI. OVERALL OBSERVATIONS	
A. Implementation of the Remedy	<p>Describe issues and observations relating to whether the remedy is effective and functioning as designed. Begin with a brief statement of what the remedy is to accomplish (i.e., to contain contaminant plume, minimize infiltration and gas emission, etc.).</p> <p><u>Multiple efforts have been undertaken by branches of the military to clear the sites of munitions and explosives of concern (MEC) over the years. These clearances cannot provide an absolute guarantee of removing all MEC items, the LUCs have been developed and employed at the Former Camp Elliott, Mission Trails and Former Camp Elliott, Tierrasanta FUDS. The objective of the LUCs is to minimize the exposure of residents and recreational users to MEC items through the use of provided information and notification, and if encountered, to properly educate people on avoidance and reporting procedures. The LUCs that have been implemented at the sites includes: (1) warning/information signage in open spaces; (2) public/community education/awareness; (3) notification of individuals (e.g., contractors, homeowners) potentially contacting MEC; and (4) establishment of document repositories. The following observations were made about each of the LUCs:</u></p> <ol style="list-style-type: none"> (1) <u>Warning/Information Signage. The warning signs are the most visible LUC. They are located throughout the Former Camp Elliott, Tierrasanta FUDS and at various locations within the Former Camp Elliott, Mission Trails FUDS. The condition of the signs varied from very good to poor and needing immediate replacement. The signs needing immediate replacement were located within the Camp Elliott, Tierrasanta FUDS. A munitions safety flyer was also observed at several kiosks within the Camp Elliott, Mission Trails FUDS. A sign condition log is provided as Appendix D to this Fourth Five-Year Review.</u> (2) <u>Public/Community Education/Awareness (see the Five-Year Review Report for updates).</u> (3) <u>Notification of Individuals (see the Five-Year Review Report for updates).</u> (4) <u>Establishment of Document Repositories. The document repository at the Tierrasanta Branch Library was updated with the most recent documents on 6 March 2020. A second repository was established at the MTRP Visitors Center on 6 March 2020 also.</u>
B. Adequacy of O&M	<p>Describe issues and observations related to the implementation and scope of O&M procedures. In particular, discuss their relationship to the current and long-term protectiveness of the remedy.</p> <p><u>In order for the LUCs to remain effective, annual audits of the LUCs should continue to be conducted at the sites.</u></p>
C. Early Indicators of Potential Remedy Problems	<p>Describe issues and observations such as unexpected changes in the cost or scope of O&M or a high frequency of unscheduled repairs, that suggest that the protectiveness of the remedy may be compromised in the future.</p> <p><u>None.</u></p>

D.	Opportunities for Optimization
	<p>Describe possible opportunities for optimization in monitoring tasks or the operation of the remedy.</p> <p><u>Add QR codes to signs and fact sheets/brochures; provide Spanish language educational materials and signage; contact the SDUSD to see what additional resources are needed to recommit to the annual safety presentations; provide the warning sign template and funding to MTRP; replace damaged or missing signs; prepare an MFR regarding the expansion of the Tierrasanta project remedy to cover Mission Trails.</u></p>

List of Attachments

- Attachment E1: Inspection Team Roster
- Attachment E2: Observation Locations Map (Mission Trails)
- Attachment E3: Observation Locations Map (Tierrasanta)
- Attachment E4: Sign Location Map (based on locations provided by USACE)
- Attachment E5: Site Visit Summary

Attachment E1: Inspection Team Roster

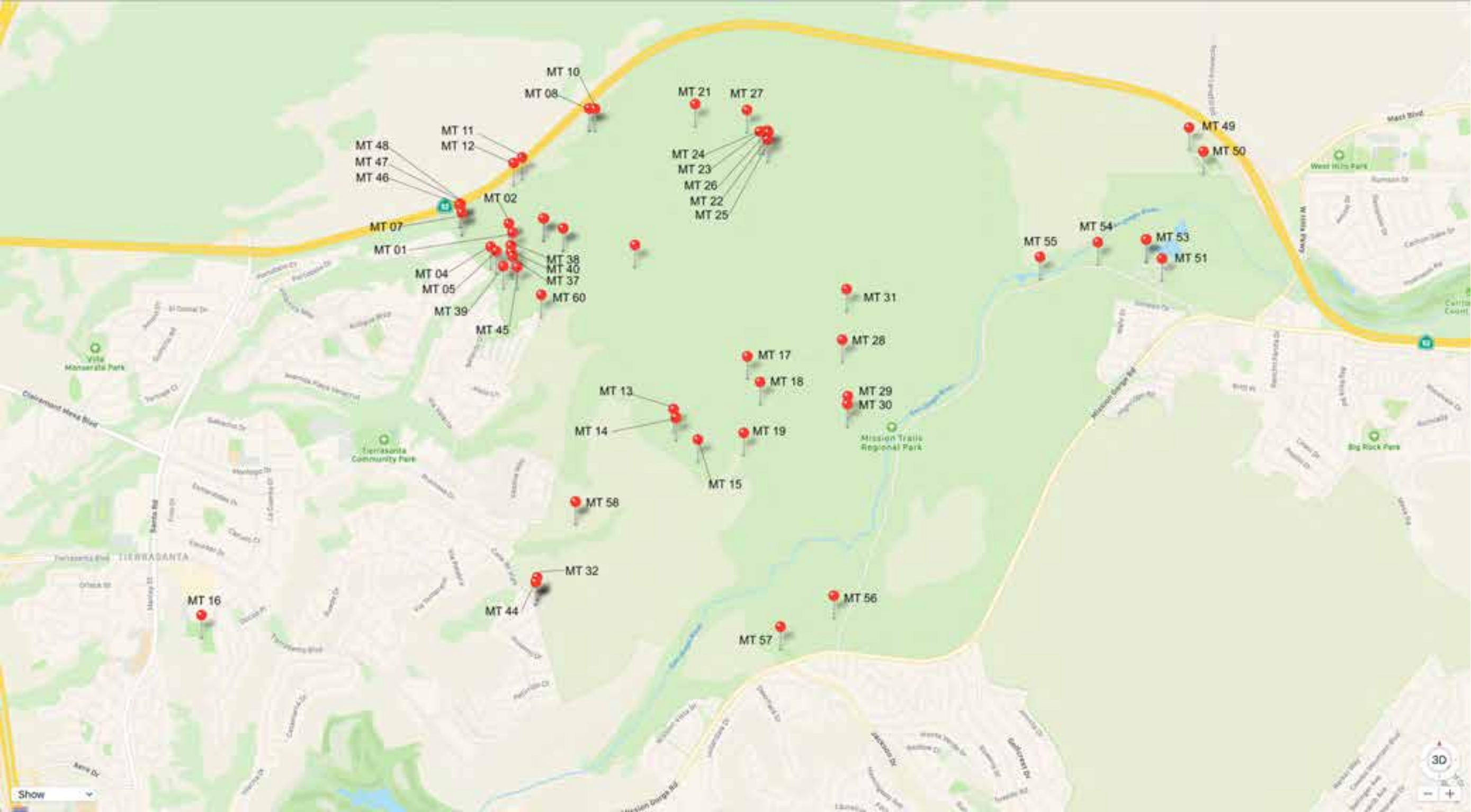
The site inspection of the Former Camp Elliott, Mission Trails and Former Camp Elliott, Tierrasanta Formerly Used Defense Sites was conducted on 5 to 7 November 2019 and 3 to 5 March 2020 by the following individuals:

Patti De La O, Program Manager
BSX, LLC
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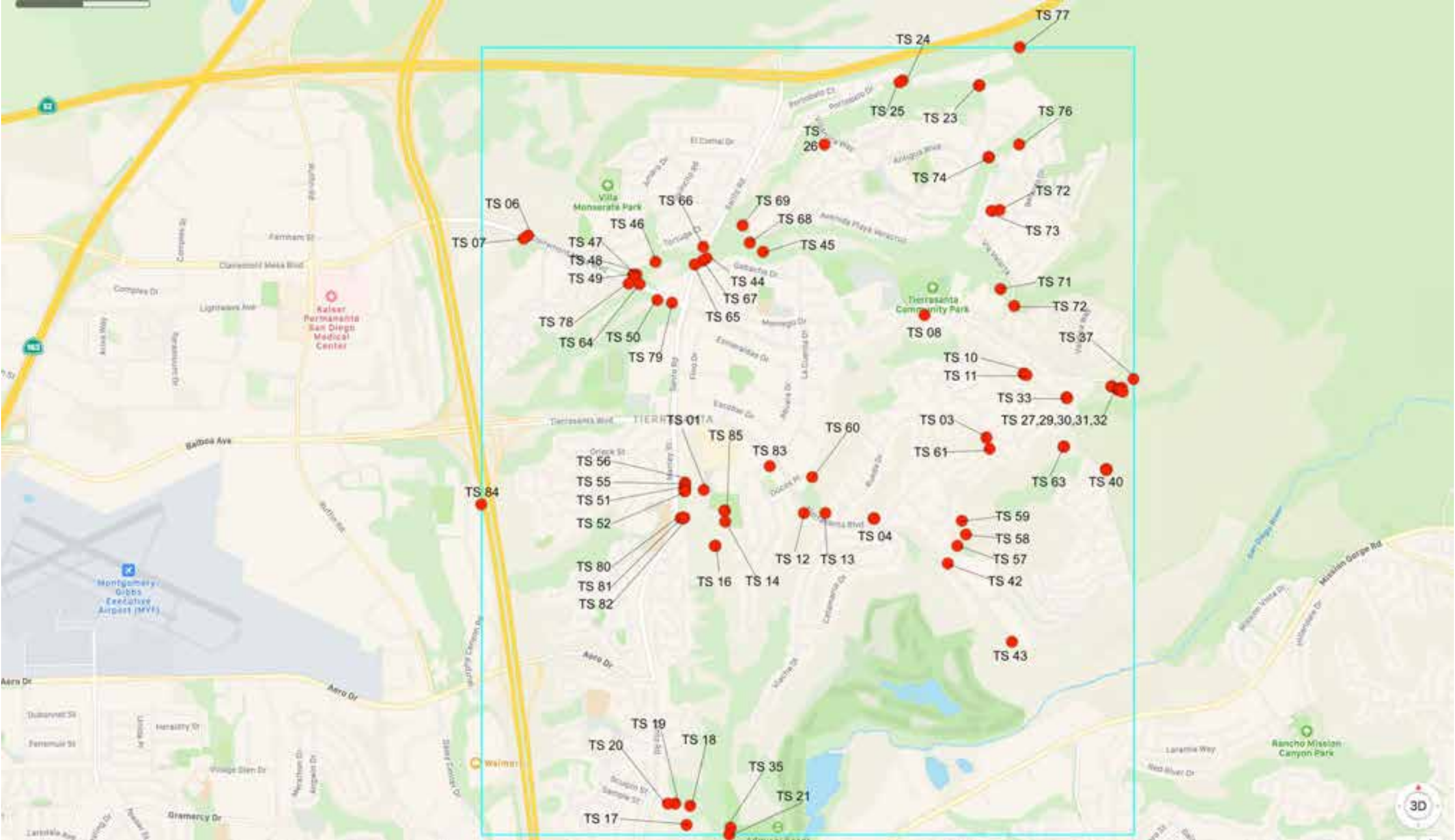
S. Julia Liu, P.E., Project Engineer
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Phone: (404) 428-1407
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Jeffrey Bryant, General Manager
BSX, LLC
Phone: (850) 736-1169
Email: jbryant@bsxak.com
(Present on 5 to 7 November 2019)

Attachment E2: Observation Location Map (Mission Trails)



Attachment E3: Observation Location Map (Tierrasanta)



Attachment E4: Sign Location Map (based on locations provided by USACE)

