APPENDIX B

MOUT Site MRA Conceptual Site Model

9.0 MOUT SITE MRA CONCEPTUAL SITE MODEL

The MOUT Site MRA CSM profiles are based on existing information and data provided by the Army and contained in the Fort Ord Administrative Record. Tables and figures associated with the MOUT Site MRA are located at the end of Section 9.0.

9.1 MOUT Site MRA Facility Profile

The facility profile provides information on location, physical boundaries, roadways and access, structures and utilities, historical military use, and administrative controls associated with the MRA.

9.1.1 Boundaries and Access

The MOUT Site MRA is located in the central portion of the former Fort Ord within the northeastern portion of the former impact area. The MRA includes the MOUT training area and a portion of Barloy Canyon Road located along the eastern boundary of the former impact area (Figure 9.1-1). The MOUT Site MRA is wholly contained within the jurisdictional boundaries of Monterey County.

The MOUT Site MRA encompasses approximately 61 acres and contains the following two USACE property transfer parcels: F1.7.2 and L20.8 (Table 9.1-1 and Figure 9.1-1).

Access to the MOUT Site MRA is currently restricted to the public by four-strand barbed-wire fencing with concertina along Eucalyptus Road to the north, and locked gates/barricades with concertina and warning signs across Barloy Canyon Road at the intersection with Eucalyptus Road. There is no fencing around the MOUT training area portion of the MRA; however, the MOUT training area is located within the former impact area, which is surrounded by four-strand barbed-wire fencing. Detailed information on roadways and access is provided in Table 9.1-2.

9.1.2 Structures and Utilities

The MOUT training area portion of the MRA (Parcel F1.7.2) includes 42 buildings and structures and a pistol range (Figure 9.1-1). An observation tower, range support building, and field latrine are the only unused structures on the MRA. Detailed information concerning location, size, description of structures, presence of ACM and/or LBP, if evaluated, and year constructed is provided in Table 9.1-3. There are no commercial businesses or full-time inhabitants within 4,000 feet of the MRA.

The MOUT training area (Parcel F1.7.2) is not served by water, sewer, storm, gas, or electrical utility systems. A telephone line enters the MOUT training area at the northwestern boundary (Figure 9.1-1).

The Barloy Canyon Road portion of the MOUT Site MRA (Parcel L20.8) does not have utilities. East of the Barloy Canyon Road, an electrical line runs in a north to south direction. The electrical line crosses from the eastern side to the western side of Barloy Canyon Road approximately one mile south of the intersection with Eucalyptus Road (Figure 9.1-1). More detailed information on utilities within the MRA is provided in Table 9.1-2.

9.1.3 Historical Military Use

Initial use of the area including the MOUT Site MRA began in approximately 1917 when the U.S. government purchased more than 15,000 acres of land and designated it as an artillery range. No training maps from this time period have been found, and no pre-World War II-era military munitions have been encountered during previous Army response actions within the MOUT Site MRA.

Figure 9.1-2 shows the locations of known firing ranges and training sites in the vicinity of the MRA. To facilitate previous MEC investigation and removal activities, the MOUT training area was designated as MRS-28, which corresponds to USACE Parcel F1.7.2 (Table 9.1-1). The Barloy Canyon Road portion of the MRA borders a former military training area to the east, and also a part of the eastern boundary of the former impact area. USACE Parcel L20.8 passes through one of the former training sites (MRS-27O). The two MRSs are shown on Figure 9.1-3.

A summary of the historical military use for each MRS is provided in Table 9.1-4. The primary historical military use within MRS-28 was for infantry training in an urban setting. Historical maps indicate a history of close combat training (USACE 1997a). The historical use of MRS-27O and the unfenced area east of Barloy Canyon Road included bivouac, troop maneuver, and subcaliber artillery training (USACE 1997a).

9.1.4 Administrative Controls

A number of administrative controls have been and will be imposed on the MRA, including land use covenants, county ordinances, FORA resolutions, an MOA between FORA and the DTSC, habitat-related requirements, and BOs. The applicable administrative controls are described in detail in Table 9.1-5. These administrative controls are enforceable and place constraints on field-related activities and future development activities until such time that remediation has been completed and the regulatory agencies have made a determination as to the closure status of the MOUT Site MRA.

9.2 MOUT Site MRA Physical Profile

The physical profile provides information on topography, geology, vegetation, surface water, and groundwater associated with the MRA that may affect the location, movement, detectability, and recovery of military munitions.

9.2.1 Topography and Geology

The terrain of the MOUT Site MRA is characterized as rugged terrain with slopes ranging from 15 to 50 percent. The elevation ranges from approximately 260 feet msl to approximately 420 feet msl in the MOUT training area and from approximately 200 feet msl to approximately 480 feet msl in the Barloy Canyon Road portion of the MRA (Figure 9.2-1). The geology includes alluvial fan and flood deposits for the Paso Robles Formation, and sand and gravel deposits of Aromas Formation. Surface soil conditions in the MOUT Site MRA are predominantly weathered dune sand (Figure 9.2-1), which provides a relatively good environment for conducting geophysical surveys, including electromagnetic and magnetic surveys. Table 9.2-1 provides more detailed information on the geology of the former Fort Ord and soils encountered within the MRA.

9.2.2 Vegetation

The vegetation of the MOUT Site MRA consists primarily of inland coast live oak woodland and grassland with smaller areas of maritime chaparral (Figure 9.2-2 and Table 9.2-2; USACE/Jones & Stokes 1992). The MRA is characterized by dense vegetation except for the MOUT training area, which is developed with training facilities and buildings. A number of sampling and removal actions have been performed at the MOUT training area that required vegetation removal. Given the terrain, the vegetation removal was performed predominantly through manual practices, although a significant portion of the MRA was burned during an accidental fire that occurred in July 2003. During past field activities, the presence of poison oak was noted in the area.

9.2.3 Surface Water and Groundwater

Groundwater investigations associated with the Basewide RI/FS have resulted in the installation of a number of groundwater monitoring wells on former Fort Ord property near the MOUT Site MRA. The Seaside Groundwater Basin is the main hydrogeologic structure that underlies the MRA. The depth to groundwater is estimated to be greater than 100 feet bgs and is not expected to influence geophysical surveys conducted for MEC remediation activities. No water supply wells or groundwater monitoring wells are identified in the area.

A number of aquatic features (i.e., vernal pools, ponds) are located within 800 feet (approximately 500 meters) of the MOUT training area and the southern end of Barloy Canyon Road (Figure 9.2-2).

9.3 MOUT Site MRA Release Profile

The release profile provides information on the MRA with respect to investigation and removal history, location and extent of military munitions, such as MEC, MPPEH, and MD, and history and conditions of HTW.

9.3.1 Investigation and Removal History

Numerous investigations and removal actions were conducted by the Army in the MOUT Site MRA, which included:

MRS-27O:

- Site Inspection in March 1996 (USACE 1997a)
- TCRA (Visual Surface) and Military Munitions Reconnaissance from October to November 2003 (Shaw 2005).

MRS-28:

- 4-foot 100 Percent Grid Sampling of 16 Grids from March to September 1998 (USA 2001c)
- SS/GS Sampling of 13 100-foot by 200-foot Grids from March to September 1998 (USA 2001c)
- TCRA (Visual Surface) and Military Munitions Reconnaissance from November to December 2003 (Shaw 2005).

In addition, a portion of Barloy Canyon Road and areas immediately adjacent to the road were investigated as part of the TCRA (surface reconnaissance) following the 2003 Eucalyptus Fire (Shaw 2005).

These investigations and removal actions are summarized in Table 9.3-1. During the removal actions, two burial pits containing MEC were discovered in the northern portion of MRS-28. Table 9.3-2 provides more detailed information on the specific types of MEC recovered from these burial pits. The results of these investigations and removal actions with respect to MEC and MD are summarized in Table 9.3-3 and are shown on Figures 9.3-1, 9.3-2, and 9.3-3.

9.3.2 Types of MEC Recovered and Hazard Classification

Table 9.3-3 includes a summary of MEC recovered from the MOUT Site MRA and associated hazard classification scores. All MEC removed from the MRA were identified and assigned a hazard classification. Hazard classification scores range from 0 to 3 according to the following descriptions:

Hazard Classification Score	Description
0	Inert MEC that will cause no injury
1	MEC that will cause an injury or, in extreme cases, could cause major injury or death to an individual if functioned by an individual's activities
2	MEC that will cause major injury or, in extreme cases, could cause death to an individual if functioned by an individual's activities
3	MEC that will kill an individual if detonated by an individual's activities

The hazard classification provides a qualitative assessment of risk for MEC. These classifications will be used as inputs in future risk assessments for the MOUT Site MRA. It should be noted that SAA is not considered in the risk assessment because SAA poses no explosive risk.

9.3.3 Location of MEC and MD

Figures 9.3-1, 9.3-2, and 9.3-3 show the location of MEC and MD previously removed from the MOUT Site MRA. A summary of the MEC and MD encountered during previous investigations and removal actions in the MOUT Site MRA is provided in Table 9.3-4 and included:

- 53 UXO items
- 59 DMM items
- 22,110 pounds of MD (includes MD-E and MD-F items if weights were documented)

The MMRP database indicates that the greatest concentrations of MEC and MD were encountered in the southern portion of MRS-28. The majority of MEC in MRS-28 was consistent with troop maneuver and close combat training, with the exception of a single high-explosive mortar. MEC consistent with use as a troop maneuver area were encountered east of Barloy Canyon Road, and high concentrations of subcaliber artillery simulators were encountered west of the southern end of Barloy Canyon Road, as expected. In addition, MEC consisting of 40 grenade fuzes and 16 mine fuzes were found in two separate burial pits (Figure 9.3-2).

Most of the investigated grids within MRS-28 contained less than 10 pounds of MD; however, the majority of the MRS only had visual surface removal. The highest concentration of MD by weight was encountered in the southern portion of the MOUT training area (Figure 9.3-3). A portion of the MD identified on Figures 9.3-1 and 9.3-3 includes SAS but not SAA.

All MEC and MD encountered and removed during previous removal operations were located within the 4-foot removal depth. The majority of MEC and MD removed was located

within 0 to 24 inches bgs. Figure 9.3-4 shows the distribution of MEC recovered at specified depth intervals and does not include MEC recovered from the burial pits.

9.3.4 HTW History and Conditions

A BRA was conducted by the Army to evaluate the potential presence of COCs related to HTW at known or suspected small arms ranges, multi-use ranges, and military munitions training sites within the former Fort Ord (Shaw/MACTEC 2006). The areas are identified as HAs. The objectives of the BRA investigation activities were to identify which HAs could be eliminated from consideration for potential remediation related to COCs, and to identify areas that require additional investigation for potential chemical contamination or should be considered for remediation/habitat mapping related to COCs.

Table 9.3-5 summarizes the findings of the BRA investigation activities with respect to HTW for each MRS. As stated in the FOSET, based on the BRA, no further action has been recommended for HA-158 (MRS-28) because the area was still in active use (Army 2007). However, MRS-28 is also part of IRP Site 39 at the former Fort Ord. Previous soil remediation activities were conducted as part of the Site 39 program, which has an existing ROD.

In 2003, four buildings at the MOUT training area (Parcel F1.7.2) were burned during the Eucalyptus Road Fire. Previous surveys showed that three of the four structures had ACM. In 2004, the Army performed soil sampling within the footprints of the former buildings and adjacent areas to determine whether the soil contained asbestos or lead. No detectible asbestos was found to be present, and no further action was required. The soil did contain concentrations of lead, which was identified as requiring notification prior to transfer or lease (Shaw 2004b).

9.3.5 Regulatory Status

Work completed to date has been documented in after action reports, which have received regulatory reviews; however, the regulatory agencies have identified the following outstanding issue:

- The CERCLA process must be completed for the MOUT Site MRA including development of an RI/FS, development of a Proposed Plan, and completion of a ROD

9.4 MOUT Site MRA Land Use and Exposure Profile

The land use and exposure profile provides information on the MRA with respect to cultural resources, the current and reasonably foreseeable future uses of the land, and the potential human receptors that may be exposed to military munitions.

9.4.1 Cultural Resources

According to archaeological records, the greater Monterey Peninsula was occupied by Native American groups, including the Ohlone (Costanoan) Indians (EA 1991). Monterey County has designated the southeastern margin of the former Fort Ord as an archaeologically sensitive zone based on two known archaeological sites (EA 1991). The remaining portions of the former Fort Ord have been designated as having low or no archaeological sensitivity. The MOUT Site MRA is located in the central portion of the former Fort Ord in an area designated as having low archaeological sensitivity.

Actions to be taken at the MOUT Site MRA will be in compliance with the Programmatic Agreement Among the Department of the Army, the Advisory Council on Historic Preservation, and the California State Historic Preservation Officer Regarding the Base Closure and Realignment Actions at Fort Ord, California.

9.4.2 Current Land Use

This MOUT Site MRA includes the MOUT training area (Parcel F1.7.2) and a portion of Barloy Canyon Road (Parcel L20.8). The MOUT training area consists of a mock city that is currently used for tactical training of military, federal, and local law enforcement agencies. To the east of the MOUT training area is Barloy Canyon Road, which is used as a controlled roadway to periodically access the Laguna Seca Raceway events.

9.4.3 Reasonably Foreseeable Future Land Use

Table 9.4-1 and Figure 9.4-1 identify the proposed uses of the MRA by parcel. As shown in the Base Reuse Plan, the parcels in the MOUT Site MRA are scheduled for development. It is important to note that the development land use category encompasses infrastructure activities, such as roadway and utility corridor construction.

The MOUT training area (Parcel F1.7.2) is expected to continue being used as a tactical training area for law enforcement agencies. The Barloy Canyon portion of the MOUT Site MRA is likely to be improved and opened as a transportation corridor. To facilitate reuse, infrastructure improvements, such as utilities and roadways, are required.

9.4.4 Potential Receptors

A number of potential human receptors that could come in contact with residual MEC have been identified for current and future land use scenarios. The potential human receptors include:

- Construction Workers (persons conducting surface and subsurface construction activities) – current/future
- Utility Workers (persons installing and maintaining surface and subsurface utilities) - current/future

- Trespassers (persons not authorized to enter or use an area) – current/future
- Firefighters (may require installation of fire breaks) – current/future
- Emergency Response Workers (police and emergency medical technicians conducting surface activities) – current/future
- Ancillary Workers (biologist, archaeologists) – current/future

9.5 MOUT Site MRA Ecological Profile

The ecological profile provides information on the MRA with respect to biological resources, plant communities and habitats, threatened and endangered species, and habitat management. This information is discussed below and provided in Table 9.5-1.

As discussed in Section 9.3.4, COCs related to HTW have been previously addressed and no further action was recommended. Therefore, potential exposure of ecological receptors to the primary risk factors has been mitigated to an acceptable level and ecological receptor exposure is not considered further in this CSM.

The HMP identifies the MOUT Site MRA as development without restriction (Figure 9.5-1). Nearby NRMA and habitat reserve areas support plant and animal species that require implementation of mitigation measures identified in the HMP to ensure compliance with the ESA and to minimize impacts to listed species.

FORA will implement the mitigation requirements identified in the HMP for MEC activities in accordance with the BOs developed during formal consultation between the Army and the USFWS under Section 7 of the ESA. For habitat areas, these measures include conducting habitat monitoring in compliance with Chapter 3 of the HMP (USACE 1997b). For borderland areas, FORA will follow best management practices while conducting work to prevent the spread of exotic species, limit erosion, and limit access to the NRMA.

9.5.1 Major Plant Communities and Ecological Habitats

The vegetation of the MOUT Site MRA consists primarily of inland coast live oak woodland and grassland with smaller areas of maritime chaparral (Figure 9.2-2; USACE/Jones & Stokes 1992). The MRA is characterized by dense vegetation except for the MOUT training area, which is developed with training facilities and buildings. During past field activities, the presence of poison oak was noted in the area.

9.5.2 Threatened and Endangered Species

Special-status biological resources are those resources, including plant, wildlife, and native biological communities, that receive various levels of protection under local, state, or federal laws, regulations, or policies. The closure and disposal of former Fort Ord is considered a major federal action that could affect several species proposed for listing or listed as threatened or endangered under the federal ESA.

The HMP for former Fort Ord complies with the USFWS BO and establishes the guidelines for the conservation and management of wildlife and plant species and habitats that largely depend on former Fort Ord land for survival (USACE 1997b). The HMP incorporated conservation measures pursuant to USFWS BOs dated prior to issuance of the HMP in April 1997. Future MEC remediation is required to be consistent with the applicable conservation measures.

Threatened or endangered plant species identified as having possible occurrence in the MOUT Site MRA include sand gilia (endangered) and Monterey spineflower (threatened).

In 2004, the CTS was identified as a threatened species. CTS may be found as far as 2 km from aquatic breeding habitats. Figure 9.5-1 shows the MOUT Site MRA with respect to various aquatic features. The MOUT Site MRA may have a presence of CTS because the MRA is located within 500 meters of two aquatic features, one of which was identified as suitable breeding habitat and the other which was identified as a known CTS breeding site in 2004.

9.5.3 Other Communities and Species of Concern

As identified in the HMP, a number of species that could be found on the MOUT Site MRA have been identified in Table 9.5-1 by parcel. The following species are identified in the HMP as having possible occurrence in the MOUT Site MRA: toro manzanita, Monterey ceanothus, Eastwood's ericameria, Hooker's manzanita, and Monterey ornate shrew.

9.6 MOUT Site MRA Pathway Analysis

As discussed in Sections 9.3.4 and 9.5, potential exposure of human and ecological receptors to COCs related to the HTW program has been evaluated by the Army; based on the Army's evaluation in the FOSET, no further action relative to the COCs is required under the ESCA Remediation Program. Therefore, no further discussion of potential exposure to human or ecological receptors to COCs relative to the HTW program is presented in this pathway analysis. The primary focus of the exposure pathway analysis is for human health risk from MEC that are potentially present.

9.6.1 Exposure Pathways

An exposure pathway analysis was conducted for the MOUT Site MRA using the information gathered in the CSM profiles. Exposure pathways include source, access, receptor, and activity. The likelihood of exposure, however, has been significantly reduced as a result of the Army's previous surface removal actions and subsurface sampling actions. Exposure pathways for the MOUT Site MRA are presented on Figure 9.6-1 and discussed below.

Source

Source areas within the MOUT Site MRA were partially addressed during the Army's previous sampling and removal actions. The historical source areas within the MOUT Site MRA are shown on Figure 9.1-3, and recovered MEC and MD from these areas are shown on Figures 9.3-1, 9.3-2, and 9.3-3. The sources include firing points, target areas, and range safety fans for military weapons training activities and troop training/maneuver areas.

Figure 9.6-2 illustrates the most likely release mechanisms of MEC being found in the MOUT Site MRA, which include:

- Mishandling/Loss, Abandonment, and Burial (Military Weapons Training)
- Direct and Indirect Firing and Thrown (Military Weapons Training)
- Firing, Mishandling/Loss, Abandonment, and Burial (Troop Training and Maneuvers)

Access

Access to the MOUT training area and Barloy Canyon Road is restricted to authorized users.

Receptor / Activity

Table 9.6-1 identifies the receptors and exposure media as Ground Surface and Below Grade.

9.6.2 Exposure Pathway Analysis

As discussed above, Figure 9.6-1 graphically presents the exposure pathways analysis for the MOUT Site MRA. The graphic shows the current and future potentially incomplete and potentially complete pathways for activities in the MOUT Site MRA. A small risk of MEC exposure to current and future receptors remains during intrusive activities in the MOUT training area (MRS-28) and along Barloy Canyon Road. The risk of MEC exposure to current and future receptors during surface activities along Barloy Canyon Road is unlikely; however, this will receive further consideration.

9.7 MOUT Site MRA Conclusions and Recommendations

Potential exposure of human and ecological receptors to COCs related to the HTW program has been evaluated by the Army. Based on the Army's evaluation in the FOSET, no further action relative to the COCs is required under the ESCA RP. The CSM has identified a potential for human health risk associated with residual (or potentially present) MEC in the MOUT Site MRA.

As required by the AOC, the SEDR provides conclusions and recommendations for each MRA. Generally, the SEDR recommendations identify that a particular MRA falls into one or more of the following categories:

- No response action or no further response action is appropriate
- Response action is necessary
- Additional data are required to fill data gaps
- Proceed to RI

The MEC encountered within the MOUT Site MRA are consistent with the historical uses, including weapons and troop training, bivouac, and troop maneuvers. Therefore, the MOUT Site MRA falls into the category of proceed to RI. Based on the existing data for the MOUT Site MRA, the recommendation is:

- Proceed with Documentation – Prepare the RI/FS and subsequent ROD.

The proposed pathway to regulatory closure incorporating the above recommendations is presented in Section 13.0 of this SEDR.

Table 9.1-1
MOUT Site MRA – Parcel Numbers, Acreage, and MRS Identifiers

USACE Parcel Number (for land transfer)	Acreage (approximate)	MRS Identifier
F1.7.2	54	MRS-28
L20.8	7	MRS-27O
MRA TOTAL	**61**	

Note: The northern portion of USACE Parcel L20.8 passes through MRS-27O, and the southern portion of the parcel is adjacent to MRS-14D.

Table 9.1-2
MOUT Site MRA – Site Features

Feature	Description
Roadways	• Eucalyptus Road is a closed two-lane roadway that provides restricted access to the MOUT Site MRA from the north. • Barloy Canyon Road (Parcel L20.8) is east of the MOUT training area (Parcel F1.7.2). • Internal to the MOUT training area, a number of dirt and paved roads are present. Additionally, there are a number of dirt trails within the MRA.
Structures and Utilities	• No utility systems (water, wastewater, electrical, gas, or storm drainage) are found in either Parcel F1.7.2 or L20.8. • A telephone line enters Parcel F1.7.2 at the northwestern border and terminates at Building 613. • East of the Barloy Canyon Road, an electrical line runs in a north to south direction. The electrical line crosses from the eastern side to the western side of Barloy Canyon just over a mile south of the intersection with Eucalyptus Road.
Fencing and Access	• Access is restricted by four-strand barbed-wire fencing with concertina along Eucalyptus Road and locked gates/barricades with concertina and warning signs across Barloy Canyon Road. • There is no fencing around the MOUT training area itself; however, the MOUT training area is located within the former impact area, which is surrounded by four-strand barbed-wire fencing.

Table 9.1-3
MOUT Site MRA – Existing Structures and Buildings

USACE Parcel Number	Facility Number	Area (square footage)	Description	Asbestos-Containing Material	Lead-Based Paint	Year Built
F1.7.2	628	1,659	MOUT Range	no ACM	NO	1986
F1.7.2	627	2,214	MOUT Range	no ACM	NO	1986
F1.7.2	829	200	Observation Tower	no ACM	YES	1969
F1.7.2	826	200	Combat Pistol Range	no ACM	YES	1969
F1.7.2	R9521	172	Field Range Latrines	unknown	NO	1984
F1.7.2	624A	5,106	MOUT Range	unknown	unknown	unknown
F1.7.2	623	1,383	MOUT Range	no ACM	NO	1986
F1.7.2	622	18,701	MOUT Range	no ACM	NO	1986
F1.7.2	621B	724	Field Range Latrines	no ACM	NO	1986
F1.7.2	624	2,027	Helipad	unknown	NO	1990
F1.7.2	613	3,868	Range Support Building	unknown	NO	1986
F1.7.2	601	2,436	MOUT Range	no ACM	NO	1986
F1.7.2	632	516	Range Support Building	unknown	unknown	unknown
F1.7.2	610B	2,023	MOUT Range	no ACM	NO	1986
F1.7.2	615	1,430	MOUT Range	no ACM	NO	1986
F1.7.2	609A	2,085	MOUT Range	no ACM	NO	1986
F1.7.2	633	1,010	Covered Training Area	unknown	unknown	unknown
F1.7.2	610A	2,120	MOUT Range	no ACM	NO	1986
F1.7.2	608A	3,039	MOUT Range	no ACM	NO	1986
F1.7.2	609B	2,310	MOUT Range	no ACM	NO	1986
F1.7.2	617	2,407	MOUT Range	no ACM	NO	1986
F1.7.2	619D	992	MOUT Range	no ACM	NO	1986
F1.7.2	620D	520	MOUT Range	no ACM	NO	1986
F1.7.2	611A	1,834	MOUT Range	no ACM	NO	1986
F1.7.2	612	508	MOUT Range	no ACM	NO	1986
F1.7.2	618	725	MOUT Range	no ACM	NO	1986
F1.7.2	620C	615	MOUT Range	no ACM	NO	1986
F1.7.2	619C	1,014	MOUT Range	no ACM	NO	1986
F1.7.2	621A	1,038	Field Range Latrines	no ACM	NO	1986
F1.7.2	605	3,567	MOUT Range	no ACM	NO	1986

Table 9.1-3
MOUT Site MRA – Existing Structures and Buildings

USACE Parcel Number	Facility Number	Area (square footage)	Description	Asbestos-Containing Material	Lead-Based Paint	Year Built
F1.7.2	611B	1,855	MOUT Range	no ACM	NO	1986
F1.7.2	607A	3,044	MOUT Range	no ACM	NO	1986
F1.7.2	608B	3,297	MOUT Range	no ACM	NO	1986
F1.7.2	606	3,694	MOUT Range	no ACM	NO	1986
F1.7.2	604B	2,541	MOUT Range	no ACM	NO	1986
F1.7.2	619B	1,046	MOUT Range	no ACM	NO	1986
F1.7.2	607B	2,782	MOUT Range	no ACM	NO	1986
F1.7.2	604A	2,540	MOUT Range	no ACM	NO	1986
F1.7.2	620B	398	MOUT Range	no ACM	NO	1986
F1.7.2	603	2,222	MOUT Range	no ACM	NO	1986
F1.7.2	620A	478	MOUT Range	no ACM	NO	1986
F1.7.2	619A	925	MOUT Range	no ACM	NO	1986
F1.7.2	616	975	MOUT Range	no ACM	NO	1986
F1.7.2	614	3,822	MOUT Range	no ACM	NO	1986

Table 9.1-4
MOUT Site MRA – Historical Military Use

Location	Prior Use	Description
Unknown	EOD Training Area	The area of Site MRS 28 may have been used as an Explosive Ordnance Disposal (EOD) training area (USACE 1997a).
Unknown		The MOUT Site MRA reportedly contained a lot of ordnance, including torpedoes that were removed from the site. The type of torpedoes was not specified, but it is suspected that they were Bangalore Torpedoes. There are reports of 40mm high-explosive grenades and bazooka rounds being fired into Wildcat Canyon, somewhere south of Impossible City (USACE 1997a).
Impossible City	Operations in Urban Center Training	Located in the northeastern portion of MRS-28 and was used for training infantry to operate within an urban setting. Several buildings within the city were small arms live-fire sites (USACE 1997a).
Tire House	High-Explosive Hand Grenades	A structure made from sand-filled tires where live fire of small arms and the use of high-explosive hand grenades were authorized (USACE 1997a).
Hand Grenade	Unknown	Maps from the 1950s show several grenade training areas in the vicinity of MRS-28 (USACE 1997a).
Combat in Cities	Unknown	Maps from the 1950s indicate a Combat in Cities Range (USACE 1997a).
Rocket Launcher	Unknown	Maps from the 1950s indicate a Rocket Launcher Range (USACE 1997a).
Range 35	Quick Kill Range	A 1973 Standard Operating Procedure (SOP) showed Range 35 as a quick kill range with up to 20 firing locations (MACTEC 2007). Authorized weapons were the M16 and M14 rifles. In 1977, Range 35 was listed as an indirect fire subcaliber range. Based on a review of 1964-1972 training maps, it appears that the area may have also been used as a rocket launcher range. After 1977, the range was listed as either “inactive” or as the “MOUT.”
Range 35 A	Combat Pistol Range	Used as a combat pistol range from at least 1972 (USACE 1997a). Information from September 1980 through October 1992 indicated that the range had six small arms firing lanes and was authorized for 38 and 45 caliber pistol fire (MACTEC 2007).
Range 74	Mock-Up Village	Shown as a mock-up village in the 1940s and 1950s (USACE 1997a).
Range 147, TS-15 (MRS-27O)	Training Site	Identified as a former training site (USACE 1997a). As defined in the Fort Ord Regulations, a training site is a training facility located within a training area and used as an overnight bivouac area. The area is identified as Bivouac L on a 1964 training map. On 1976 through 1987 ranges and training maps, the site is identified as Training Site 15.

Table 9.1-4
MOUT Site MRA – Historical Military Use

Location	Prior Use	Description
Adjacent to Barloy Canyon Road		
P-5 (MRS-14D)	Subcaliber Artillery Impact Area	A 1956 map shows a subcaliber artillery training area in this area identified as P-5. According to the Archives Search Report, this area was used from approximately 1972 through 1992 for subcaliber artillery training (USACE 1997a).
Training Area	Division Artillery Training	The area east of Barloy Canyon Road was labeled Division Artillery training area on 1950s maps (USACE 1997a).

Table 9.1-5
MOUT Site MRA – Administrative Controls

Type	Description
Land Use Covenants	• To further ensure protection of human health and the environment, the Army has agreed to enter into CRUPs with the State of California. The CRUPs place additional use restrictions on all of the transferring property, as appropriate. • Due to Fort Ord's former use as a military installation, the property may contain MEC and a risk remains of encountering subsurface MEC. Any person conducting ground-disturbing or intrusive activities (e.g., digging or drilling) must comply with the applicable municipal code. Any alterations, additions, or improvements to the property in any way that may violate excavation restrictions are prohibited. No actual or potential hazard exists on the surface of the property from MEC that may be in the subsurface of the property, provided the CRUPs are adhered to (Army 2007). • The CRUPs are defined in the "Memorandum of Agreement Among the Fort Ord Reuse Authority, Monterey County and Cities of Seaside, Monterey, Del Rey Oaks and Marina, California State University Monterey Bay, University of California Santa Cruz, Monterey Peninsula College, and the Department of Toxics Substances Control Concerning the Monitoring and Reporting of Environmental Restrictions on the Former Fort Ord, Monterey County, California." • These restrictions involve the enforcement of site review and reporting requirements and agency cost recovery/reimbursement requirements as imposed by the DTSC.
Restrictions to Digging / Excavation	• Monterey County Ordinance 16.10 prohibits excavation, digging, development, or ground disturbance of any type on the former Fort Ord that involves the displacement of 10 or more cubic yards of soil without approval.
FORA Resolution 98-1	• An approved FORA resolution that contains proposed and suggested measures to avoid or minimize hazardous material impact.
ESCA MOA	• The MOA between FORA and the jurisdictions for the purpose of defining terms of an agreement for holding and managing (ownership and responsibilities) property while remedial work is accomplished under an ESCA. • The MOA establishes FORA's ownership during MEC remediation period; identifies that jurisdictions need to provide public safety response from police, fire, and other emergency personnel as needed; establishes control of access to ESCA properties during MEC remediation period; and agreement that access to properties will be governed by the restrictions included in the Land Use Covenant accompanying the transfer of the property.
Habitat Management Plan	• The HMP incorporated conservation measures pursuant to USFWS BOs dated prior to issuance of the HMP in April 1997. Specific MEC activities were addressed in Chapter 3 of the HMP (USACE 1997b).
Biological Opinions	• Since the release of the HMP, three additional BOs have been issued that are relevant to the MEC remediation period (USFWS 1999, 2002, and 2005). Accordingly, some information has been updated and additions have been made to the sections that address MEC activities. • Future MEC work is required to be consistent with the applicable conservation measures.

Table 9.2-1
MOUT Site MRA – Geology and Soils

Type	Description
General Geology	• The former Fort Ord is located within the Coast Ranges Geomorphic Province, which consists of northwest-trending mountain ranges, broad basins, and elongated valleys generally paralleling the major geologic structures. • The former Fort Ord is located at the transition between the mountains of the Santa Lucia Range and the Sierra de la Salinas to the south and southeast, respectively, and the lowlands of the Salinas River Valley to the north. • The geology of the former Fort Ord generally reflects this transitional condition. Older, consolidated rocks are characteristically exposed in the mountains near the southern base boundary but are buried under a northward-thickening sequence of younger, unconsolidated alluvial fan and fluvial sediments in the valleys and lowlands to the north. In the coastal lowlands, these younger sediments commonly interfinger with marine deposits. • The former Fort Ord and the adjacent areas are underlain, from depth to ground surface, by one or more of the following older, consolidated units: Mesozoic granite and metamorphic rocks; Miocene marine sedimentary rocks of the Monterey Formation; and upper Miocene to lower Pliocene marine sandstone of the Santa Margarita Formation (and possibly the Pancho Rico and/or Purisima Formations). • Locally, these units are overlain and obscured by geologically younger sediments, including: Pliocene-Pleistocene alluvial fan, lake, and fluvial deposits of the Paso Robles Formation; Pleistocene eolian and fluvial sands of the Aromas Sand; Pleistocene to Holocene valley fill deposits consisting of poorly consolidated gravel, sand, silt, and clay; Pleistocene and Holocene dune sands; recent beach sand and alluvium. • Depth to groundwater is likely to be more than 100 feet bgs. Layers of perched groundwater may be present..
Topography and Soils	• Terrain is characterized as rugged with slopes ranging from 15 to 50 percent. • Elevation ranges from approximately 260 feet msl to approximately 420 feet msl in the MOUT training area and from approximately 200 feet msl to approximately 480 feet msl in the Barloy Canyon Road portion of the MRA. • Soils consist predominantly of Arnold Loamy Sand with 15 to 50 percent slopes, Aquic Xerofluvents, and Arnold Loamy Sand with 9 to 15 percent slopes. Smaller areas of the MRA consist of dissected Xerothents, Santa Ynez Fine Sandy Loam with 15 to 30 percent slopes, and Baywood Sand with 2 to 15 percent slopes.

References: EA 1991, HLA 1995, and the Fort Ord MMRP Database

Table 9.2.2
MOUT Site MRA – Vegetation

USACE Parcel Number	MRS Identifier	Vegetation
F1.7.2	MRS-28	Inland coast live oak woodland, grassland, and maritime chaparral
L20.8	MRS-27O	Inland coast live oak woodland, grassland, maritime chaparral, coast live oak savanna, and ice plant mats surrounding the roadway.

Reference: USACE/Jones & Stokes 1992

Table 9.3-1
MOUT Site MRA – Investigation, Sampling, and Removal Activities

Activity	Summary
MRS-27O	• In March 1996, a USACE OESS performed a site inspection and found expended small arms blanks and expended pyrotechnic items (USACE 1997a). • From approximately October to November 2003, a visual surface TCRA and military munitions reconnaissance was conducted to remove MEC greater than 2 inches in size following an accidental fire in the area (Eucalyptus Fire Area) (Shaw 2005).
MRS-28	• From March to September 1998, 100 percent grid sampling was conducted in 16 grids to a depth of 4 feet in the northeastern and southwestern portions of the MRS. Additionally, SS/GS sampling operations were conducted in 13 100-foot by 200-foot grids in the central portion of the MRS (USA 2001c). • From approximately November to December 2003, a visual surface TCRA and military munitions reconnaissance was conducted to remove MEC greater than 2 inches in size following an accidental fire in the area (Eucalyptus Fire Area) (Shaw 2005).

Table 9.3-2
MOUT Site MRA – Burial Pits Containing MEC

Location	Grid	Type	Item Description	Qty	Depth (inches bgs)
MRS-28	B3I9C0	DMM	Fuze, Mine, Combination, M10 (M10A1, M10A2)	16	10
	B3I9C4	DMM	Fuze, Grenade, Hand, M10 Series, M10A3	40	10

Reference: Fort Ord MMRP Database

Please note: Munitions descriptions have been taken directly from the Army's MMRP Database and/or other historical documents. Any errors in terminology, filler type, and/or discrepancies between model number and caliber/size are a result of misinformation from the data sources.

Table 9.3-3
MOUT Site MRA – Types of MEC Removed and Hazard Classification

MEC Items	UXO	DMM	ISD	Hazard Classification
Cartridge, ignition, M2 series	0	1	0	1
Flare, surface, trip, M49 series	1	0	0	1
Fuze, grenade, hand, M10 series	0	40	0	1
Fuze, grenade, hand, M204 series	6	1	0	1
Fuze, grenade, hand, practice, M205 series	3	0	0	1
Fuze, grenade, hand, practice, M228	0	1	0	1
Fuze, mine, combination, M10 series	0	16	0	1
Grenade, hand, fragmentation, M67	3	0	0	3
Grenade, hand, fragmentation, MK II	1	0	0	3
Grenade, hand, practice, M21	5	0	0	1
Grenade, hand, practice, M62	1	0	0	1
Grenade, hand, practice, M69	2	0	0	1
Grenade, hand, practice, MK II	2	0	0	1
Grenade, hand, smoke, M18 series	7	0	0	1
Grenade, hand, smoke, M48	7	0	0	1
Grenade, rifle, antitank, M9 series	1	0	0	3
Projectile, 22mm, subcaliber, practice, M744	1	0	0	1
Projectile, 40mm, high explosive, M381	1	0	0	3
Projectile, 40mm, parachute, illumination, M583 series	1	0	0	1
Projectile, 81mm, mortar, high explosive, M43 series	1	0	0	3
Rocket, 3.5 inch, practice, M29 series	1	0	0	0
Signal, illumination, ground, M125 series	1	0	0	2
Simulator, blast, stinger, civilian, M15	2	0	0	2
Simulator, explosive booby trap, flash, M117	2	0	0	1
Simulator, flash artillery, M110	1	0	0	1
Simulator, grenade, hand, M116A1	1	0	0	2
Simulator, projectile, airburst, M74 series	1	0	0	1
Simulator, projectile, ground burst, M115A2	1	0	0	2
MRA TOTAL	**53**	**59**	**0**	

Reference: Fort Ord MMRP Database.

Please note: Munitions descriptions have been taken directly from the Army's MMRP Database and/or other historical documents. Any errors in terminology, filler type, and/or discrepancies between model number and caliber/size are a result of misinformation from the data sources.

Table 9.3-4
MOUT Site MRA – Summary of Recovered MEC and MD

Type	Summary
UXO	53 items
DMM	59 items
MD	22,110 pounds (includes MD-E and MD-F items if weights were documented)
Aerial Extent	• The greatest concentrations of MEC and MD were encountered in the southern portion of MRS-28. The majority of MEC in MRS-28 were consistent with troop maneuver and close combat training with the exception of a single high-explosive mortar. • MEC consistent with use as a troop maneuver area were encountered east of Barloy Canyon Road, and a high concentration of subcaliber artillery simulators were encountered, as expected, southeast of Barloy Canyon Road.
Vertical Extent	• The MMRP database indicates that all MEC and MD encountered and removed during previous removal operations were located within the 4-foot removal depth. The majority of MEC and MD removed were located within 0 to 24 inches bgs. Figure 9.3-4 shows the distribution of MEC recovered at specified depth intervals and does not include MEC recovered from the burial pits. • The majority of MEC were found during the visual surface TCRA. Forty grenade fuzes and 16 mine fuzes were found in two separate burial pits.

Table 9.3-5
MOUT Site MRA – HTW History and Conditions

Type	Summary
MRS-28	• In 2003, four buildings at the MOUT training area (Parcel F1.7.2) were burned during the Eucalyptus Fire. Previous surveys showed that three of the four structures had ACM. In 2004, the Army performed soil sampling within the footprints of the former buildings and adjacent areas to determine whether the soil contained asbestos or lead. The findings were documented in accordance with the approved sampling and analysis plan (Shaw 2004a). Based on the analytical results, it was concluded that no detectible asbestos was present and no further action was required. The soil did contain concentrations of lead; therefore. the property recipient is required to be notified of the lead-affected soil prior to transfer or lease (Shaw 2004b). • The evaluation of HA-158 (MRS-28) included a literature search and reconnaissance of the site. SAA was found, including live blanks and expended blank casings. Additionally, MEC and MD were observed. This site is still active as a training area for tactical training of military, federal, and local law enforcement agencies. Because this site is still active, no further investigation for MC is recommended under the BRA (Shaw/MACTEC 2006; Army 2007). • At HA-35A (Combat Pistol Range), there has been release of lead, copper, and antimony associated with SAA uses. However, the Army concluded that, since the range continues to be active, no action related to MC is recommended (Shaw/MACTEC 2006; Army 2007).
MRS-27O	• The evaluation of HA-147 (MRS-27O) included a literature search and site reconnaissance. Expended blank casings were found during the site visit; however, no MEC or MD were identified. Because no evidence of range or soil contamination was found, and only expended pyrotechnics were identified, no further action related to MC was recommended for HA-147 under the BRA (Shaw/MACTEC 2006; Army 2007).

Table 9.4-1
MOUT Site MRA- Future Land Use by Parcel

USACE Parcel Number	MRS Number	Land Use Category	Description	Acreage
F1.7.2	MRS-28	Development	Law Enforcement Use, Homeland Security Training, Fenced-Off Training Areas	54
L20.8	No Related MRS	Development	Roadway	7
MRA TOTAL				**61**

Table 9.5-1
MOUT Site MRA – Ecological Information

Type	Summary
Biological	• The dominant vegetation is characterized as oak woodlands and grasslands with smaller areas of maritime chaparral, which are described below. • Maritime chaparral is one of the dominant vegetation types at former Fort Ord, characterized by a wide variety of evergreen, sclerophyllus (hard-leaved) shrubs occurring in moderate to high density on sandy, well-drained substrates within the zone of coastal fog. This community is primarily dominated by shaggy-barked manzanita. Other species found in the shrub layer include chamise, toro manzanita, sandmat manzanita, toyon, blue blossom ceanothus, and Monterey ceanothus. The greatest diversity of wildlife species at former Fort Ord occurs in the chaparral. Birds such as orange-crowned warbler, rufous-sided towhee, and California quail nest in the chaparral. Small mammals such as California mouse and brush rabbit forage in this habitat and serve as prey for gray fox, bobcat, spotted skunk, and western rattlesnake. • Coast Live Oak Woodland and Savanna - The coast live oak woodland is an open-canopied to nearly closed-canopied community with a grass or sparsely scattered shrub understory. Oaks provide nesting sites and cover for birds and cover for many mammals. Common wildlife species in coast live oak woodlands include black-tailed deer, California mouse, raccoon, California quail, scrub jay, and Nuttall's woodpecker. Red-tailed hawks and great-horned owls nest and roost in the inland coast live oaks, but probably make little use of the coastal oaks because the tightly spaced branches discourage them from entering the tree canopies. • Grasslands - Annual grasslands dominated by introduced species such as slender wild oats, soft chess, and ripgut brome are the most common grassland communities. Perennial grasslands are of two types at former Fort Ord: valley needlegrass grassland and blue wildrye. Common wildlife species include California ground squirrel, Heerman's kangaroo rat, narrow-faced kangaroo rat, western meadowlark, and kestrel.
Habitat Management Plan / Biological Opinions	• The USFWS BO required that an HMP be developed and implemented to reduce the incidental take of listed species and loss of habitat that supports these species. The HMP for former Fort Ord complies with the USFWS BO and establishes the guidelines for the conservation and management of wildlife and plant species and habitats that largely depend on former Fort Ord land for survival. The HMP incorporated conservation measures pursuant to USFWS BOs dated prior to issuance of the HMP in April 1997. • To maintain compliance with habitat management and monitoring requirements presented in the HMP, biological resources are monitored after MEC removal activities have been completed. The HMP specifies mitigation measures to monitor the successful regeneration of species and habitat following removal of MEC. Monitoring includes conducting follow-up monitoring for a period of 5 years after MEC removal to document habitat conditions. Since the inception of the MEC removal program, the Army had elected to augment the monitoring program, where feasible, to include the collection of baseline data prior to MEC removal. Baseline data have been collected to provide additional information on preexisting species composition and distribution of herbaceous annual sensitive species. Both baseline and follow-up data are used to compare community regeneration to HMP success criteria. • FORA will implement the mitigation requirements identified in the HMP in accordance with the BO developed during formal consultation between the Army and the USFWS under Section 7 of the ESA. For habitat areas, these measures include conducting habitat monitoring in compliance with Chapter 3 of the HMP (USACE 1997b).

Table 9.5-1
MOUT Site MRA – Ecological Information

Type	Summary
	• Since April 1997, a number of BOs have been issued that are relevant to the anticipated removal activities at the former Fort Ord (USFWS 1999, 2002, and 2005). Future MEC remediation is required to be consistent with the applicable conservation measures. • The HMP identified principal management categories. The MOUT Site MRA is defined as development, which is identified as a parcel in which no management restrictions are contained under the HMP. Some plans for salvage of biological resources for these parcels may be specified.
Threatened and Endangered Species	• Special-status biological resources are those resources, including plant, wildlife, and native biological communities, that receive various levels of protection under local, state, or federal laws, regulations, or policies. The closure and disposal of former Fort Ord is considered a major federal action that could affect several species proposed for listing or listed as threatened or endangered under the federal ESA. • Threatened or endangered plant species identified as having possible occurrence in the MOUT Site MRA include sand gilia (endangered) and Monterey spineflower (threatened). • In 2004, the CTS was identified as a threatened species. CTS may be found as far as 2 km from aquatic breeding habitats. The MOUT Site MRA may have a presence of CTS because the MRA is located within 500 meters of two aquatic features, one of which was identified as suitable breeding habitat and the other which was identified as a known CTS breeding site in 2004.

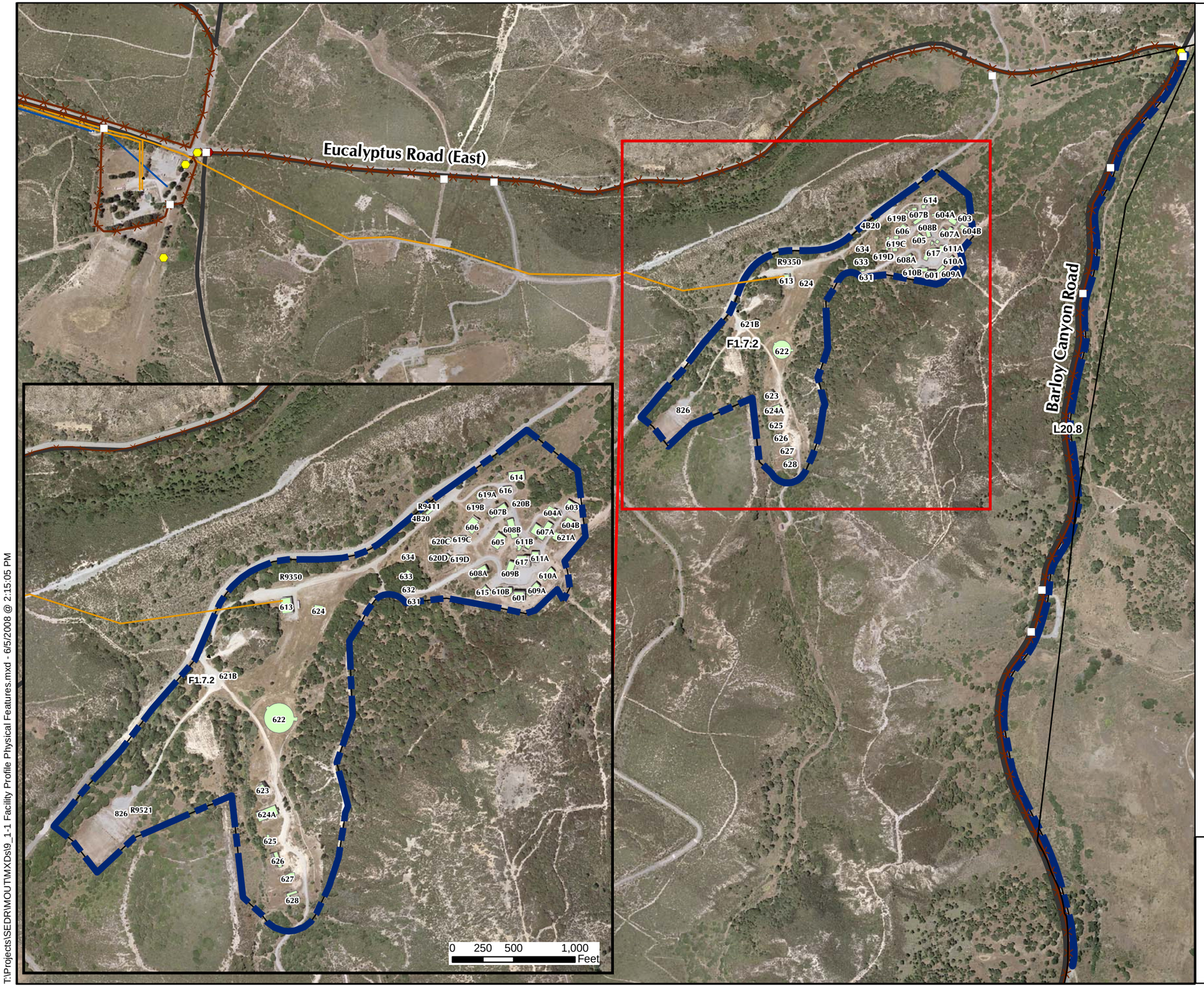
Table 9.5-2
MOUT Site MRA - HMP Category by Parcel and Possible Occurrence of HMP Species

USACE Parcel Number	HMP Designated Use	HMP Species
L20.8	Development	Toro manzanita, Monterey ceanothus, Eastwood's ericameria; Monterey ornate shrew
F1.7.2	Development	Toro manzanita; Monterey ceanothus; Eastwood's ericameria; Hooker's manzanita; Monterey ornate shrew

Reference: USACE 1997b

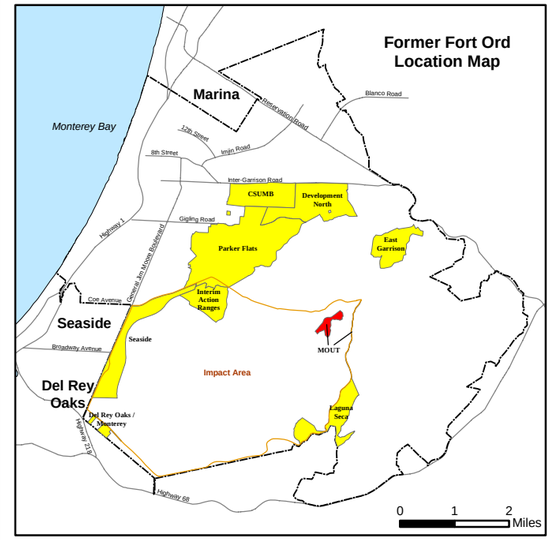
Table 9.6-1
MOUT Site MRA – Potential Receptors and Exposure Media

Potential Receptor	Exposure Media			Exposure Media		
	Current	Ground Surface	Below Grade	Future	Ground Surface	Below Grade
Construction Workers	✓	✓	✓	✓	✓	✓
Utility Workers	✓	✓	✓	✓	✓	✓
Trespassers	✓	✓		✓	✓	
Firefighters	✓	✓	✓	✓	✓	✓
Emergency Response Workers	✓	✓		✓	✓	
Ancillary Workers	✓	✓	✓	✓	✓	✓



Legend

- School
- Fire Station
- Gate
- Entry Forbidden Sign
- Sign
- Hydrant
- High-Power Transmission Line Tower
- Electrical Line Pole
- Munitions Response Area
- Major Road
- Electrical Line
- Fence
- Gas Line
- Storm Line
- Telephone Line
- Water Line
- Sewer Line
- High-Power Transmission Line and Right of Way
- R9211 — Structure
- E23.1 — USACE Parcel



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MOUT Site MRA Facility Profile Physical Features

FORA ESCA RP
Monterey County, California

Figure 9.1-1

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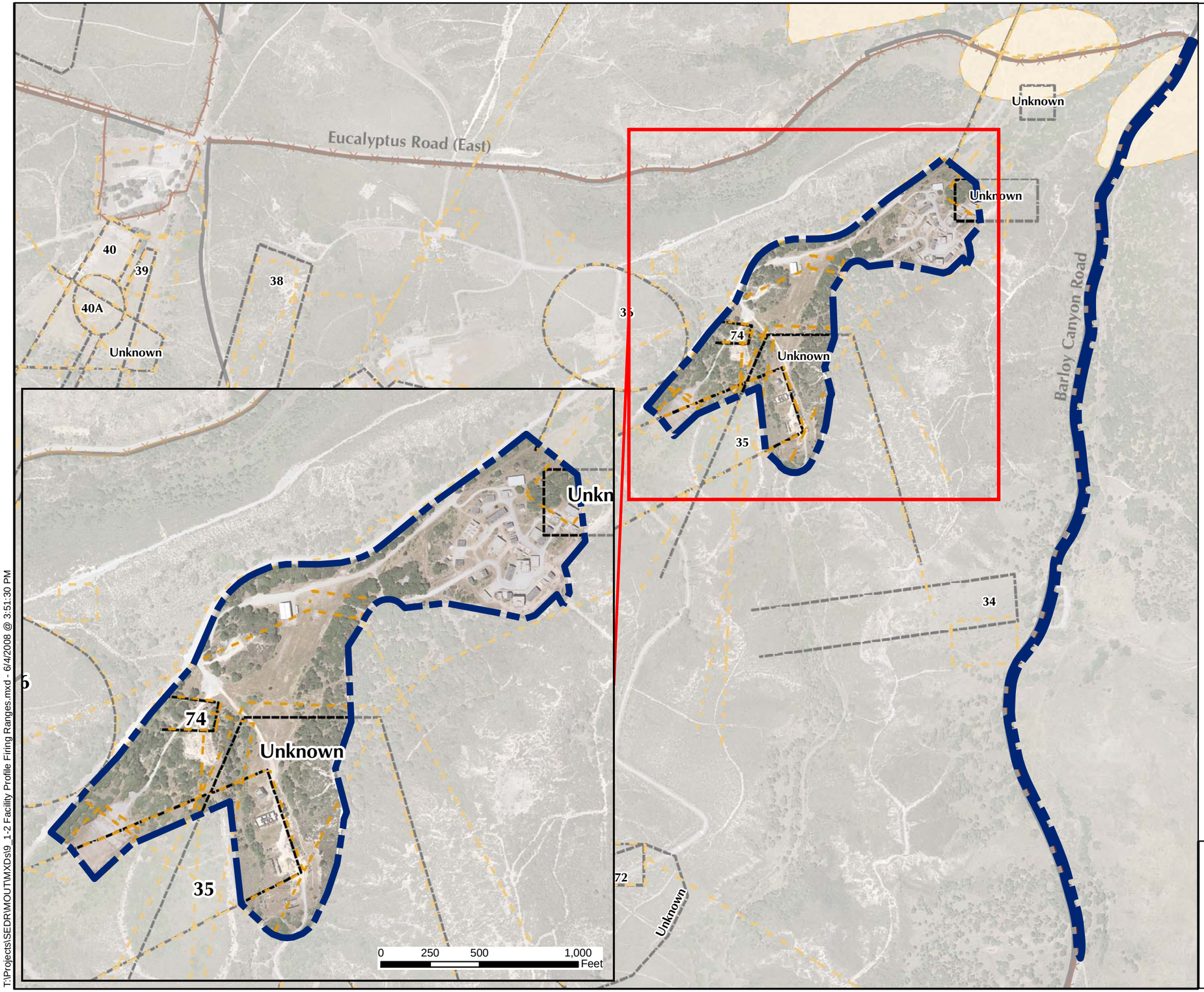
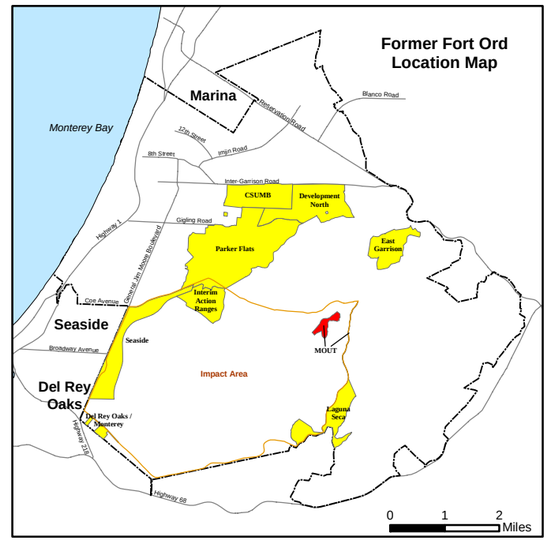
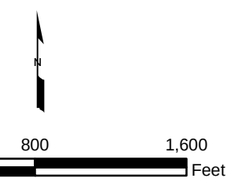


Legend

- Training Site
- Munitions Response Area
- 42 Firing Range
- Historical Range
- Major Road
- Fence





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MOUT Site MRA Facility Profile
Ranges and Training Sites

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Monterey County, California

Figure 9.1-2

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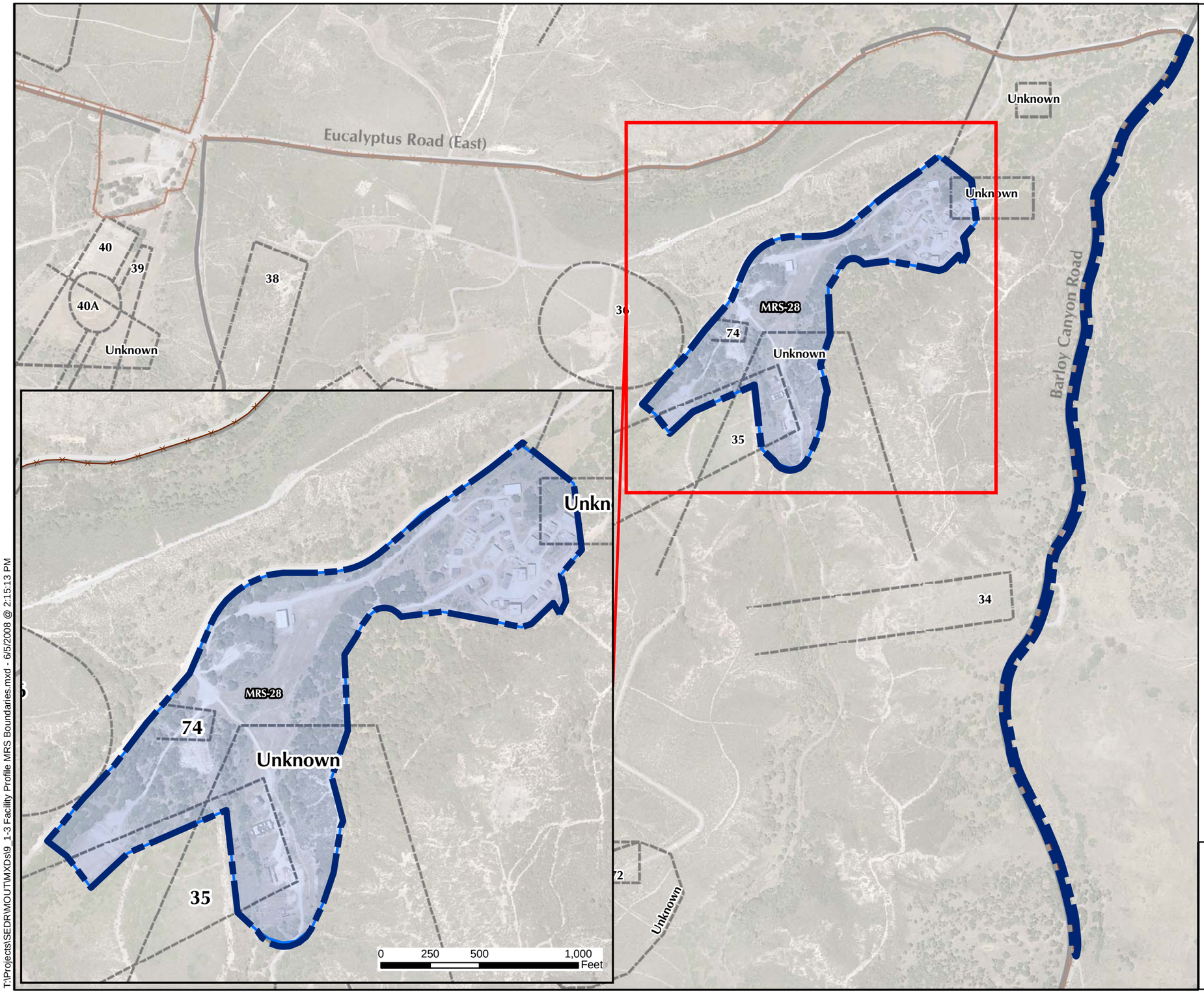
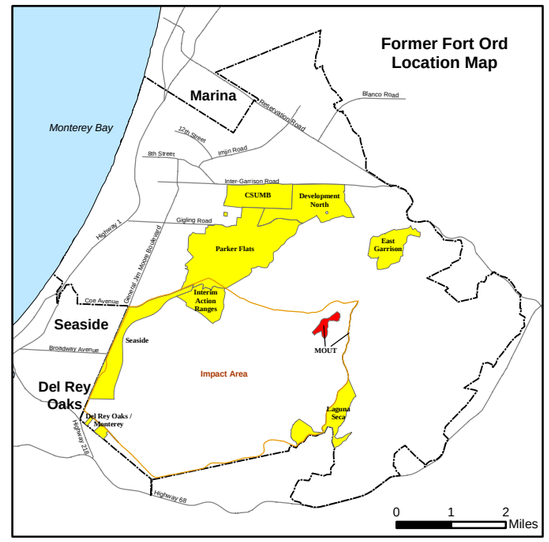
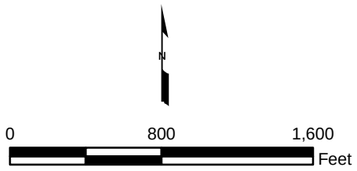


Legend

- Munitions Response Area
- Major Road
- Fence
- 34 Firing Range
- MRS-28 Munitions Response Site





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MOUT Site MRA Facility Profile Munitions Response Site Boundaries

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Monterey County, California

Figure 9.1-3

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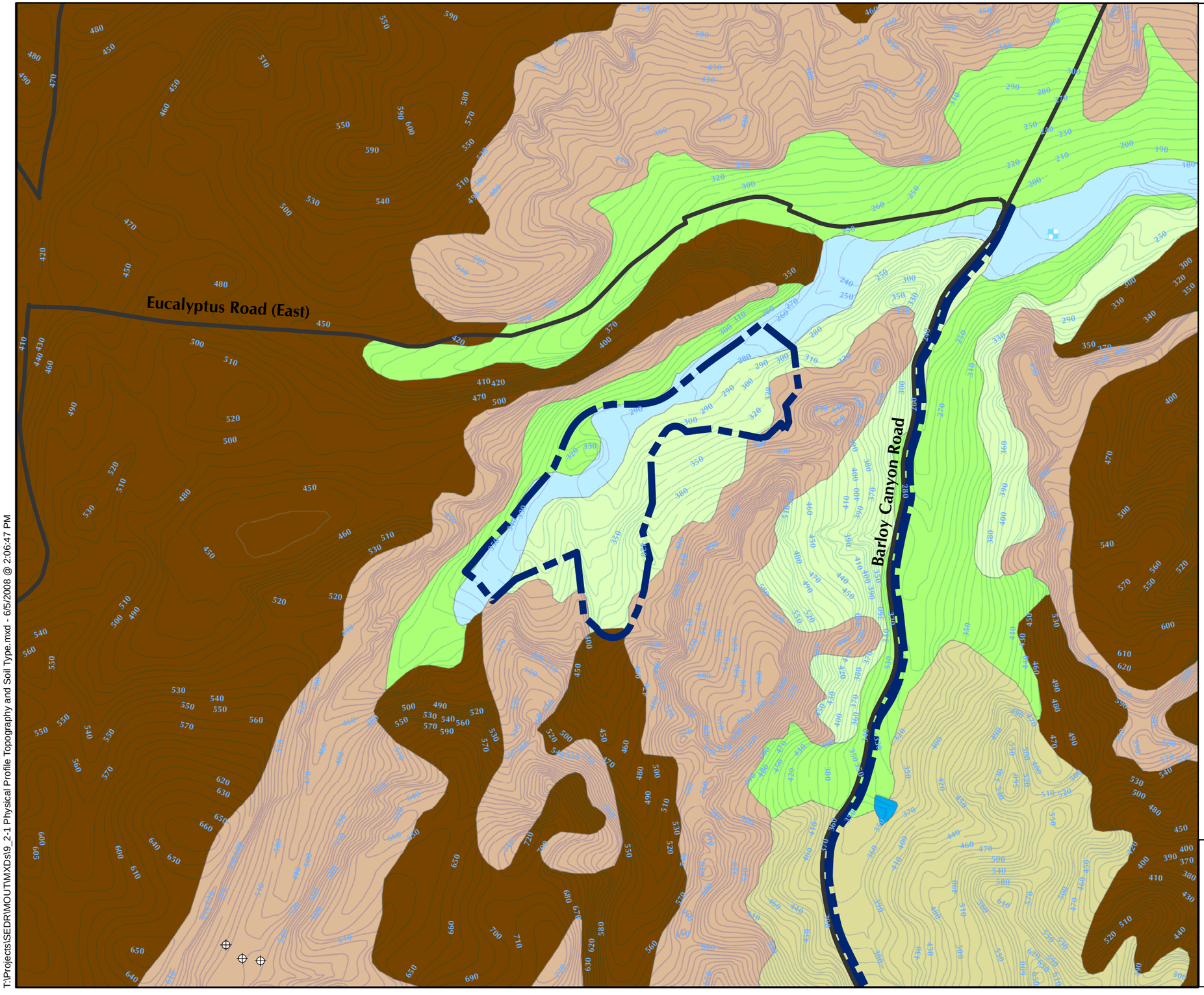
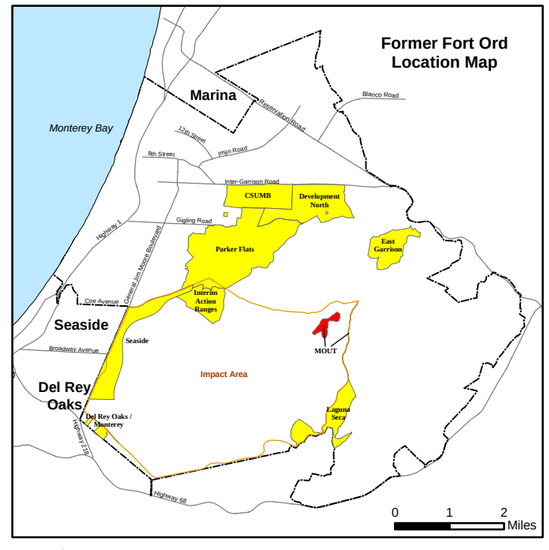


Legend

- Abandoned Well
- Water Supply Well
- 540 Topography 5ft
- Munitions Response Area
- Major Road

Soil Type

- Arnold-Santa Ynez Complex
- Xerorthents, Dissected
- Arnold Loamy Sand, 15 to 50 Percent Slopes
- Arnold Loamy Sand, 9 to 15 Percent Slopes
- Baywood Sand, 2 to 15 Percent Slopes
- Santa Ynez Fine Sandy Loam, 15 to 30 Percent Slopes
- Aquic Xerofluvents
- Saturated Soil



N

0 800 1,600 Feet

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MOUT Site MRA Physical Profile Topography and Soil Type

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Figure 9.2-1

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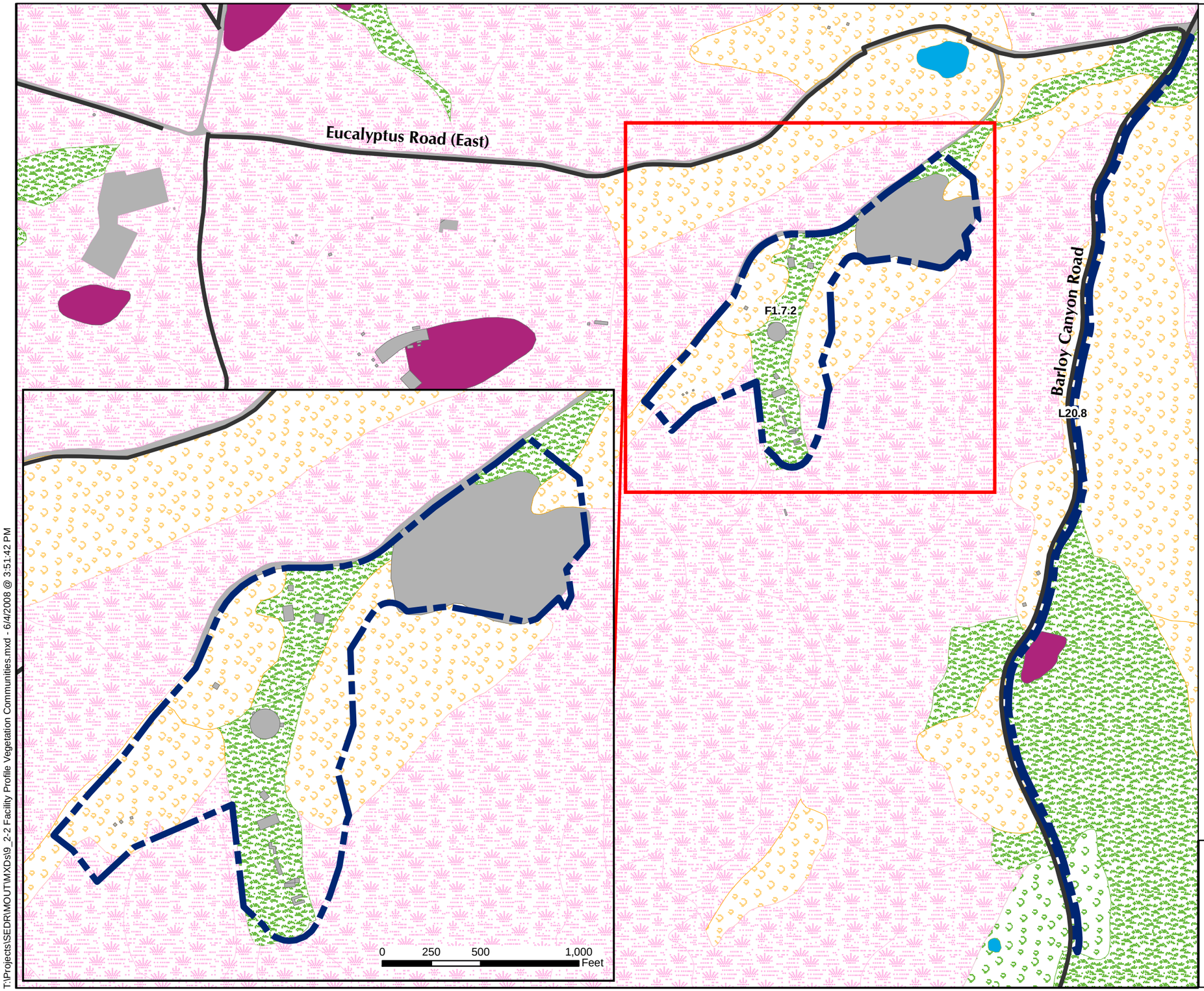


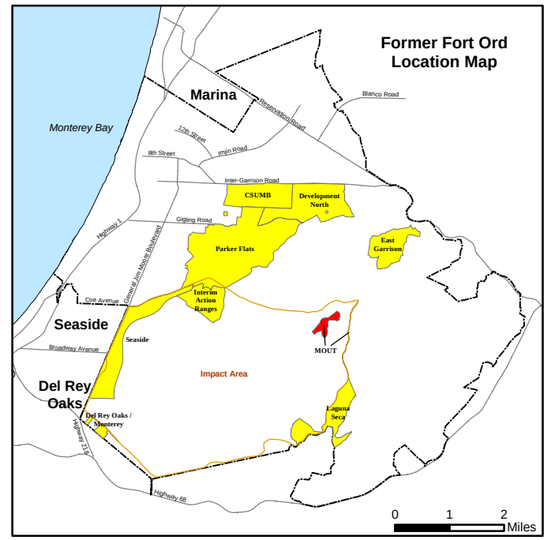
Legend

- Munitions Response Area
- Major Road
- F1.7.2 USACE Parcel

Vegetation Type

- Grassland
- Maritime Chaparral
- Inland Coast Live Oak Woodland
- Coast Live Oak Savanna
- Coastal Scrub
- Ice Plant Mats
- Aquatic Feature
- Developed / Disturbed
- Blue Wildrye Grassland

Source: Flora and Fauna Baseline Study of Fort Ord, California, Jones and Stokes Association Inc., December 1992.



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MOUT Site MRA Physical Profile
Generalized Vegetation Communities

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Monterey County, California

Figure 9.2-2

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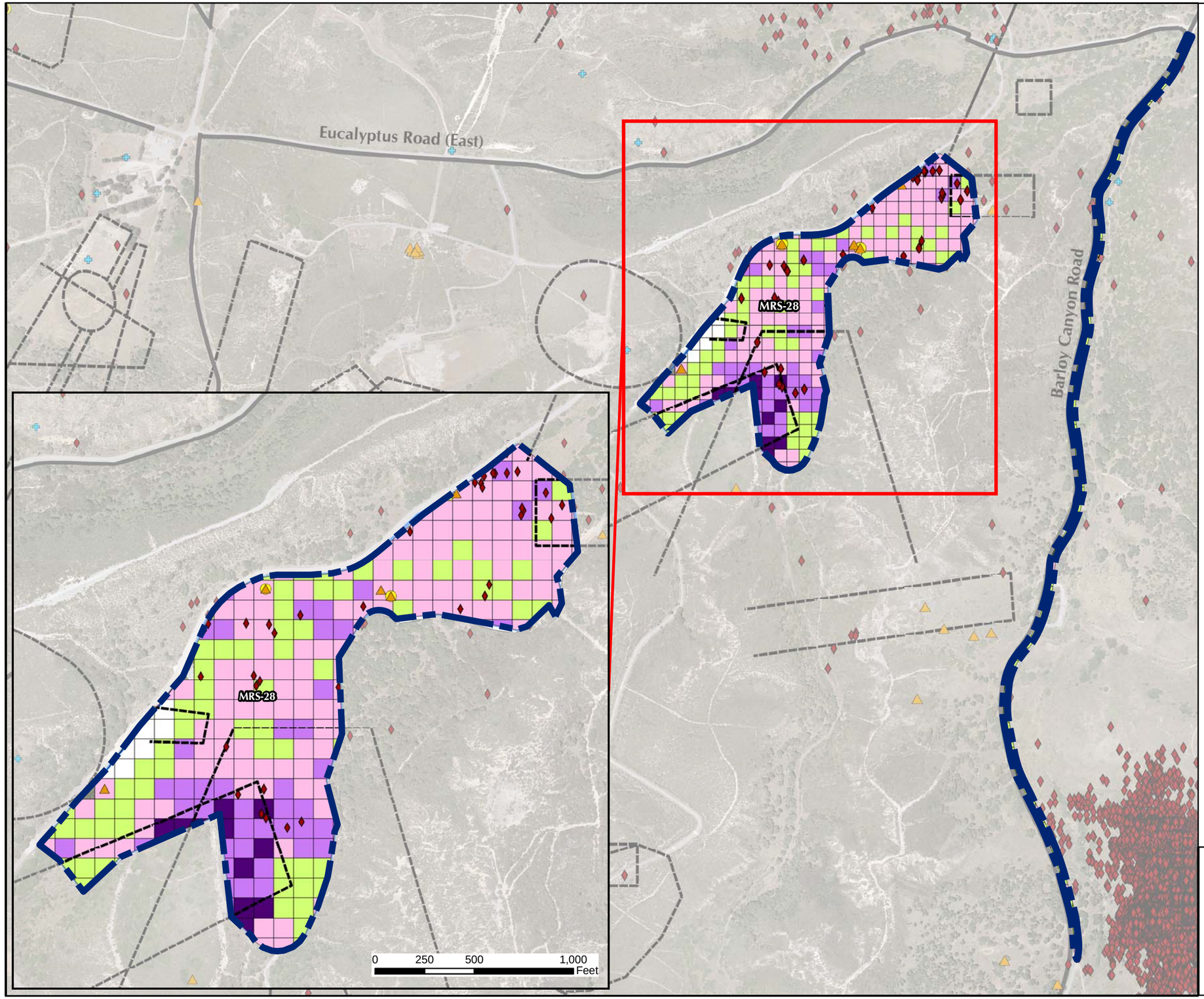


Legend

- Munitions Response Area
- Firing Range
- MRS-28 Munitions Response Site
- Major Road

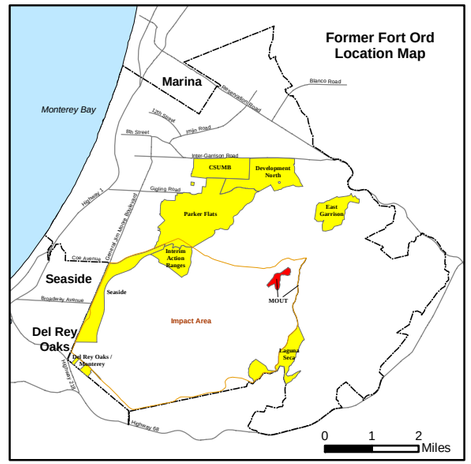
MEC Type

- Unexploded Ordnance (UXO)
- Discarded Military Munition (DMM)
- Insufficient Data (ISD)
- Burial Pit Containing MEC

Munitions Debris (MD) by Weight (total pounds per grid)

- No Data
- 0
- < 10
- 10 to 100
- > 100

Note: Munitions Debris (MD) includes scrap related to small arms ammunition.



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0 800 1,600
Feet

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MOUT Site MRA Release Profile MD and MEC Locations

FORA ESCA RP
Monterey County, California

Figure 9.3-1

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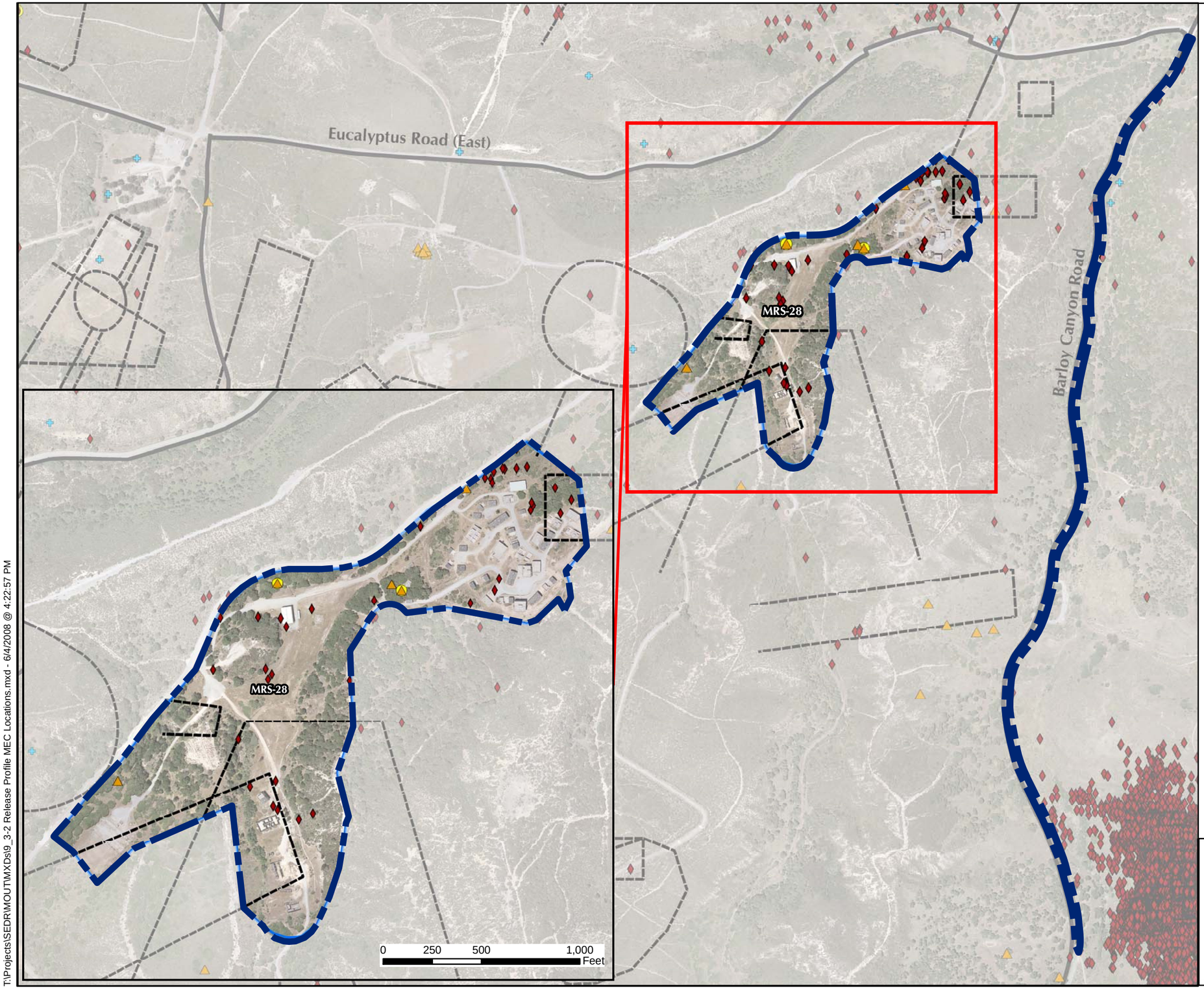


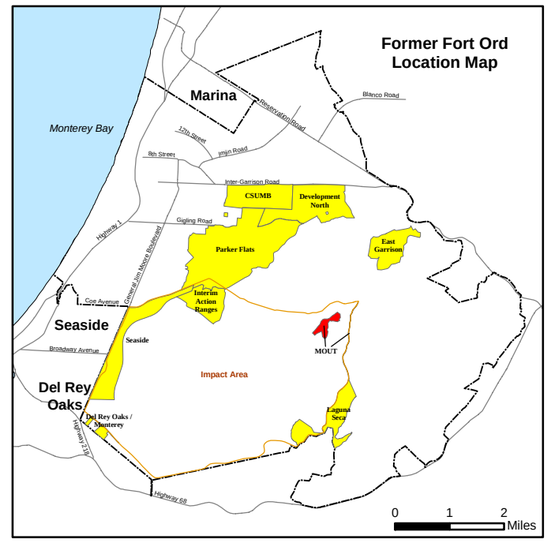
Legend

- Munitions Response Area
- Munitions Response Site
- MRS-28
- Firing Range
- Major Road

MEC Type

- Unexploded Ordnance (UXO)
- Discarded Military Munition (DMM)
- Insufficient Data (ISD)
- Burial Pit Containing MEC

Note: MEC locations may include more than one item.



N

0 800 1,600 Feet

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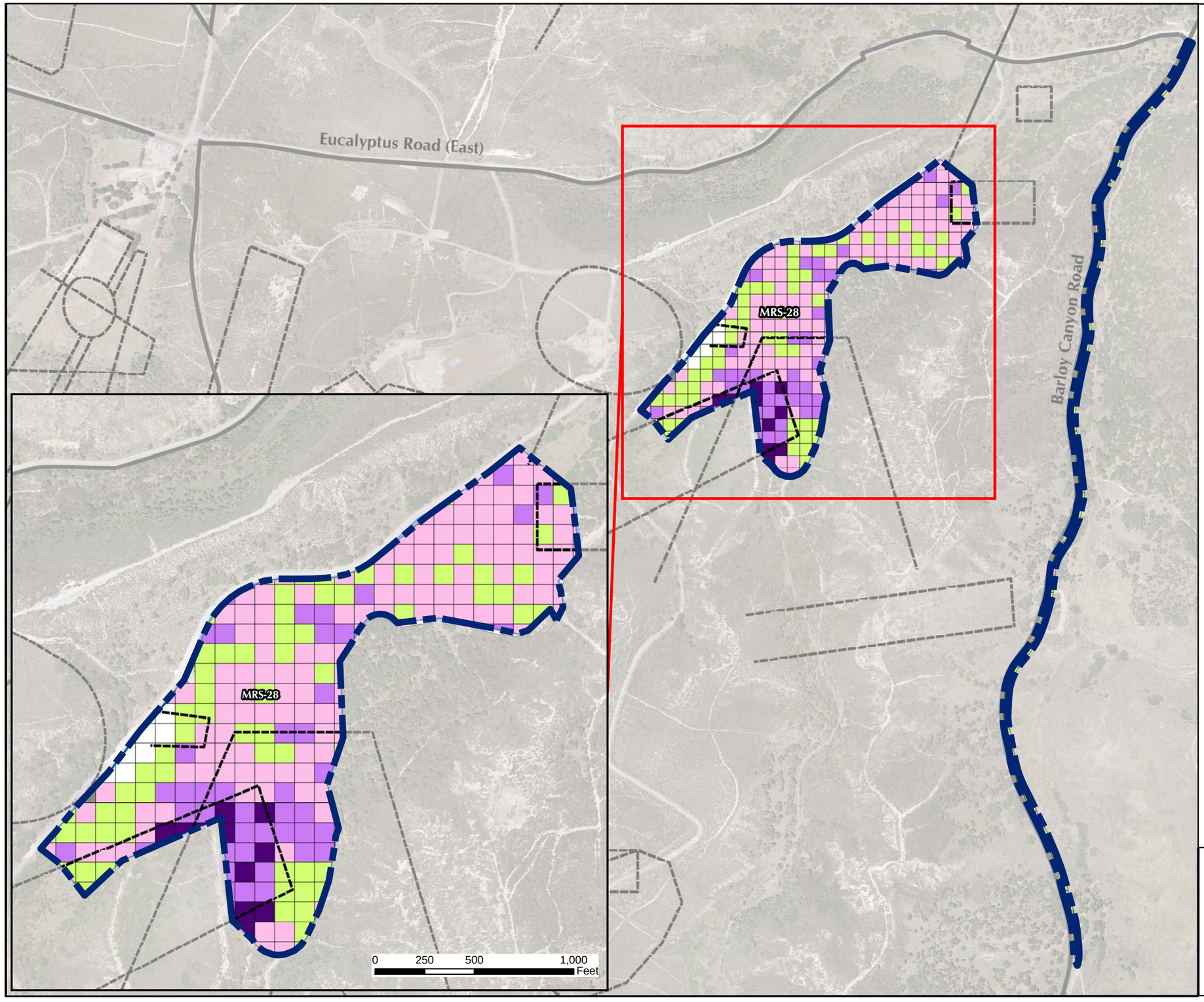
MOUT Site MRA Release Profile MEC Locations

FORA ESCA RP
Monterey County, California

Figure 9.3-2

T:\Projects\SEDR\MOUT\MXDs\9_3-2 Release Profile MEC Locations.mxd - 6/4/2008 @ 4:22:57 PM



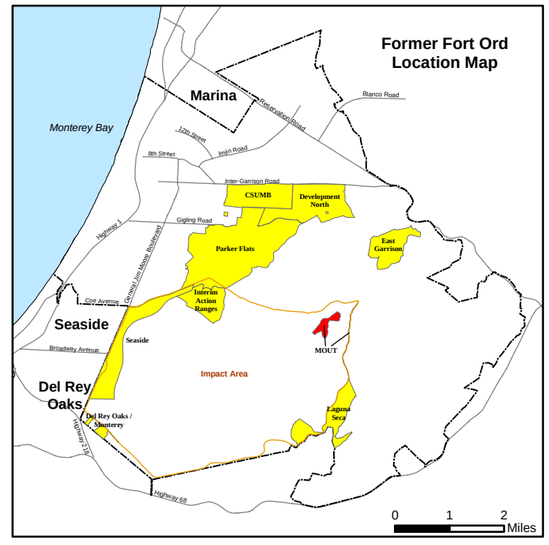
Legend

- Munitions Response Area
- MRS-28 — Munitions Response Site
- Firing Range
- Major Road

Munitions Debris (MD) by Weight (total pounds per grid)

- No Data
- 0
- < 10
- 10 to 100
- > 100

Note: Munitions Debris (MD) includes scrap related to small arms ammunition.



N

0 800 1,600
Feet

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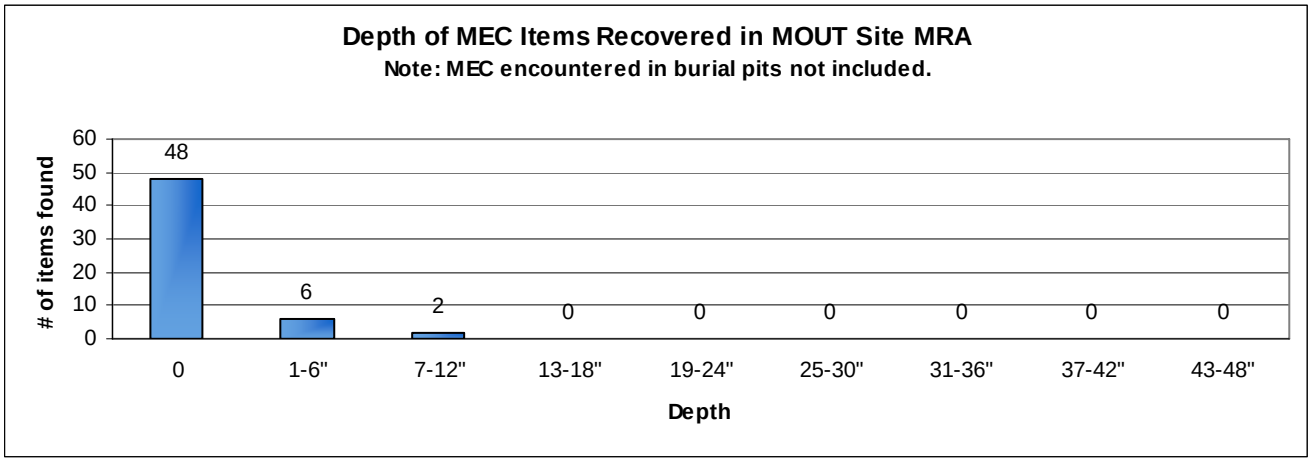
MOUT Site MRA Release Profile MD Locations

FORA ESCA RP
Monterey County, California

Figure 9.3-3

T:\Projects\SEDR\MOUT\MXDs\9_3-3 Release Profile MD Locations.mxd - 6/4/2008 @ 4:24:32 PM



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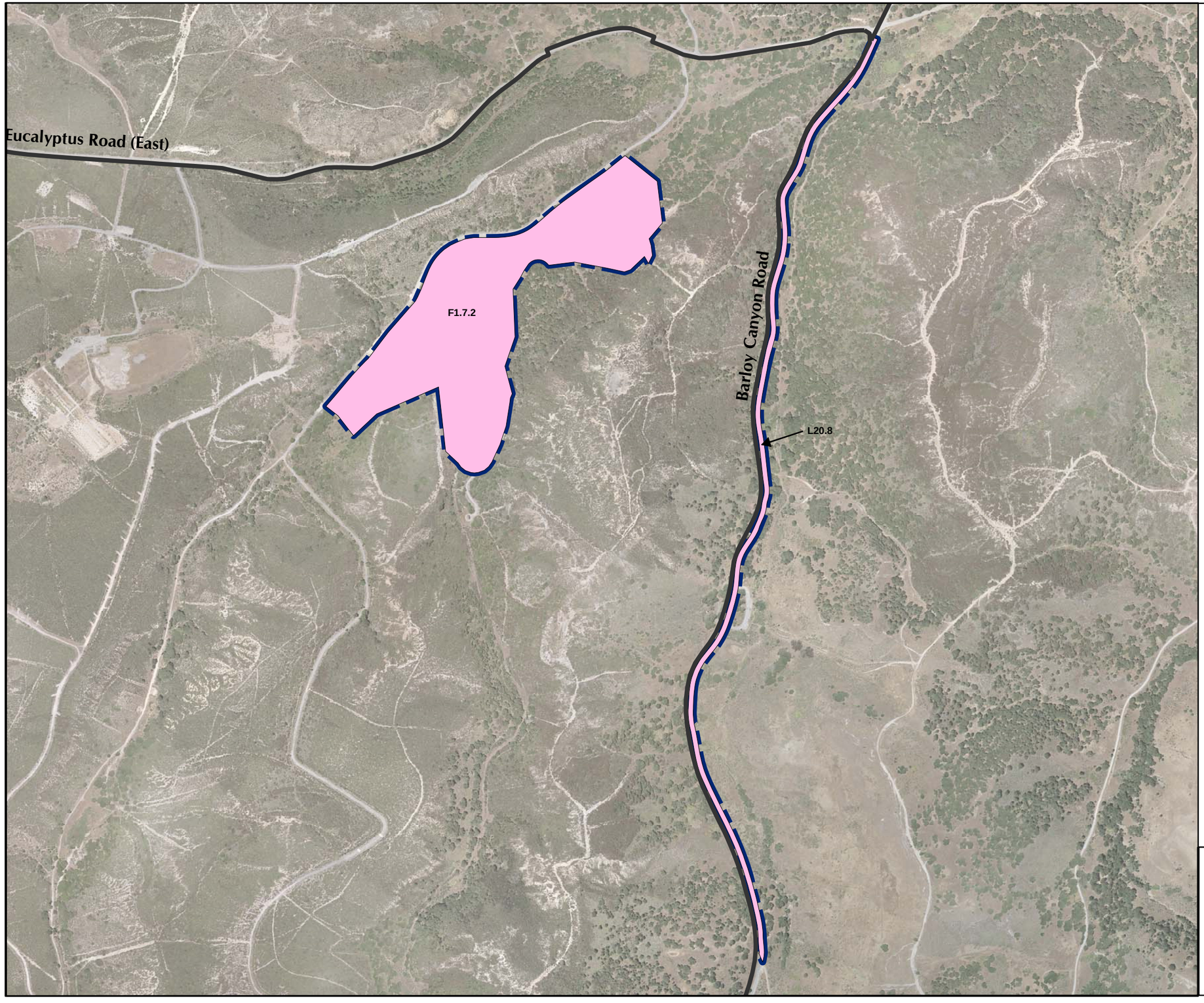
MOUT Site MRA
Distribution of MEC Recovered by Depth Interval

FORA ESCA RP
Monterey County, California

Figure 9.3-4

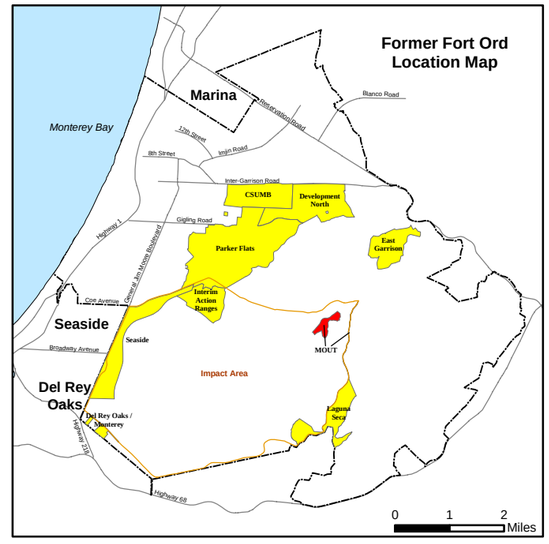


Legend

- Munitions Response Area
- Major Road
- F1.7.2 — USACE Parcel

Future Land Use

- Residential
- Non-Residential
- Habitat Reserve



N

0 800 1,600 Feet

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MOUT Site MRA Land Use Profile Reuse Plan

FORA ESCA RP
Monterey County, California

Figure 9.4-1

T:\Projects\SEDR\MOUTMXDs\9_4-1 Land Use Profile Reuse Plan.mxd - 6/4/2008 @ 5:16:03 PM

Eucalyptus Road (East)

Barloy Canyon Road

500 m

500 m

500 m

500 m

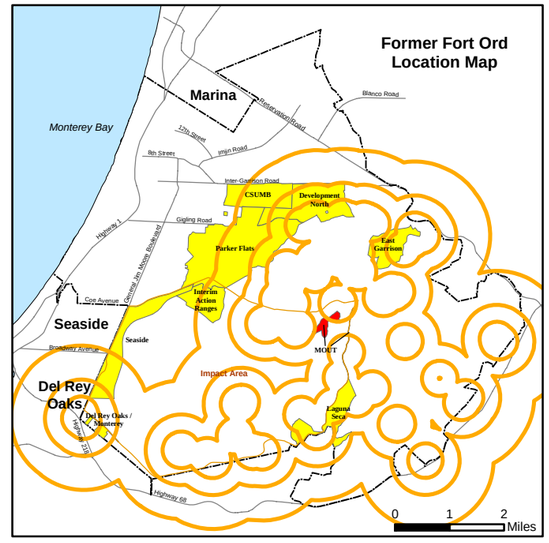
1 km

Legend

- Munitions Response Area
- California Tiger Salamander Buffer
- Major Road
- Borderland Interface
- 200-Foot Buffer from Borderland Interface
- Aquatic Features

Habitat Management Plan Category

- Development (includes future Residential and Non-Residential areas)
- Development with Reserve or Restrictions
- Habitat Corridor
- Habitat Corridor with Development
- Habitat Reserve



N

0 800 1,600 Feet

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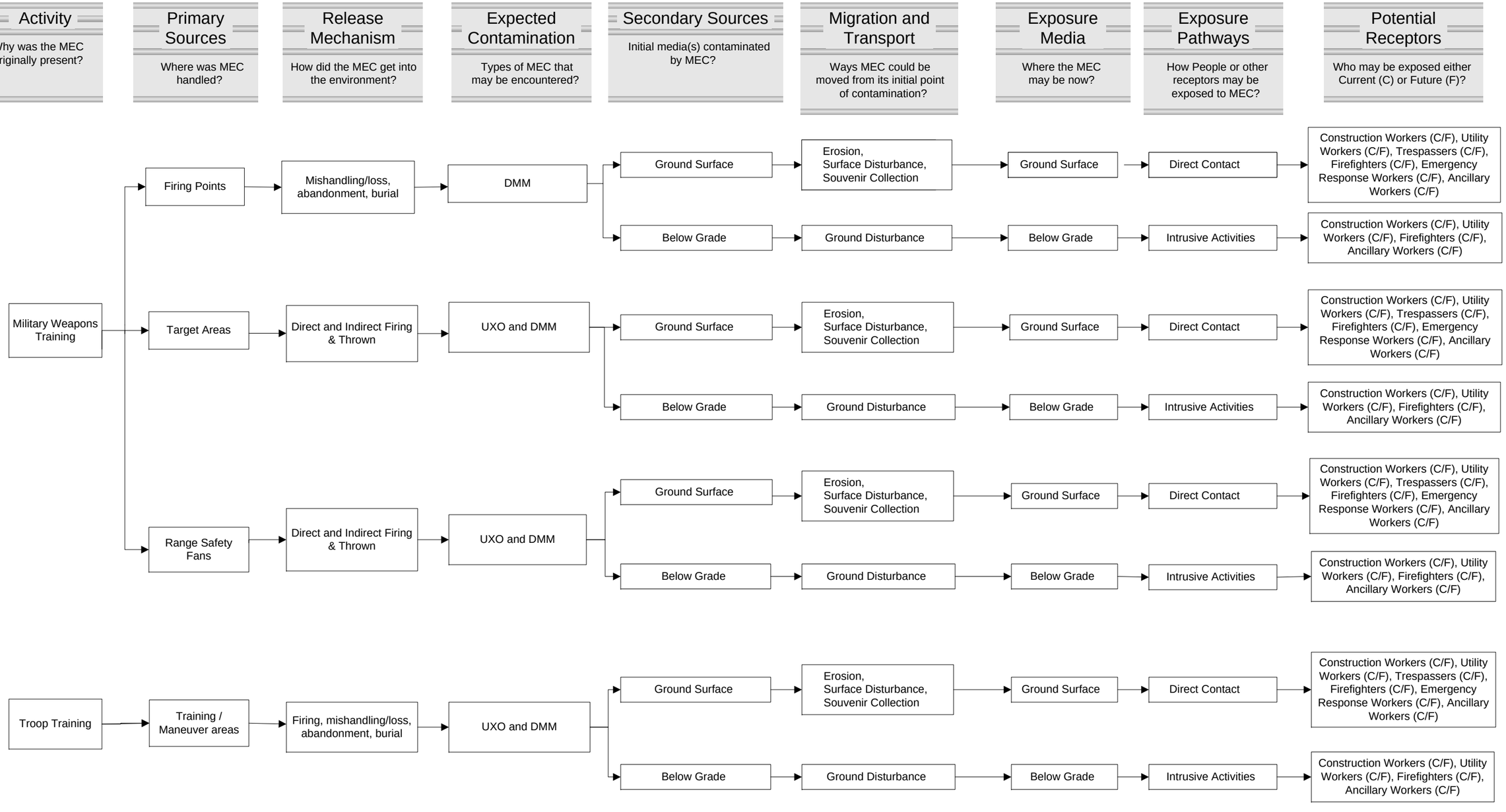
MOUT Site MRA
Ecological Profile Habitat Type

FORA ESCA RP
Monterey County, California

Figure 9.5-1

T:\Projects\SEDR\MOUT\MXDs\9_5-1 Ecological Profile Habitat Type.mxd - 6/4/2008 @ 5:16:09 PM



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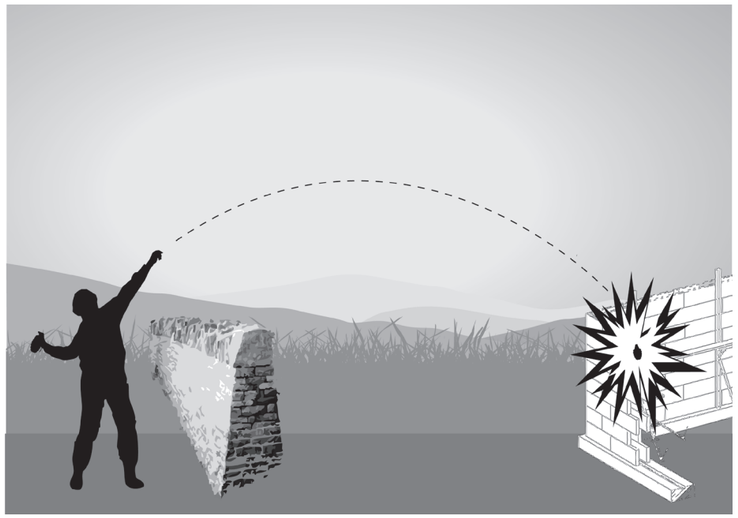
MOUT Site MRA
Pathway Analysis Flowchart

FORA ESCA RP
Monterey County, California

Figure 9.6-1



Thrown Ordnance

Burial / Mishandling / Loss

Firing

Direct Fire

Indirect Fire

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MOUT Site MRA
Release Mechanism Illustrations

FORA ESCA RP
Monterey County, California

Figure 9.6-2