

**APPENDIX B**

**Parker Flats MRA Conceptual Site Model**

## 5.0 PARKER FLATS MRA CONCEPTUAL SITE MODEL

The Parker Flats 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 Parker Flats MRA are located at the end of Section 5.0.

The Army completed a Track 2 Munitions Response RI/FS (“Track 2 RI/FS”) for a portion of the Parker Flats MRA (MACTEC 2006). For the purpose of this CSM, the Parker Flats MRA is divided into two parts: Parker Flats MRA Phase I and Parker Flats MRA Phase II (Figure 5.1-1). The area included in the Track 2 RI/FS is referred to in this document as the Parker Flats MRA Phase I, which has a Proposed Plan and a pending ROD. The proposed remedy for the Parker Flats MRA Phase I is land use controls (LUCs). Five-year reviews would also be required for this area. The Parker Flats MRA Phase II portion is addressed in this CSM.

### 5.1 Parker Flats 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.

#### 5.1.1 Boundaries and Access

The Parker Flats MRA is located in the central portion of the former Fort Ord, bordered by the CSUMB MRA and the Development North MRA to the north, the Interim Action MRA to the south, CSUMB campus property to the west, and additional former Fort Ord property to the east and southeast (Figure 5.1-1). The Parker Flats MRA is contained within the jurisdictional boundaries of the City of Seaside and the County of Monterey.

The Parker Flats MRA (Phase I and Phase II areas) encompasses approximately 1,180 acres and fully contains USACE property transfer parcels E18.1.1, E18.1.2, E18.1.3, E18.4, E19a.1, E19a.2, E19a.5, E20c.2, E21b.3, L20.18, L23.2, and L32.1, and portions of USACE property transfer parcels E19a.3 and E19a.4 (Table 5.1-1 and Figure 5.1-1). The remaining portions of USACE property transfer parcels E19a.3 and E19a.4 are contained in the Development North MRA (Section 7.1.1). The area completed under the Phase I activities was approximately 698 acres; the remaining approximately 482 acres were included under the Phase II activities (Table 5.1-1).

Gigling Road is located along a portion of the northern boundary of the MRA. The western portion of Gigling Road is an active roadway with vehicle traffic on a daily basis and is a major roadway of the FORA transportation network. Eucalyptus Road crosses the southern portion of the MRA and is restricted by road barriers marked with “road closed” signs located at the intersection of General Jim Moore Boulevard and Eucalyptus Road to the west and at the intersection of Parker Flats Road and Eucalyptus Road to the east. Watkins Gate Road also borders a portion of the eastern boundary of the MRA. Parker Flats Road crosses

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through the central portion of the MRA. A number of unpaved roadways and dirt trails are located throughout the MRA (Figure 5.1-1).

The Parker Flats MRA is primarily open land; there are no fences and only limited gates and barricades that restrict access to the property, except for the four-strand barbed-wire fencing reinforced with concertina wire and locked chain-link gates along the southern side of Eucalyptus Road, restricting access to a small portion of the MRA and the former impact area to the south (Figure 5.1-1). “U.S. Government Property-No Trespassing” and “Danger-Explosives Area” warning signs are posted along the fence line and locked gates. Detailed information on roadways and access is provided in Table 5.1-2.

### **5.1.2 Structure and Utilities**

The Parker Flats MRA contains several existing structures and buildings associated with the previous use of the area (Figure 5.1-1; Army 2007). Detailed information concerning location, size, description of structures, presence of ACM and/or LBP, if evaluated, and year constructed is provided in Table 5.1-3.

Several utilities extend onto or cross the Parker Flats MRA. Telephone, electrical, and water lines cross the southwestern portion of the MRA along or near Eucalyptus Road. A high-powered transmission line crosses the entire MRA in a northeast to southwest direction. Several utilities (water, storm drain, natural gas, telephone, sewer, and electrical) also extend into the MRA in the northwestern portion of the MRA along the boundary with CSUMB (Figure 5.1-1). More detailed information on utilities within the MRA is provided in Table 5.1-2.

### **5.1.3 Historical Military Use**

Initial use of the Parker Flats 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. Although no training maps from this time period have been found, pre-World War II-era military munitions have been removed during previous Army response actions within the Parker Flats MRA. Because the northern portion of the Parker Flats MRA (north of Gigling Road) prior to 1940 was privately owned agricultural land, it is unlikely that this area was used for military training until after this time.

Figure 5.1-2 shows the locations of known firing ranges and training sites within the MRA. Table 5.1-4 summarizes the historical military uses of these areas within the Parker Flats MRA. To facilitate previous MEC investigations and removal activities, the historical use areas were divided into MRSs.

The MRSs within the Parker Flats MRA Phase I included MRS-3, MRS-4B, MRS-13B, MRS-27A (portion), MRS-27B (portion), MRS-27G (portion), MRS-37, MRS-40, MRS-50, MRS-50EXP, MRS-52, MRS-53, MRS-53EXP, MRS-54EDC, and MRS-55 (Table 5.1-1 and Figure 5.1-3). The northern portion of the Parker Flats MRA Phase I is comprised entirely of MRS-13B (Practice Mortar Range), and is separated from the southern portion of the Parker

Flats MRA Phase I by an area that has not been fully investigated for the presence of MEC (Figure 5.1-3).

The MRSs within the Parker Flats MRA Phase II include MRS-4A, MRS-27A (portion), MRS-27B (portion), MRS-27C, MRS-44EDC/PBC, and MRS-15MOCO.2 (Table 5.1-1 and Figure 5.1-3). The historical use of the Parker Flats MRA Phase II areas was for troop training and maneuvers.

Historical uses for specific MRSs in the Parker Flats MRA Phase II include:

- MRS-4A - former Chemical, Biological, and Radiological (CBR) Training Area
- MRS-27A (Training Site 1), MRS-27B (Training Site 2), and MRS-27C (Training Site 3) - overnight bivouac areas
- MRS-15MOCO.2 - Firing lines for Ranges 44 and 45 (antitank weapons and 40mm grenade ranges, respectively)
- MRS-44EDC and MRS-44PBC - Actual historical use is unknown; evidence of military weapons and troop training.

Table 5.1-4 identifies the historical military uses of the MRSs within the Parker Flats MRA.

#### 5.1.4 Administrative Controls

A number of administrative controls have been and will be imposed on the Parker Flats MRA, including land use covenants, city and county ordinances, FORA resolutions, an MOA between FORA and the DTSC, habitat-related requirements, and BOs. The applicable administrative controls are described in more detail in Table 5.1-5. 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 MRA.

## 5.2 Parker Flats 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.

### 5.2.1 Topography and Geology

The terrain of the Parker Flats MRA is primarily rolling hills with moderate to steep slopes. The elevation ranges from approximately 280 to approximately 490 feet msl with 2 to 15 percent slopes (Figure 5.2-1). The surface soils are characterized as eolian (sand dune) and terrace (river deposits), which consist of unconsolidated materials of the Aromas and Old Dune Sand formations. The primary soil type present in the Parker Flats MRA is Oceano Loamy Sand with smaller areas of Arnold-Santa Ynez complex and Baywood Sand (Figure



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5.2-1). Soil conditions at the MRA consist predominantly of weathered dune sand, which provides a relatively good environment for conducting geophysical surveys including electromagnetic and magnetic surveys. Table 5.2-1 provides more detailed information on the geology of the former Fort Ord and soils encountered within the MRA.

### **5.2.2 Vegetation**

Vegetation in the Parker Flats MRA consists primarily of coastal coast live oak woodland with smaller areas of maritime chaparral, grassland, and coastal scrub (Table 5.2-2 and Figure 5.2-2; USACE/Jones & Stokes 1992). Vegetation varies from sparsely vegetated areas to heavy brush. Past field activities have noted the presence of poison oak in the area. As part of the Army's removal actions for MEC, vegetation was cut to make the surface safe and accessible for MEC removal crews. In 2005, FORA, under the supervision of the Army, performed a prescribed burn on 147 acres of the Parker Flats MRA.

### **5.2.3 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 Parker Flats MRA. The Seaside and Salinas Groundwater Basins are the main hydrogeologic units that underlie the MRA. The depth to groundwater is estimated to be greater than 100 feet bgs. One known groundwater monitoring well is located in the northwestern portion of the MRA in the Phase I area, and two groundwater monitoring wells are located northwest of the MRA (Figure 5.2-1). The occurrence of groundwater beneath the MRA is not expected to influence geophysical surveys conducted for MEC remediation activities.

There are no aquatic features (i.e., vernal pools, ponds) or delineated wetlands reported to be present on the Parker Flats MRA; however, several aquatic feature are present to the east and southeast of the MRA (Figure 5.2-2).

## **5.3 Parker Flats 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.

### **5.3.1 Investigation and Removal History**

Previous work in the Parker Flats MRA includes site investigations, sampling investigations, and removal actions. Details of information on the investigations within the Parker Flats MRA Phase I were documented in the Parker Flats RI/FS (MACTEC 2006). The evaluation of the Parker Flats MRA Phase I area is complete. A ROD is pending for the Phase I area. Figures 5.3-1 through 5.3-3 show the results of investigations and removal actions by identifying the location of MEC and MD previously removed from the Parker Flats MRA.

Following is a summary of previous site investigations and removal actions conducted by the Army within the Parker Flats MRA Phase II:

### ***MRS-4A***

- Sampling investigation of six grids from 1993 to 1994 (HFA 1994)
- Site Stats/Grid Stats (SS/GS) sampling and removal at six 100-foot by 200-foot grids in November 1997 (USA 2000b)
- 100 percent 4-foot ordnance and explosives (OE) removal at 38 100-foot by 100-foot grids in February 1998 (USA 2000b)

### ***MRS-27A, MRS-27B, and MRS-27C***

- Preliminary Assessment/Site Inspection (PA/SI) in 1996 (USACE 1997a)
- 4-foot OE removal performed between September 1998 and December 2000 on 5 acres of 27A overlapping with the site OE-53 expansion area (USA 2001i)
- 4-foot OE removal performed between March and October 1999 on 4 acres of 27A and 3.5 acres of 27B overlapping with the site OE-55 expansion area (USA 2001n)
- Visual surface removal in accessible areas from 2001 to 2002 (Parsons 2002a and 2002c)

### ***MRS-44 EDC and MRS-44PBC***

- SS/GS sampling at 12 100-foot by 200-foot grids from May 26 to July 13, 1998 (USA 2001o)
- 100 percent grid sampling at 22 100-foot by 100-foot grids in the EDC in 1999 (USA 2001o)
- 100 percent grid sampling at 13 100-foot by 100-foot grids in the Public Benefit Conveyance (PBC) in 1999 (USA 2001o)
- 100 percent 4-foot removal action at 83 complete and partial grids in MRS-44 PBC only from September to December 2000 (USA 2001o)
- Visual surface removal in accessible areas of the northern portion of MRS-44EDC from 2001 to 2002 (Parsons 2002a and 2002c)

### ***MRS-15MOCO.2***

- 100 percent grid sampling at 20 100-foot by 100-foot grids from March to August 1999 (USA 2001m)
- Fuel break maintenance at 35 15-foot by 100-foot grids in 2001 (USA 2001p)
- Surface TCRA at Ranges 43-48 from August to December 2001 (Parsons 2002b)

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- Prescribed burn preparatory action at Ranges 43-48 from August to October 2002 (Parsons 2004a)
- NTCRA Phase I from July to November 2003, which included an analog removal to depth at 98 100-foot by 100-foot complete grids and 97 partial grids and digital geophysical surveys in accessible portions of Notice of Intent (NOI) areas and identified SCA (Parsons 2004b)
- MRS Ranges 43-48 and MRS-MOCO.2 – Removal of selected range-related debris (RRD) between October and December 2004 to facilitate ongoing or future munitions responses on portions of the site made inaccessible by RRD. No MEC were found in MRS-MOCO.2 (Parsons 2005)
- NTCRA Phase II, which included analog removal, digital geophysical mapping, and MEC removal to depth from January to December 2005 (Parsons 2006d)

In addition, a visual surface removal was conducted in accessible areas that covered the majority of the Parker Flats MRA Phase II. Several sampling grids shown on Figure 5.3-1 have also been investigated in the Phase II area (Parsons 2002a and 2002c).

These investigations and removal actions are summarized in Tables 5.3-1 and 5.3-2. Table 5.3-3 includes a list of MEC found within the individual MRS that are within Parker Flats MRA Phase I and Phase II, and MEC and MD are shown on Figures 5.3-1, 5.3-2, and 5.3-3.

### 5.3.2 Types of MEC Recovered and Hazard Classification

Table 5.3-3 includes a summary of MEC recovered from the Parker Flats 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 Parker Flats MRA. It should be noted that SAA is not considered in the risk assessment because SAA poses no explosive risk.

### 5.3.3 Location of MEC and MD

Figures 5.3-1, 5.3-2, and 5.3-3 show the distribution of MEC and MD within the Parker Flats MRA (Phase I and Phase II). A summary of the MEC and MD encountered during previous investigations and removal actions in the Parker Flats MRA Phase II only is provided in Table 5.3-4 and included:

- 365 UXO items
- 569 DMM items
- 1 Insufficient Data (ISD) item (potential MEC that could not be classified as either UXO or DMM)
- 11,734 pounds MD (includes MD-E and MD-F items if weights were documented)

Figures 5.3-2 and 5.3-3 show the patterns and concentrations of recovered MEC and MD in the Parker Flats MRA. Significant amounts of MEC and MD were encountered during previous investigations throughout the Parker Flats MRA Phase I. The largest concentrations of MEC were located in the central and southern portions of the Phase I area and in MRS-15MOCO.2. A significant amount of MEC was also recovered from the north central portion of MRS-13B.

Recovered MD (total pounds per grid) in the Parker Flats MRA is shown on Figure 5.3-3. The majority of the grids along the boundaries of previous investigations and removal actions contained less than 10 pounds of MD per grid. Many of those boundary grids contained no MD. A portion of the MD identified on Figures 5.3-1 and 5.3-3 includes SAS but not SAA.

The MMRP database indicates that the majority of the MEC items recovered from the Parker Flats MRA were located between 0 and 24 inches bgs, or in the many burial pits found in the Phase I area. Figure 5.3-4 shows the distribution of MEC recovered at specified depth intervals.

### 5.3.4 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 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 5.3-5 summarizes the findings of the BRA with respect to HTW for each MRS. As stated in the FOSET, all identified HTW issues have been addressed and no further action was recommended (Army 2007).

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Work completed to date has been documented in after action reports (Section 5.3.1), which have received regulatory reviews; however, the regulatory agencies have identified the following outstanding issues:

- The CERCLA process must be completed for the Parker Flats MRA Phase II, including development of an RI/FS, development of a Proposed Plan, and completion of a ROD.
- Additional quality assurance and MEC removal, if necessary, must be completed in areas proposed for residential development within the MRA.

**5.4 Parker Flats 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.

**5.4.1 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 Parker Flats 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 CSUMB 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.

**5.4.2 Current Land Use**

The current uses for the MRA include open land. There are residual structures that were in support of the training at the MRA, but these have been abandoned. Reportedly, the area is accessed by day recreational users, including hikers and mountain bikers. There is also evidence of trespasser activity and illegal dumping.

**5.4.3 Reasonably Foreseeable Future Land Use**

Table 5.4-1 and Figure 5.4-1 identify the proposed uses of the MRA by parcel. As indicated in the Base Reuse Plan, this area is planned for residential, development with borderland interface, and habitat reserve. It is important to note that general development land use category encompasses infrastructure activities, such as roadway and utility construction as

well as commercial/retail, parks, borderland activities, a horse park, and the State Central Coast Veterans Cemetery.

#### 5.4.4 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
- Residents (persons conducting surface and subsurface activities) – future
- Recreational Users (persons biking and on foot) – future

#### 5.5 Parker Flats 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 5.5-1.

As discussed in Section 5.3.4, 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 Parker Flats MRA as development (including residential) and habitat reserve with borderland development areas along an NRMA interface (Figure 5.5-1). The NRMA separates the development category land from the adjacent habitat reserve area. The 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

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borderland areas, FORA will follow best management practices while conducting MEC activities to prevent the spread of exotic species, limit erosion, and limit access to the NRMA.

### **5.5.1 Major Plant Communities and Ecological Habitats**

Vegetation in the Parker Flats MRA consists primarily of coastal coast live oak woodland with smaller areas of maritime chaparral, grassland, and coastal scrub (Table 5.2-2 and Figure 5.2-2; USACE/Jones & Stokes 1992). Vegetation varies from sparsely vegetated areas to heavy brush. Past field activities have noted the presence of poison oak in the area.

### **5.5.2 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 BOs 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. Since April 1997, three additional BOs have been issued that are relevant to MEC removal activities (USFWS 1999, 2002, and 2005). 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 Parker Flats 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. As shown on Figure 5.5-1, it is possible the CTS may be found in the Parker Flats MRA as the majority of the MRA is within 2 km of aquatic features that may provide breeding habitat for the CTS.

### **5.5.3 Other Communities and Species of Concern**

As identified in the HMP, a number of species could be found on the Parker Flats MRA, which have been identified in Table 5.5-2 by parcel. The vegetation on the MRA consists primarily of native oak woodland with smaller areas of maritime chaparral, grassland, and coastal scrub. The following species are identified in the HMP as having possible occurrence in the Parker Flats MRA: toro manzanita, sandmat manzanita, Hooker's manzanita, seaside bird's beak, Monterey ceanothus, Eastwood's ericameria, California black legless lizard, and Monterey ornate shrew.

## 5.6 Parker Flats MRA Pathway Analysis

As discussed in Sections 5.3.4 and 5.5, 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 RP. 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.

### 5.6.1 Exposure Pathways

An exposure pathway analysis was conducted for the Parker Flats MRA using the information gathered in the CSM profiles. The likelihood of exposure, however, has been significantly reduced as a result of the Army's previous surface and subsurface removal actions. Exposure pathways for the Parker Flats MRA are presented on Figure 5.6-1 and discussed below.

#### **Source**

Source areas within the Parker Flats MRA were addressed during the Army's previous removal actions. The historical source areas within the Parker Flats MRA are shown on Figure 5.1-3, and recovered MEC and MD from the MRA are shown on Figures 5.3-1, 5.3-2, and 5.3-3. The source areas include troop training and maneuver areas. It is anticipated that the areas showing no MEC or MD data, having undergone surface removal, would contain similar types of MEC in the subsurface as found in adjacent areas. Areas where subsurface investigations are not complete are considered data gaps.

Figure 5.6-2 illustrates the most likely release mechanisms for MEC being found in the Parker Flats MRA, which included:

- Firing, Intentional Placement, Mishandling/Loss, Abandonment, and Burial (Troop Training and Maneuvers)

#### **Access**

Access is mostly unrestricted to the Parker Flats MRA Phase II with the exception of MRS-15MOCO.2, which is restricted by the fence around the impact area.

#### **Receptor / Activity**

Table 5.6-1 identifies the potential human receptors and exposure media as Ground Surface or Below Grade. The activities of the five current and six future surface receptors would result in potential exposure on the ground surface. The activities of three current receptors and four future receptors would result in a potential subsurface exposure in the Parker Flats



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MRA Phase II areas where subsurface activities would be expected and subsurface removal actions have not occurred.

### 5.6.2 Exposure Pathway Analysis

As discussed above, Figure 5.6-1 graphically presents the exposure pathways analysis for the Parker Flats MRA.

There remains a risk of MEC exposure to current and future receptors during surface and intrusive activities. The risk of surface exposure was greatly reduced as a result of surface removal actions. Those surface removal actions focused on accessible areas; therefore, MEC may be present on the surface.

All current and future receptors anticipated to conduct subsurface activities would be at risk of exposure in areas having no history of subsurface MEC removal actions.

## 5.7 Parker Flats 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 Parker Flats 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 evaluation of the Parker Flats MRA Phase I area is complete. A ROD is pending for the Phase I area. Remedial action will be implemented after the ROD is issued.

The MEC encountered within the Parker Flats MRA are consistent with the historical use as a troop training area. However, data gaps, uncertainties, and/or open regulatory issues have been identified and must be addressed prior to receiving regulatory closure and implementing the planned reuse of the MRA. Therefore, the Parker Flats MRA falls into one of the categories, which is additional data are required to fill data gaps. Based on the information as presented in the CSM for the Parker Flats MRA, the recommendations are:

- Collection of additional data to fill data gaps:
  - Collect data sufficient to support the MEC remedial investigation in all areas where limited data are available. It is not anticipated that collection of additional data is required in MRS-15MOCO.2, MRS-44PBC, and MRS-4A.
  - Conduct an RQA Pilot Study to assess the potential for risk from undetected MEC in future residential areas after MEC investigation is completed in those areas.
- Proceed with Documentation – Prepare RI/FS and subsequent ROD.

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

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**Table 5.1-1**  
**Parker Flats MRA – Parcel Numbers, Acreage, and MRS Identifiers**

USACE Parcel Number (for land transfer)	Acreage (approximate)			MRS Identifier
	Phase I	Phase II	Total	
E18.1.1	63	37*	100	MRS-44 EDC, MRS-50
E18.1.2	65*	13*	78	MRS-40, MRS-44 EDC, MRS-50
E18.1.3	0	40*	40	MRS-4A
E18.4	1	1*	2	MRS-4A
E19a.1	6	66*	72	MRS-4A, MRS-50, MRS-53
E19a.2	1	72*	73	MRS-27A, MRS-27B
E19a.3	188	75*	263	MRS-13B, MRS-27A, MRS-4B, MRS-53, MRS-55
E19a.4	144	94*	238	MRS-27B, MRS-27C, MRS-3, MRS-37, MRS-52, MRS-53, MRS-54, MRS-55
E19a.5	227	0	227	MRS-50, MRS-53, MRS-27G
E20c.2	0	34	34	MRS-44 EDC
E21b.3	0	32	32	MRS-15MOCO.2
L20.18	0	7*	7	MRS-44
L23.2	0	11	11	MRS-44 PBC
L32.1	3		3	MRS-13B
<b>MRA TOTAL</b>	698	482	1,180	

Note: \* Indicates that a portion of the acreage is not designated as an MRS.

**Table 5.1-2**  
**Parker Flats MRA – Site Features**

Feature	Description
<b>Roadways</b>	<ul style="list-style-type: none"> <li>• Gigling Road is located along a portion of the northern boundary of the MRA, and only the western portion is an active roadway with vehicle traffic on a daily basis and is a major roadway of the FORA transportation network.</li> <li>• Eucalyptus Road crosses the southern portion of the MRA</li> <li>• Watkins Gate Road also borders a portion of the eastern boundary of the MRA.</li> <li>• Parker Flats Road crosses through the central portion of the MRA.</li> <li>• A number of unpaved roadways and dirt trails are located throughout the MRA.</li> </ul>
<b>Structures and Utilities</b>	<ul style="list-style-type: none"> <li>• The MRA includes a rappelling tower, a CBR training facility, several latrines, two support buildings, air transportation mock-ups, enlisted barracks, a gas chamber, and an observation tower.</li> <li>• Telephone, electrical, and water lines cross the southwestern portion of the MRA along or near Eucalyptus Road.</li> <li>• A high-powered transmission line crosses the entire MRA in a northeast to southwest direction.</li> <li>• Several utilities (water, storm drain, natural gas, telephone, sewer, and electrical) also extend into the MRA in the northwestern portion of the MRA along the boundary with CSUMB.</li> </ul>
<b>Fencing and Access</b>	<ul style="list-style-type: none"> <li>• The MRA is primarily open land, and there are no fences, gates, or barricades that restrict access to the property except for the four-strand barbed-wire fencing reinforced with concertina wire and locked chain-link gates along the southern side of Eucalyptus Road, restricting access to a small portion of the MRA and the former impact area to the south.</li> <li>• “U.S. Government Property-No Trespassing” and “Danger-Explosives Area” warning signs are posted along the fence line and locked gates.</li> <li>• Eucalyptus Road is restricted by road barriers marked with “road closed” signs located at the intersection of General Jim Moore Boulevard and Eucalyptus Road to the west and at the intersection of Parker Flats Road and Eucalyptus Road to the east.</li> </ul>

## Section 5 – Parker Flats MRA Conceptual Site Model

**Table 5.1-3**  
**Parker Flats MRA – Existing Structures and Buildings**

Parcel Number	Facility Number	Area (square feet)	Description	Asbestos-Containing Material	Lead-Based Paint	Year Built
<b>Phase I Area</b>						
E18.1.1	4B52	81	Field Range Latrines	Rated 6 to 13	Unknown	Unknown
E19a.3	4A52	207	Field Range Latrines	Not Surveyed	Unknown	Unknown
E19a.3	4B74	96	Field Range Latrines	No ACM	Unknown	Unknown
E19a.3	3984	1,364	Gas Chamber	No ACM	No	1984
E19a.4	4A44	174	Field Range Latrines	No ACM	Unknown	Unknown
E19a.5	4A22	179	Field Range Latrines	Rated 6 to 13	Unknown	Unknown
E19a.5	4A29	179	Field Range Latrines	No ACM	Unknown	Unknown
E19a.5	4A30	295	Field Range Latrines	No ACM	Unknown	Unknown
E19a.5	4A35	404	Field Range Latrines	Rated 6 to 13	Unknown	Unknown
E19a.5	4B50	180	Field Range Latrines	Rated 6 to 13	Unknown	Unknown
E19a.5	4A64	101	Field Range Latrines	No ACM	Unknown	Unknown
E19a.5	3949	21,372	Air Trans Mock-Up	No ACM	Yes	1976
E19a.5	3949A	2,921	Air Trans Mock-Up	No ACM	Unknown	Unknown
E19a.5	3949B	958	Air Trans Mock-Up	No ACM	Unknown	Unknown
E19a.5	3953B	42	Observation Tower	No ACM	Yes	1951
L32.1	H441	185	Fence Wall	Not Surveyed	Unknown	Unknown
<b>Phase II Area</b>						
E18.1.3	4386	7,332	Enlisted Barracks	Rated 6 to 13	Yes	1974
E18.1.3	4387	7,233	Enlisted Barracks	Rated 6 to 13	Yes	1974
E18.1.3	4476	74,167	Softball Field	Not Surveyed	No	1978
E18.4	4475	0	Water Tower	No ACM	Yes	1964
E19a.2	4B57	165	Field Range Latrines	Rated 6 to 13	Unknown	Unknown
E19a.2	4B58	165	Field Range Latrines	Rated 6 to 13	Unknown	Unknown
E19a.2	4B60	165	Field Range Latrines	No ACM	Unknown	Unknown
E19a.3	2028A	0	Field Range Latrines	Rated 6 to 13	Unknown	Unknown
E19a.3	4A34	176	Field Range Latrines	No ACM	Unknown	Unknown
E19a.3	4B56	174	Field Range Latrines	Not Surveyed	Unknown	Unknown
E19a.3	4B77	147	Field Range Latrines	No ACM	Unknown	Unknown
E19a.3	3950	305	Rappelling Tower	Not Surveyed	No	1981
E19a.4	4A26	165	Field Range Latrines	No ACM	Unknown	Unknown

## Section 5 – Parker Flats MRA Conceptual Site Model

Parcel Number	Facility Number	Area (square feet)	Description	Asbestos-Containing Material	Lead-Based Paint	Year Built
E19a.4	4A27	165	Field Range Latrines	No ACM	Unknown	Unknown
E19a.4	4A60	380	Field Range Latrines	No ACM	Unknown	Unknown
E19a.4	R391	96	Re-Locatable Building	Not Surveyed	Unknown	Unknown
E19a.4	R392	467	Re-Locatable Building	Not Surveyed	Unknown	Unknown
E19a.4	R393	300	Re-Locatable Building	Not Surveyed	Unknown	Unknown
E21b.3	3991	243	Covered Training Area	Unknown	Unknown	Unknown
E21b.3	R9441	161	Field Range Latrines	No ACM	No	1984

## Section 5 – Parker Flats MRA Conceptual Site Model

**Table 5.1-4**  
**Parker Flats MRA Phase II – Historical Military Use**

Location	Description
<b>General Vicinity</b>	<ul style="list-style-type: none"> <li>• The historical use of the Parker Flats MRA Phase II areas was for troop training and maneuvers.</li> <li>• 1940s training areas include portions of training areas G-1, G-2, H-1, and P.</li> <li>• 1950s training areas are assigned to 1st Brigade, 2nd Infantry, 3rd Brigade, 10th Infantry, 11th Infantry, and “RFP.”</li> <li>• 1950s and 1960s maps indicate “1000’ MTR RNG,” “PTA,” “Map Reading,” and “MTR SQ.”</li> <li>• “MTR SQ” appears in several locations of the northern portions of Parker Flats MRA Phase II.</li> <li>• “Sinkhole Practice Mortar Range” appears in the southern portion of MRS-13B.</li> </ul>
<b>MRS-4A</b>	<ul style="list-style-type: none"> <li>• A portion of MRS-4A was a former CBR Training Area.</li> <li>• This training area appears on historical maps (Fort Ord Training Areas &amp; Facilities) July 15, 1957 and January 10, 1958.</li> </ul>
<b>MRS-27A (TS-1), MRS-27B (TS-2), MRS-27C (TS-3)</b>	<ul style="list-style-type: none"> <li>• Areas were part of a group of 25 training sites designated as Site OE-27 in the Revised Archive Search Report (USACE 1997a).</li> <li>• Training areas that were used as overnight bivouac areas.</li> <li>• These areas were labeled on a historical training area map called the Beardsley Map, date unknown.</li> </ul>
<b>MRS-44EDC/PBC</b>	<ul style="list-style-type: none"> <li>• Located in the area to the north of the former impact area.</li> <li>• The boundaries of these areas were identified when an ordnance safety specialist discovered 37mm HE fragmentation and a 37mm rotating band during a site visit for an adjacent site.</li> </ul>
<b>MRS-15MOCO.2</b>	<ul style="list-style-type: none"> <li>• Located within the boundary of the former impact area and contains the firing lines for Ranges 44 and 45.</li> <li>• Range 44 was used for firing of antitank weapons.</li> <li>• Range 45 was a 40mm grenade range.</li> </ul>

**Table 5.1-5  
Parker Flats MRA – Administrative Controls**

Type	Description
<b>Land Use Covenants</b>	<ul style="list-style-type: none"> <li>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.</li> <li>Due to Fort Ord’s former use as a military installation, the property may contain MEC and there remains a risk 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).</li> <li>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.”</li> <li>These restrictions involve the enforcement of site review and reporting requirements and agency cost recovery/reimbursement requirements as imposed by the DTSC.</li> </ul>
<b>Restrictions to Digging / Excavation</b>	<ul style="list-style-type: none"> <li>City of Seaside Ordinance No. 259 amending the municipal code referred to as Chapter 15.34 and Monterey County Ordinance 16.10.</li> <li>These ordinances prohibit 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.</li> </ul>
<b>FORA Resolution 98-1</b>	<ul style="list-style-type: none"> <li>An approved FORA resolution that contains proposed and suggested measures to avoid or minimize hazardous material impact.</li> </ul>
<b>ESCA MOA</b>	<ul style="list-style-type: none"> <li>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.</li> <li>MOA establishes FORA’s ownership during the 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 the 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.</li> </ul>
<b>Habitat Management Plan</b>	<ul style="list-style-type: none"> <li>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).</li> </ul>
<b>Biological Opinions</b>	<ul style="list-style-type: none"> <li>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.</li> <li>Future MEC work is required to be consistent with the applicable conservation measures.</li> </ul>



## Section 5 – Parker Flats MRA Conceptual Site Model

**Table 5.2-1**  
**Parker Flats MRA – Geology and Soils**

Type	Description
<b>General Geology</b>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• 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.</li> <li>• 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.</li> <li>• 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).</li> <li>• 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.</li> <li>• Depth to groundwater is likely to be more than 100 feet bgs. Layers of perched groundwater may be present.</li> </ul>
<b>Topography and Soils</b>	<ul style="list-style-type: none"> <li>• Terrain consists of rolling hills with moderate to steep slopes.</li> <li>• Elevation ranges from approximately 280 to 490 feet msl with 2 to 15 percent slopes.</li> <li>• The surface soils are characterized as eolian (sand dune) and terrace (river deposits), which consist of unconsolidated materials of the Aromas and Old Dune Sand formations.</li> <li>• The primary soil type present in the MRA is Oceano Loamy Sand with 2 to 15 percent slopes with smaller areas of Arnold-Santa Ynez Complex and Baywood Sand.</li> </ul>

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

**Table 5.2-2**  
**Parker Flats MRA – Vegetation**

USACE Parcel Number	MRS Identifier	Vegetation
E18.1.1	MRS-44 EDC, MRS-50	Coastal coast live oak woodland, coastal scrub, and maritime chaparral
E18.1.2	MRS-40, MRS-44 EDC, MRS-50	Coastal coast live oak woodland and maritime chaparral
E18.1.3	MRS-4A	Coastal coast live oak woodland and coastal scrub
E18.4	MRS-4A	Coastal coast live oak woodland and coastal scrub
E19a.1	MRS-4A, MRS-50, MRS-53	Coastal coast live oak woodland, coastal scrub, and maritime chaparral
E19a.2	MRS-27A, MRS-27B	Coastal coast live oak woodland
E19a.3	MRS-13B, MRS-27A, MRS-4B, MRS-53, MRS-55	Coastal coast live oak woodland, maritime chaparral, and grassland
E19a.4	MRS-27B, MRS-27C, MRS-3, MRS-37, MRS-52, MRS-53, MRS-54, MRS-55	Coastal coast live oak woodland and maritime chaparral
E19a.5	MRS-50, MRS-53, MRS-27G	Coastal coast live oak woodland, maritime chaparral, and grassland
E20c.2	MRS-44 EDC	Maritime chaparral
E21b.3	MRS-15MOCO.2	Maritime chaparral
L20.18	MRS-44	Maritime chaparral
L23.2	MRS-44 PBC	Maritime chaparral
L32.1	MRS-13B	Coastal coast live oak woodland

Reference: USACE/Jones & Stokes 1992

*Please note: As part of the Army's removal actions for MEC on the Parker Flats MRA, vegetation was cut to make the surface safe and accessible for MEC removal crews. In 2005, FORA, under the supervision of the Army, performed a prescribed burn on 147 acres of the Parker Flats MRA.*

## Section 5 – Parker Flats MRA Conceptual Site Model

**Table 5.3-1**  
**Parker Flats MRA Phase II – Investigation and Sampling Activities**

Activity	Summary
<b>MRS-4A</b>	<ul style="list-style-type: none"> <li>• Sampling Investigation - Between 1993 and 1994, six grids were sampled in the vicinity of MRS-4A and no MEC were found (HFA 1994).</li> <li>• SS/GS Sampling and Removal - In November 1997, SS/GS sampling was used to investigate six 100-foot by 200-foot grids (USA 2000b).</li> </ul>
<b>MRS-27A, B, C</b>	<ul style="list-style-type: none"> <li>• PA/SI - In 1996, a USACE UXO Safety Specialist conducted a munitions response (site walk) that included MRS-27A, B, and C as part of a PA/SI (USACE 1997a).</li> </ul>
<b>MRS-44EDC</b>	<ul style="list-style-type: none"> <li>• SS/GS Sampling - Between May and July 1998, SS/GS sampling was performed on 12 100-foot by 200-foot grids in the EDC parcel (USA 2001o).</li> </ul>
<b>MRS-44EDC/44PBC</b>	<ul style="list-style-type: none"> <li>• 100 Percent Grid Sampling - In 1999, 100 percent grid sampling was conducted in the EDC and PBC parcels. Thirteen 100-foot by 100-foot sampling grids were placed throughout the PBC parcel. In the EDC parcel, 22 100-foot by 100-foot sampling grids were placed to the west of the PBC boundary (USA 2001o).</li> </ul>
<b>MRS-15MOCO.2</b>	<ul style="list-style-type: none"> <li>• 100 Percent Grid Sampling - In 1999, 20 100-foot by 100-foot sample grids were investigated in MRS-15MOCO.2 to determine the need and scope of future removal actions. The sample grids were located along the perimeter of the former impact area in areas behind firing ranges or between range fans (USA 2001m).</li> </ul>

**Table 5.3-2  
Parker Flats MRA Phase II – Removal Activities**

Activity	Summary
<p><b>MRS-4A and Expansion Grids</b></p>	<ul style="list-style-type: none"> <li>• 100 Percent 4-foot MEC Removal Action - In February 1998, a 100 percent removal action was conducted to a depth of 4 feet in 38 100-foot by 100-foot grids and partial grids. A few of the grids contained several rat's nests. Trash pits were excavated using a backhoe (USA 2000b).</li> <li>• 100 Percent 4-foot MEC Removal Action - In August 2000, a 100 percent removal action was conducted to a depth of 4 feet in several 100-foot by 100-foot expansion grids and partial expansion grids. MEC were encountered in some of these expansion grids and consisted primarily of hand grenades, rifle grenades, and grenade fuzes (Fort Ord MMRP Database).</li> </ul>
<p><b>MRS-44PBC</b></p>	<ul style="list-style-type: none"> <li>• 100 Percent 4-foot MEC Removal Action - Between September 1998 and December 2000, a 4-foot MEC removal action was conducted in 83 complete and partial grids (USA 2001o).</li> </ul>
<p><b>MRS-15MOCO.2</b></p>	<ul style="list-style-type: none"> <li>• Fuel Break Maintenance - In 2001, the fuel breaks system in the former impact area was reestablished as part of the fire safety and control program in the area. Vegetation and surface removal work was performed on 150 contiguous 15-foot by 100-foot grids along the southern side of Eucalyptus Road. Thirty-five of the grids were in MRS-15MOCO.2. No MEC items were found during the fuel break work (USA 2001p).</li> <li>• Ranges 43-48 Surface TCRA - Between August and December 2001, a surface TCRA was performed over the former Ranges 43-48 area (which included a portion of MRS-MOCO.2) to remove MEC, MD, and RRD from the surface of the site's open and accessible areas (Parsons 2002b).</li> <li>• Ranges 43-48 Prescribed Burn Preparatory Action - Between August and October 2002, fire prevention and control work were accomplished in preparation for the Ranges 43-48 prescribed burn. This preparatory action entailed moving tires; cutting vegetation around structures, removing utility poles; clearing brush; removing/pruning trees and performing fire prevention work. During the preparatory work, no MEC were encountered (Parsons 2004a).</li> <li>• NTCRA (Phases I) - Between July and November 2003, an NTCRA was conducted in MRS-15MOCO.2. Ninety-eight 100-foot by 100-foot grids and 97 partial grids were selected for analog removal to depth. The majority of the MEC found were hand grenade fuzes recovered from burial pits discovered 30 and 60 inches bgs. Digital geophysical surveys were conducted over all accessible portions of the MRS-MOCO.2 NOI removal areas to map and document the post-analog removal site conditions and accurately locate and identify any geophysical anomalies potentially representing MEC in the subsurface. This operation identified areas of obstructions/interferences such as asphalt, and material from the Range 45 pad, or telephone poles as SCA (Parsons 2004b).</li> <li>• MRS Ranges 43-48 and MRS-MOCO.2 – Removal of selected RRD between October and December 2004 to facilitate ongoing or future munitions responses on portions of the site made inaccessible by RRD. No MEC were found in MRS-MOCO.2 (Parsons 2005).</li> <li>• NTCRA (Phase II) - Between January and December 2005, a Phase II removal action was conducted in SCAs identified during the Phase I Removal Action. The SCAs were the focus of Phase II activities for those portions of the site that compromised instrument performance or technician safety during the Phase I field activities. Phase II activities included analog removal, digital geophysical mapping, and MEC removal to depth (Parsons 2006d).</li> </ul>

## Section 5 – Parker Flats MRA Conceptual Site Model

**Table 5.3-2**  
**Parker Flats MRA Phase II – Removal Activities**

Activity	Summary
<p><b>Northern Portions of MRS-27A, B, and C, and 'No Data' Areas</b></p>	<ul style="list-style-type: none"> <li>Between December 2001 and February 2002, a TCRA was conducted in accessible areas of the Parker Flats MRA Phase II including MRS-27A, B, C, and MRS-4A. Also included were the “No Data” areas north of MRS-44EDC and the large “No Data” area north of the largest Parker Flats MRA Phase I area (Figure 5.3-1). The areas having undergone previous removal actions were not included in this removal action. Field crews walked open areas and trails, visually searching for MEC and MD. MEC and MD encountered were removed or destroyed (Parsons 2002a).</li> </ul>

**Table 5.3-3**  
**Parker Flats MRA Phase II – Types of MEC Removed and Hazard Classification**

MEC ITEMS	UXO	DMM	ISD	Hazard Classification
Cap, blasting, electric, M6	3	1	0	1
Cartridge case, 40mm (projectile removed/case in tact)	0	1	0	1
Cartridge, 40mm, practice, M781	0	4	0	1
Cartridge, grenade, auxiliary, M7	8	0	0	1
Charge, 0.25lbs, demolition, TNT	0	1	0	2
Charge, nitrostarch, 0.25lb *	0	0	0	2
Cord, detonating	1	1	0	NS
Flare, aircraft, parachute, M9A1	1	0	0	2
Flare, surface, trip, M49 series	3	0	0	1
Fuze, grenade, hand, M10 series	0	443	0	1
Fuze, grenade, hand, M204 series	0	2	0	1
Fuze, grenade, hand, practice, M205 series	228	104	0	1
Fuze, grenade, hand, practice, M228	17	10	0	1
Fuze, projectile, combination, M1907	1	0	0	1
Fuze, projectile, point detonating, M48 series	1	0	0	2
Grenade, hand, fragmentation, MK II	1	0	0	3
Grenade, hand, Illumination, MK I	8	0	0	1
Grenade, hand, practice, M69	1	0	0	1
Grenade, hand, practice, MK II	12	0	0	1
Grenade, hand, smoke, M18 series	12	0	0	1
Grenade, rifle, antitank, M9 series	1	0	0	3
Grenade, rifle, smoke, M22 series	0	2	0	1
Pot, 2.5lb, smoke, HC, screening, M1	1	0	0	1
Primer, ignition, percussion, M82	8	0	0	1
Projectile, 22mm, subcaliber, practice, M744	10	0	0	1
Projectile, 40mm, cluster, white star, M585	1	0	0	1
Projectile, 40mm, high explosive, M406	2	0	0	3
Projectile, 40mm, parachute, illumination, M583 series	1	0	0	1
Projectile, 57mm, high explosive, M306 series	1	0	0	3
Projectile, 60mm, mortar, illumination, M83 series	1	0	0	2
Projectile, 75mm, high explosive, MK I	2	0	0	3

## Section 5 – Parker Flats MRA Conceptual Site Model

**Table 5.3-3**  
**Parker Flats MRA Phase II – Types of MEC Removed and Hazard Classification**

MEC ITEMS	UXO	DMM	ISD	Hazard Classification
Projectile, 75mm, Shrapnel, MK I	3	0	0	3
Propellant, 60mm, wafers, mortar	2	0	0	1
Pyrotechnic mixture, illumination	7	0	0	1
Rocket, 35mm, subcaliber, practice, M73	7	0	0	1
Signal, ground, rifle, parachute, M17 series	1	0	0	1
Signal, illumination, aircraft, AN-M37 series	3	0	0	1
Signal, illumination, ground, M125 series	7	0	0	2
Simulator, projectile, airburst, M74 series	4	0	0	1
Simulator, projectile, ground burst, M115A2	6	0	0	2
HE, 40mm (Model Unknown)	0	0	1	NS
<b>MRA TOTAL</b>	<b>365</b>	<b>569</b>	<b>1</b>	

Notes: NS – Not Specified

\* - MMRP database identified items as UXO with a quantity of zero.

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 5.3-4  
Parker Flats MRA Phase II – Summary of Recovered MEC and MD**

Type	Summary
UXO	365 items
DMM	569 items
ISD	1 item (MPPEH that could not be classified as UXO, DMM, or MD)
MD	11,734 pounds (includes MD-E and MD-F items if weights were documented)
<b>Aerial Extent</b>	<ul style="list-style-type: none"> <li>• Significant amounts of MEC and MD were encountered during previous investigations throughout the Parker Flats MRA Phase I. The largest concentrations of MEC were located in the central and southern portions of the Phase I area and in MRS-15MOCO.2. A significant amount of MEC was also recovered from the north-central portion of MRS-13B.</li> <li>• The majority of the grids along the boundaries of previous investigations and removal actions contained less than 10 pounds of MD per grid. Many of those boundary grids contained no MD. A portion of the MD identified includes SAS but not SAA.</li> </ul>
<b>Vertical Extent</b>	<ul style="list-style-type: none"> <li>• The MMRP database indicates that the majority of the MEC items recovered from the Parker Flats MRA were located between 0 and 24 inches bgs, or in the many burial pits found in the Phase I areas.</li> </ul>



## Section 5 – Parker Flats MRA Conceptual Site Model

**Table 5.3-5  
Parker Flats MRA – HTW History and Conditions**

Type	Summary
<b>HA-92 (MRS-3)</b>	<ul style="list-style-type: none"> <li>The evaluation of HA-92 (MRS-3) included site reconnaissance and site investigation soil sampling. Soil sample results indicated that low levels of metals, motor oil, diesel, and one semivolatile compound were detected. No explosive compounds were detected. Because sample results were below cleanup levels, no further action related to chemical contamination was recommended for HA-92 under the BRA.</li> </ul>
<b>HA-93 (MRS-4A)</b>	<ul style="list-style-type: none"> <li>The evaluation of HA-93 (MRS-4A) included a literature search, review of the information gathered during the munitions response, and reconnaissance of the site. No targets, spent ammunition, or other MEC-related items were observed, and no further action related to chemical contamination was recommended for HA-93 under the BRA.</li> </ul>
<b>HA-94 (MRS-4B)</b>	<ul style="list-style-type: none"> <li>The evaluation of HA-94 (MRS-4B) included a literature search, review of the information gathered during the munitions response, and reconnaissance of the site. No evidence of a range, MEC-related items, concentrations of spent SAA, or soil contamination was observed, and no further action related to chemical contamination was recommended for HA-94 under the BRA.</li> </ul>
<b>HA-103 (MRS-13B)</b>	<ul style="list-style-type: none"> <li>The evaluation of HA-103 (MRS-13B) included a literature search, review of the information gathered during the munitions response, and reconnaissance of the site. No targets, fighting positions, or other MEC-related items were observed. The site does contain RRD including trash pits.</li> </ul>
<b>HA-133 (MRS-27A)</b>	<ul style="list-style-type: none"> <li>The evaluation of HA-133 (MRS-27A) included a literature search and reconnaissance of the site. No targets, spent ammunition, or other MEC-related items were observed. Several fighting positions were mapped. Because no evidence of a range or stained soil was observed, no further action related to chemical contamination was recommended for HA-133 under the BRA.</li> </ul>
<b>HA-134 (MRS-27B)</b>	<ul style="list-style-type: none"> <li>The evaluation of HA-134 (MRS-27B) included a literature search and reconnaissance of the site. No targets, spent ammunition, or other MEC-related items were observed. Several fighting positions were mapped. Because no evidence of a range or stained soil was observed, no further action related to chemical contamination was recommended for HA-134 under the BRA.</li> </ul>
<b>HA-135 (MRS-27C)</b>	<ul style="list-style-type: none"> <li>The evaluation of HA-135 (MRS-27C) included a literature search and reconnaissance of the site. No targets or range features were observed. Several fighting positions were mapped. An expended smoke grenade (MD) was found in one of the fighting positions. Because no evidence of a range or stained soil was observed, no further action related to chemical contamination was recommended for HA-135 under the BRA.</li> </ul>
<b>HA-139 (MRS-27G)</b>	<ul style="list-style-type: none"> <li>The evaluation of HA-139 (MRS-27G) included a literature search and reconnaissance of the site. An expended signal flare was found within the portion of HA-139 that lies within the parcel. One fighting position was also observed. No targets, spent ammunition, or range features were observed. Because no evidence of a range or stained soil was observed, no further action related to chemical contamination was recommended for HA-139 under the BRA.</li> </ul>
<b>HA-168 (MRS-37)</b>	<ul style="list-style-type: none"> <li>The evaluation of HA-168 (MRS-37) included site reconnaissance, review of the information gathered during the munitions response, and site investigation soil sampling. No explosive compounds were detected. Based on these results, no further action related to chemical contamination was recommended for HA-168 under the BRA.</li> </ul>

**Table 5.3-5  
Parker Flats MRA – HTW History and Conditions**

Type	Summary
<b>HA-170 (MRS-40)</b>	<ul style="list-style-type: none"> <li>The assessment of HA-170 (MRS-40) included site reconnaissance and evaluation of soil samples collected at adjacent HA-180. Soil samples were collected to evaluate whether explosive residue was present in an area where high numbers of military munitions were found. Based on the results of the reconnaissance and results of sampling at HA-180, no further action related to chemical contamination was recommended for HA-170 under the BRA.</li> </ul>
<b>HA-174 (MRS-44 EDC and MRS-44 PBC)</b>	<ul style="list-style-type: none"> <li>The evaluation of HA-174 (MRS-44PBC and MRS-44EDC) included a literature search, review of the information gathered during the munitions response, site reconnaissance, and sampling for MC. Several blank SAA casings and one expended 75mm projectile casing were found. Surface soil samples were collected to evaluate whether MC were present in areas where high numbers of military munitions were found. Because no explosive-related compounds were detected and metals concentrations were below Fort Ord background levels, no further action related to chemical contamination was recommended under the BRA.</li> </ul>
<b>HA-180 (MRS-50 and MRS-50 EXP)</b>	<ul style="list-style-type: none"> <li>The evaluation of HA-180 (MRS-50 and MRS-50EXP) included a literature search, review of the information gathered during the munitions response, site reconnaissance, and site investigation sampling. Surface soil samples were collected to evaluate whether explosive residue was present in an area where high numbers of military munitions were found. Because no explosive-related compounds were detected and metals concentrations were below Fort Ord background levels, no further action related to chemical contamination was recommended under the BRA.</li> </ul>
<b>HA-182 (MRS-52)</b>	<ul style="list-style-type: none"> <li>The evaluation of HA-182 (MRS-52) included a literature search and reconnaissance of the site. Based on the site reconnaissance and sample results from adjacent areas where a high number of military munitions items were removed, no further action related to chemical contamination was recommended for HA-185 under the BRA.</li> </ul>
<b>HA-183 (MRS-53)</b>	<ul style="list-style-type: none"> <li>The evaluation of HA-183 (MRS-53) included a literature search, review of the information gathered during the munitions response, site reconnaissance, and site investigation sampling. Soil sample results indicated that low levels of metals, motor oil, and diesel were detected. No explosive compounds were detected. Because sample results were below cleanup levels, no further action related to chemical contamination was recommended for HA-183 under the BRA.</li> </ul>
<b>HA-184 (MRS-54EDC)</b>	<ul style="list-style-type: none"> <li>The evaluation of HA-184 (MRS-54EDC) included a literature search, review of the information gathered during the munitions response, and reconnaissance of the site. No evidence of targets or range features was found; however, 21 fighting positions were observed. Because no evidence of a range or concentrated areas of military munitions were found at this site, no further action related to chemical contamination was recommended for HA-184 under the BRA.</li> </ul>
<b>HA-185 (MRS-55)</b>	<ul style="list-style-type: none"> <li>The evaluation of HA-185 (MRS-55) included site reconnaissance, review of the information gathered during the munitions response, and site investigation soil sampling. No explosive compounds were detected. Based on these results, no further action related to chemical contamination was recommended for HA-185 under the BRA.</li> </ul>

## Section 5 – Parker Flats MRA Conceptual Site Model

**Table 5.3-5  
Parker Flats MRA – HTW History and Conditions**

Type	Summary
Miscellaneous	<ul style="list-style-type: none"> <li>• There is no evidence that non-munitions-related hazardous substances were stored, released, or disposed of on parcels in Parker Flats that include all or portions of MRS-4A, MRS-13B, MRS-27A, MRS-27B, MRS-27G, MRS-37, MRS-40, MRS-44EDC, MRS-44PBC, MRS-50, MRS-50EXP, MRS-53, MRS-53EXP, and MRS-55.</li> <li>• Hazardous substances were stored for one year or more, released or disposed of on parcels in Parker Flats that include all or portions of MRS-3, MRS-37, MRS-52, MRS-53EXP, MRS-54EDC, MRS-27B, and MRS-27C in excess of reportable quantities specified in 40 CFR Part 373. All hazardous substance storage operations have been terminated on these parcels.</li> </ul>

Reference: Army 2007

**Table 5.4-1**  
**Parker Flats MRA - Future Land Use by Parcel**

USACE Parcel Number	MRS Number	Land Use Category	Description	Acreege
E18.1.1	MRS-50	Development	Cemetery	40
	MRS-50	Development	Residential	23
	MRS-44 EDC	Development	Cemetery	5
	No related MRS	Development	Cemetery	23.6
	No related MRS	Development	Residential and Cemetery Uses	8.4
E18.1.2	MRS-40, MRS-50	Development	Cemetery	61
	MRS-44 EDC	Development	Cemetery	12
	No related MRS	Development	Cemetery	3
	No related MRS	Development	Residential	2
E18.1.3	MRS-4A	Development	Residential – Single Family	1
	No related MRS	Development	Residential – Single Family	39
E18.4	MRS-4A	Development	Residential – Single Family	2
E19a.1	MRS-4A, MRS-50, MRS-53	Development	Residential – Single Family	6
	No related MRS	Development	Residential – Single Family	66
E19a.2	MRS-27A, MRS-27B	Habitat	Reserve – Horse Park Footprint. Equestrian Trails Required. Oak Woodland Habitat.	72
	MRS-13B	Habitat	Reserve – Horse Park Footprint. Equestrian Trails Required. Oak Woodland Habitat.	1
E19a.3	MRS-13B	Development	Commercial – Horse Park – Structures, Parking, Arena	98
	MRS-27A	Development	Commercial – Horse Park – Structures, Parking, Arena	75
	MRS-4B, MRS-27A, MRS-53, MRS-55	Development	Commercial – Horse Park – Structures, Parking, Arena	90
E19a.4	MRS-27B, MRS-27C	Habitat	Reserve – Equestrian Access	94
	MRS-3, MRS-37, MRS-52, MRS-53, MRS-54, MRS-55	Habitat	Reserve – Equestrian Access	144
E19a.5	MRS-50, MRS-53	Development	Institutional – MPC Education Use – Driving Track, Structures, Parking	215
	MRS-27G	Development	Institutional – MPC Educational Uses – Driving Track, Structures, Parking	6

## Section 5 – Parker Flats MRA Conceptual Site Model

**Table 5.4-1**  
**Parker Flats MRA - Future Land Use by Parcel**

<b>USACE Parcel Number</b>	<b>MRS Number</b>	<b>Land Use Category</b>	<b>Description</b>	<b>Acreage</b>
	MRS-50, MRS-53	Development	Residential	6
E20c.2	MRS-44 EDC	Development	Residential – Single Family	34
E21b.3	MRS-15MOCO.2	Development	MPC – Educational Use, Structures, Parking	32
L20.18	MRS-44	Development	Roadway	7
L23.2	MRS-44 PBC	Development	Institutional – MPC Education Use – Structures, Parking	11
L32.1	MRS-13B	Development	Light Industrial/Office – Infill Development	3
<b>MRA - TOTAL</b>				<b>1,180</b>

**Table 5.5-1  
Parker Flats MRA – Ecological Information**

Type	Summary
<b>Biological</b>	<ul style="list-style-type: none"> <li>• Dominant vegetation in the area is coastal coast live oak woodland with smaller areas of maritime chaparral and grassland. These biological communities are described below:               <ul style="list-style-type: none"> <li>• Coast Live Oak Woodland and Savanna - The 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.</li> <li>• Maritime chaparral is one of the dominant vegetation type within 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.</li> <li>• Grasslands - Annual grasslands dominated by introduced species such as slender wild oats, soft chess, and rigput brome are the most common grassland community within the Plan Area. 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.</li> </ul> </li> </ul>
<b>Habitat Management Plan / Biological Opinions</b>	<ul style="list-style-type: none"> <li>• 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 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 BOs dated prior to issuance of the HMP in April 1997.</li> <li>• 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.</li> <li>• The HMP identifies the area as development (including residential) and habitat reserve with borderland development areas adjacent to the NRMA interface. The NRMA separates the development category land from the adjacent habitat reserve area. The 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</li> </ul>

## Section 5 – Parker Flats MRA Conceptual Site Model

**Table 5.5-1**  
**Parker Flats MRA – Ecological Information**

Type	Summary
	<p>minimize impacts to listed species.</p> <ul style="list-style-type: none"> <li>• The HMP identified principal management categories. The MRA is identified as development (including residential) with borderlands interface and habitat reserve. These principal management categories are defined as: <ul style="list-style-type: none"> <li>• Development - lands in which no management restrictions are contained under the HMP. Some plans for salvage of biological resources for these parcels may be specified.</li> <li>• Habitat Reserve – land in which no development is allowed. Management goals for the area are conservation and enhancement of threatened and endangered species.</li> <li>• Borderland Development Area – land abutting the NRMA that is slated for development. Management of these lands includes no restrictions except along the development/reserve interface.</li> </ul> </li> <li>• FORA will implement the mitigation requirements during MEC activities 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).</li> <li>• Since April 1997, three additional BOs have been issued that are relevant to the MEC remediation activities (USFWS 1999, 2002, and 2005). Future MEC remediation is required to be consistent with the applicable conservation measures.</li> </ul>
<p><b>Threatened and Endangered Species</b></p>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• Threatened or endangered plant species identified as having possible occurrence in the Parker Flats MRA include sand gilia (endangered) and Monterey spineflower (threatened).</li> <li>• In 2004, the CTS was identified as a threatened species. CTS may be found as far as 2 km from aquatic breeding habitats. Most of the Parker Flats MRA is located within 2 km of an aquatic feature in which CTS may be present.</li> </ul>

**Table 5.5-2  
Parker Flats MRA – HMP Category by Parcel and Possible Occurrence of HMP Species**

USACE Parcel Number	HMP Designated Use	HMP Species
E18.1.1	Development	Monterey spineflower, sandmat manzanita, Monterey ceanothus, Eastwood's ericameria, California black legless lizard, Monterey ornate shrew
E18.1.2	Development	Monterey spineflower, sandmat manzanita, Monterey ceanothus, Eastwood's ericameria, California black legless lizard, Monterey ornate shrew
E18.1.3	Development	Monterey spineflower, Monterey ceanothus, California black legless lizard, Monterey ornate shrew
E18.4	Development	Monterey spineflower, Monterey ornate shrew
E19a.1	Development	Monterey spineflower, toro manzanita, sandmat manzanita, Monterey ceanothus, Hooker's manzanita, California black legless lizard, Monterey ornate shrew, California tiger salamander
E19a.2	Habitat Reserve	Monterey spineflower, toro manzanita, sandmat manzanita, Monterey ceanothus, Hooker's manzanita, California black legless lizard, Monterey ornate shrew, California tiger salamander
E19a.3	Development (includes a borderland buffer along the NRMA Interface)	Monterey spineflower, toro manzanita, sandmat manzanita, Monterey ceanothus, Hooker's manzanita, California black legless lizard, Monterey ornate shrew, California tiger salamander
E19a.4	Habitat Reserve	Monterey spineflower, toro manzanita, sandmat manzanita, Monterey ceanothus, Eastwood's ericameria, Hooker's manzanita, California black legless lizard, Monterey ornate shrew, California tiger salamander
E19a.5	Development (includes a borderland buffer along the NRMA Interface)	Sand gilia, Monterey spineflower, toro manzanita, sandmat manzanita, Monterey ceanothus, Eastwood's ericameria, Hooker's manzanita, California black legless lizard, Monterey ornate shrew, California tiger salamander
E20c.2	Development	Monterey spineflower, sandmat manzanita, Monterey ceanothus, Eastwood's ericameria, California black legless lizard, Monterey ornate shrew
E21b.3	Development (includes a borderland buffer along the NRMA Interface)	Monterey spineflower, Seaside bird's beak, sandmat manzanita, Monterey ceanothus, Eastwood's ericameria, California black legless lizard, California tiger salamander
L20.18	Development	Monterey spineflower, Seaside bird's beak, sandmat manzanita, Monterey ceanothus, Eastwood's ericameria, California black legless lizard, Monterey ornate shrew
L23.2	Development	Monterey spineflower, sandmat manzanita, Monterey ceanothus
L32.1	Development	Monterey spineflower, sandmat manzanita, Monterey ornate shrew

Reference: USACE 1997b



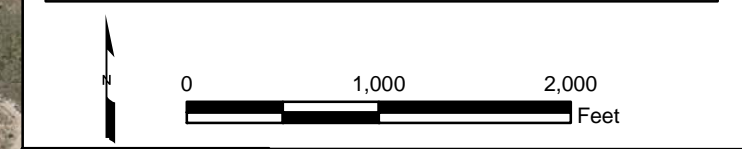
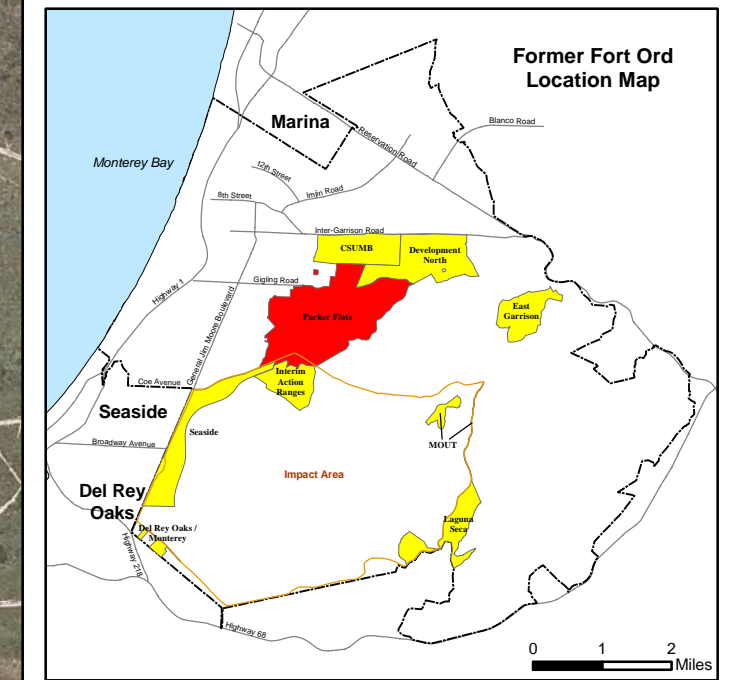
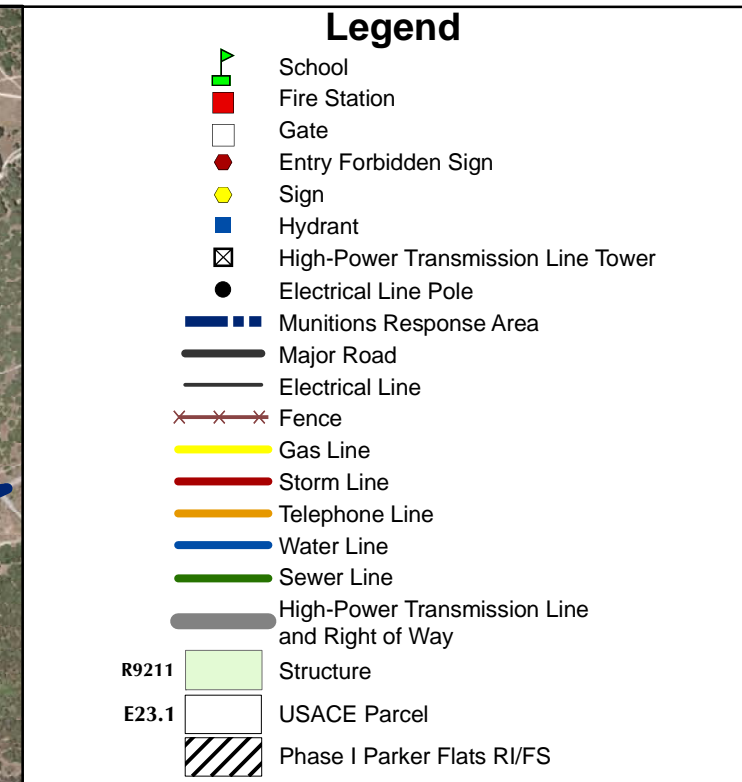
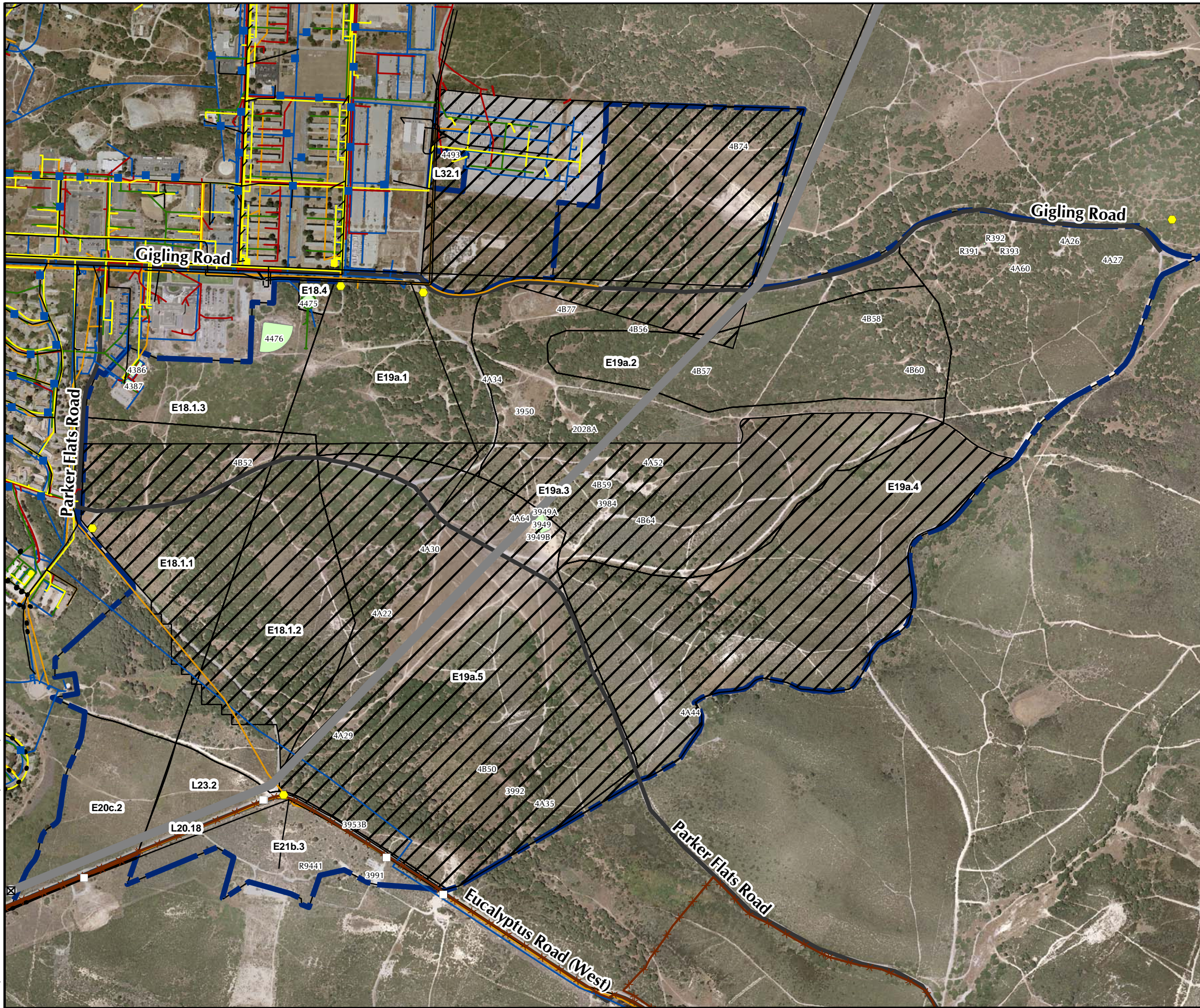
## Section 5 – Parker Flats MRA Conceptual Site Model

**Table 5.6-1**  
**Parker Flats 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	✓	✓	✓	✓	✓	✓
Residents				✓	✓	✓
Recreational Users				✓	✓	✓



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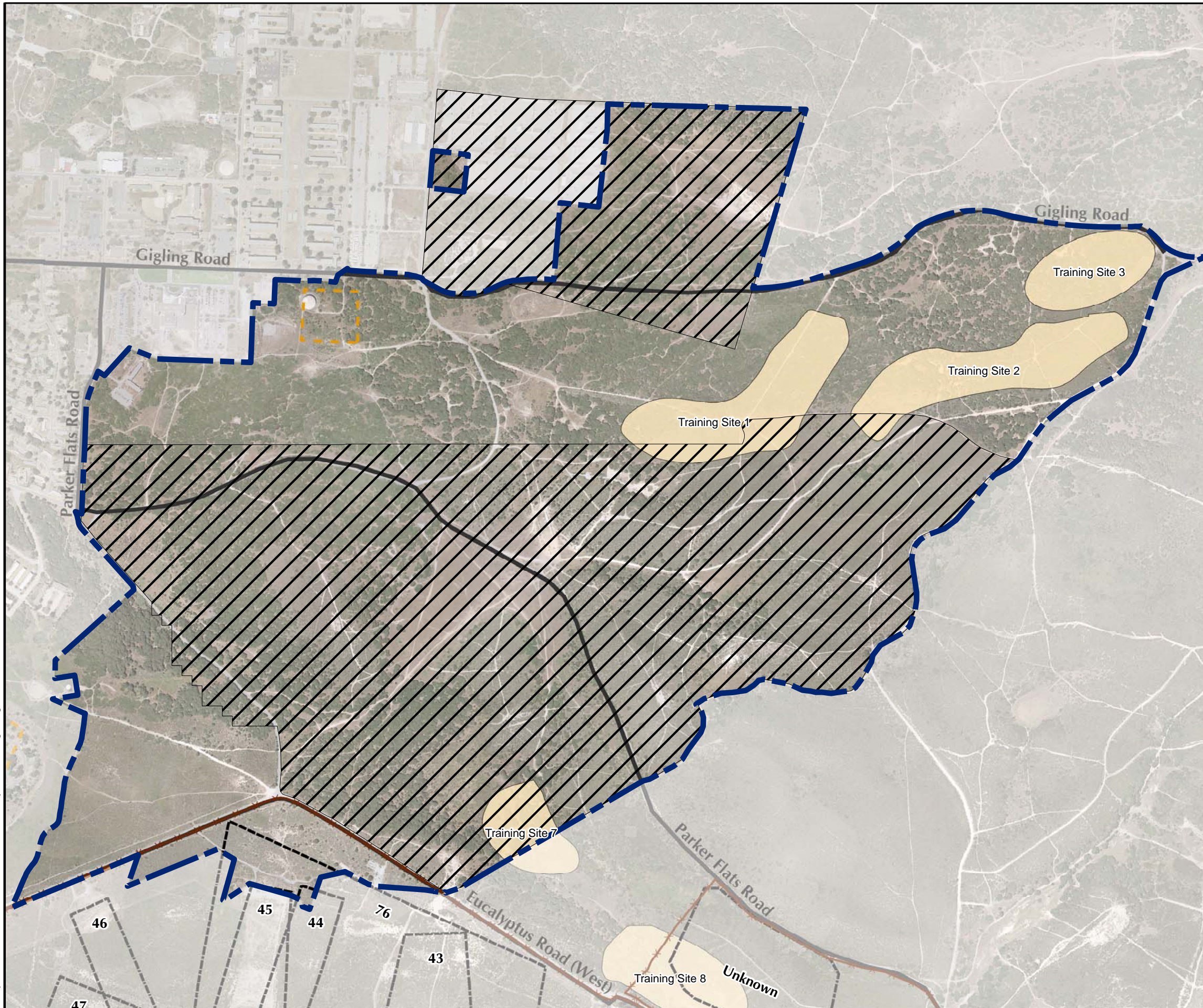
**Parker Flats MRA Facility Profile  
Physical Features**

FORA ESCA RP  
Monterey County, California

**Figure 5.1-1**

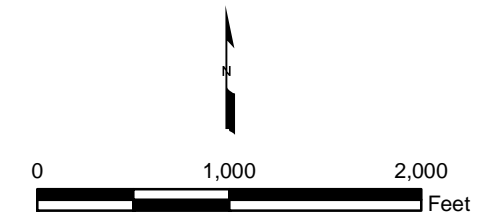
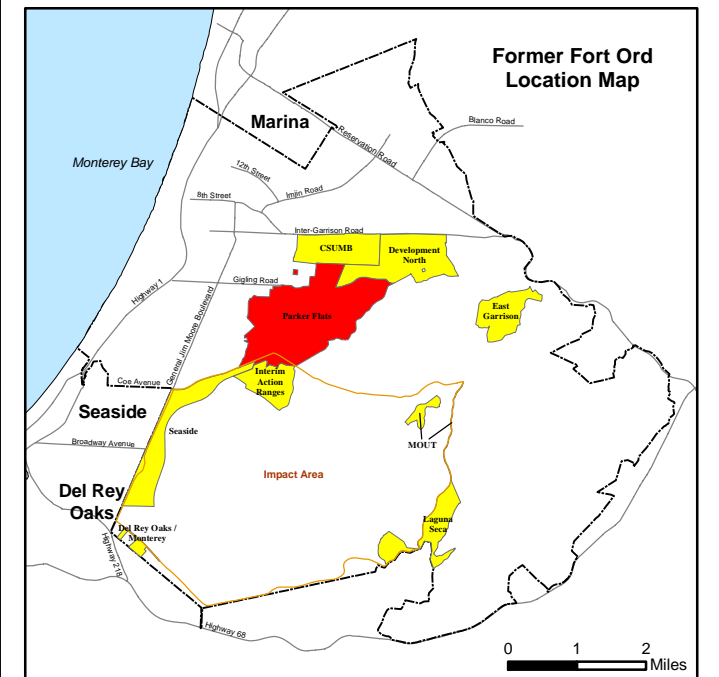


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### Legend

- Training Sites
- Munitions Response Area
- Firing Range
- Historical Range
- Major Road
- Fence
- Phase I Parker Flats RI/FS



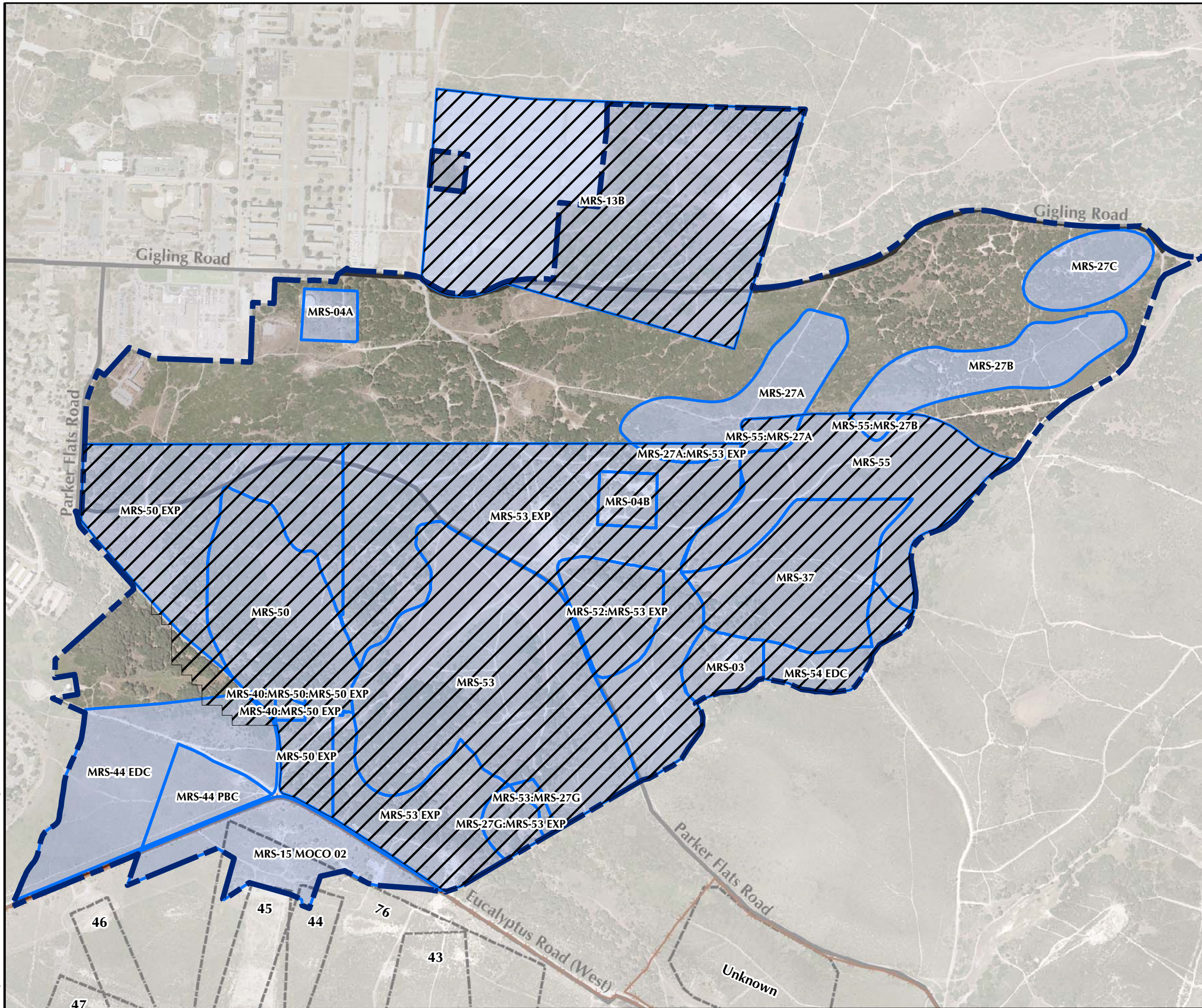
**Parker Flats MRA Facility Profile Ranges and Training Sites**

FORA ESCA RP  
Monterey County, California

Figure 5.1-2

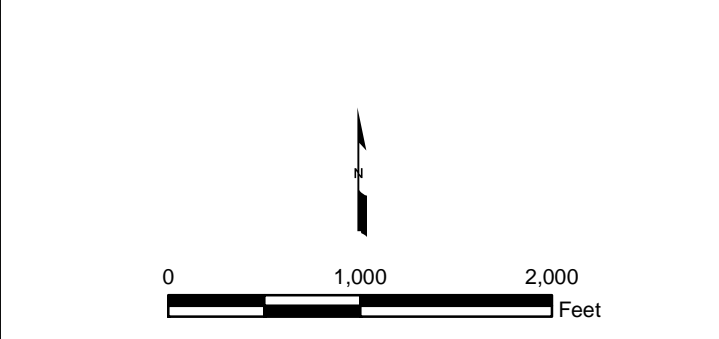
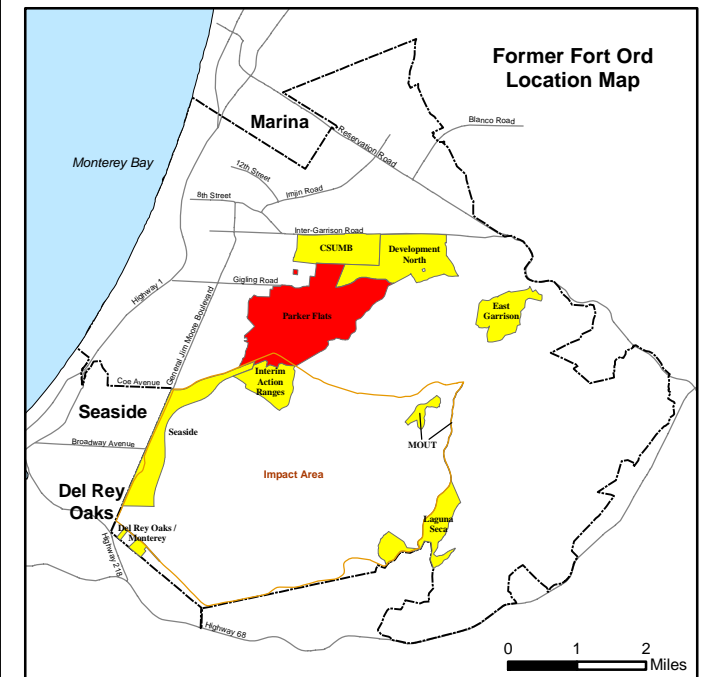


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### Legend

- Munitions Response Area
- Major Road
- Fence
- Firing Range
- Munitions Response Site
- Phase I Parker Flats RI/FS



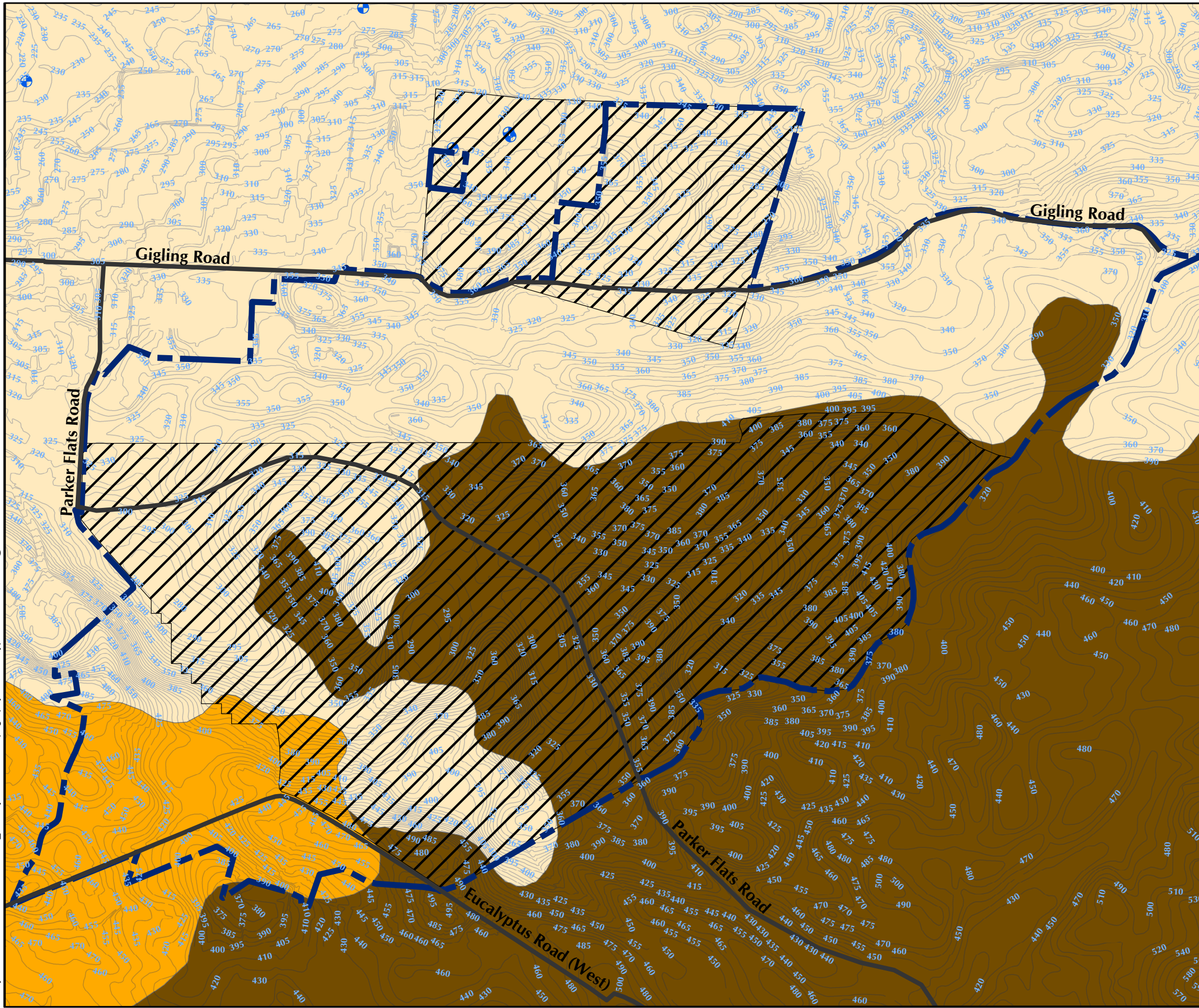
**Parker Flats MRA Facility Profile  
Munitions Response Site  
Boundaries**

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Monterey County, California

Figure 5.1-3

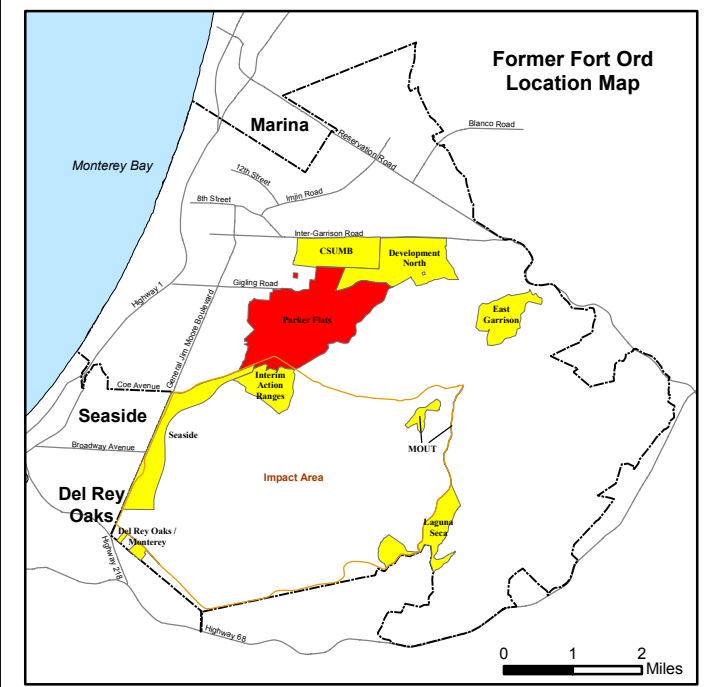


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### Legend

- Environmental Well
  - Abandoned Well
  - Water Supply Well
  - 540 Topography 5ft
  - Munitions Response Area
  - Major Road
  - Phase I Parker Flats RI/FS
- ### Soil Type
- Arnold-Santa Ynez Complex
  - Baywood Sand, 2 to 15 Percent Slopes
  - Oceano Loamy Sand, 2 to 15 Percent Slopes



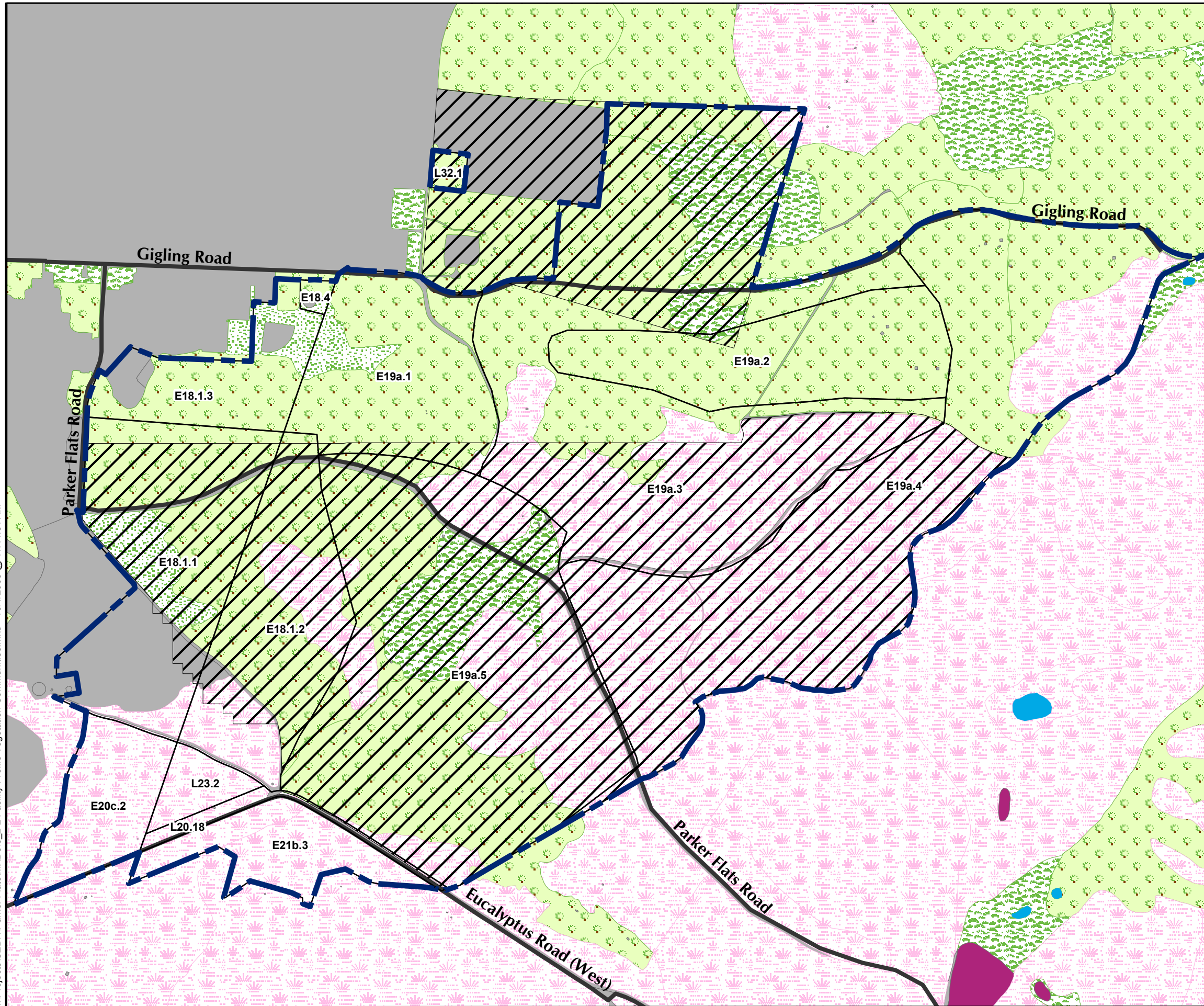
**Parker Flats MRA Physical Profile  
Topography and Soil Type**

FORA ESCA RP  
Monterey County, California

Figure 5.2-1



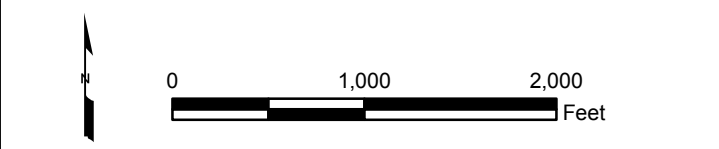
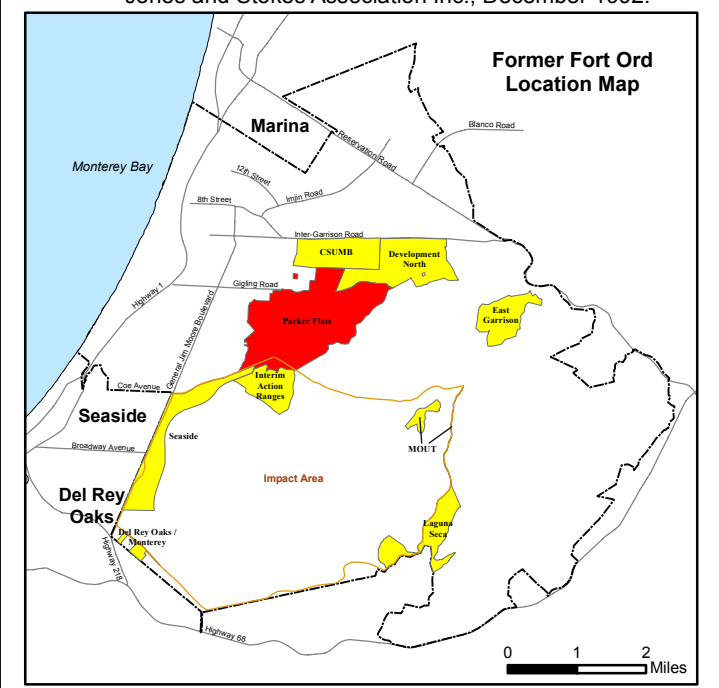
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- ### Legend
- Munitions Response Area
  - Major Road
  - USACE Parcel
  - Phase I Parker Flats RI/FS

- ### Vegetation Type
- Grassland
  - Maritime Chaparral
  - Coastal Coast Live Oak Woodland
  - Coastal Scrub
  - Ice Plant Mats
  - Aquatic Feature
  - Developed / Disturbed

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



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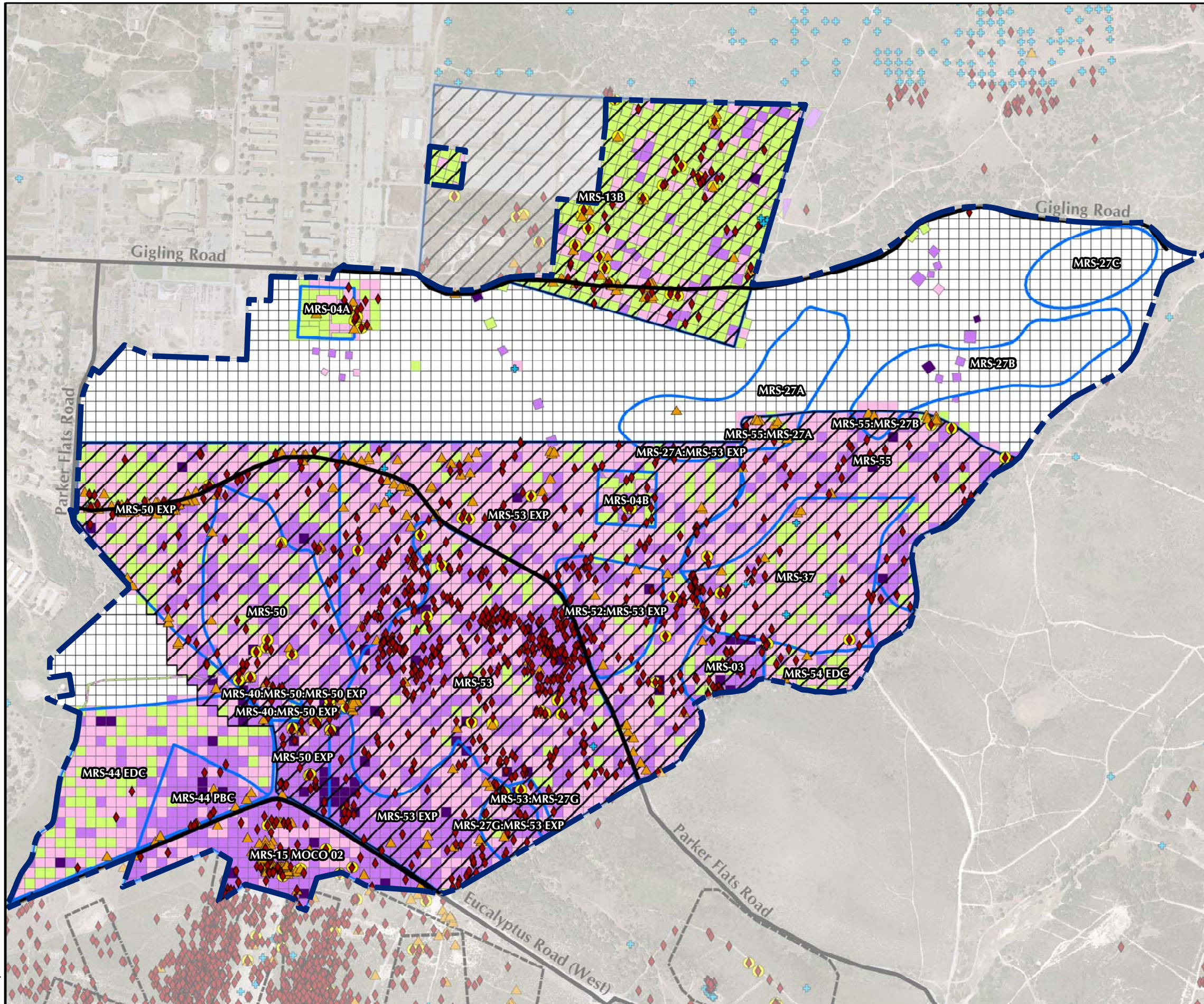
**Parker Flats MRA Physical Profile  
Generalized Vegetation Communities**

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Monterey County, California

Figure 5.2-2



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### Legend

- Munitions Response Area
- Munitions Response Site
- Major Road
- Phase I Parker Flats RI/FS

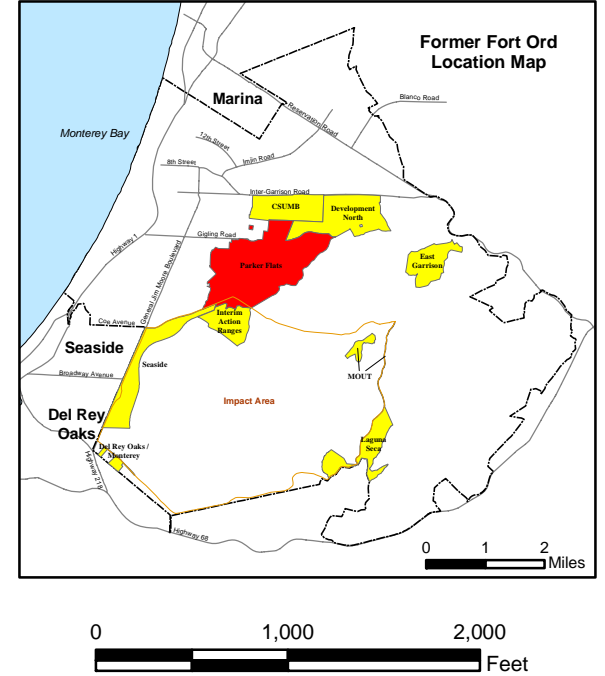
### MEC Type

- ◆ 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.



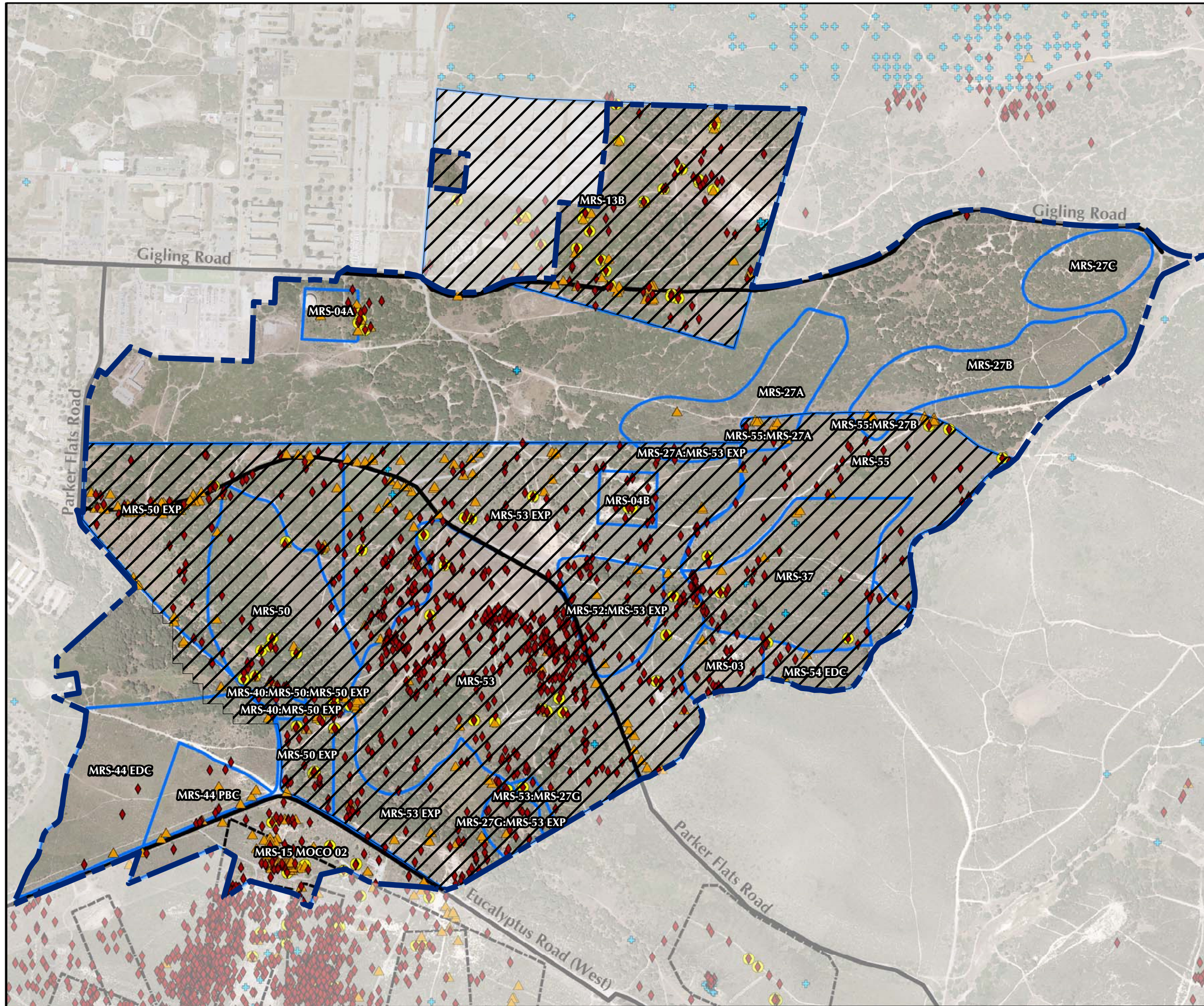
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**WESTON SOLUTIONS**  
 Westcliffe Engineers, Inc.

**Parker Flats MRA Release Profile  
 MEC and MD Locations**  
 FORA ESCA RP  
 Monterey County, California

Figure 5.3-1



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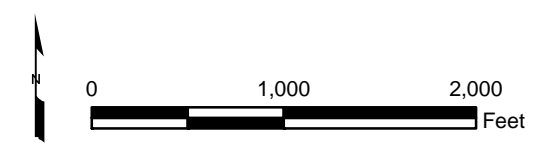
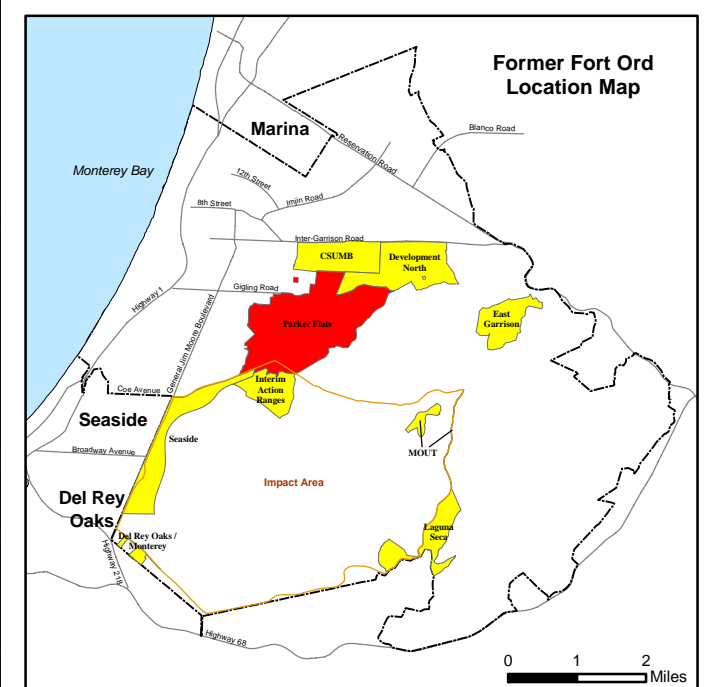
### Legend

- Munitions Response Area
- Munitions Response Site
- MRS-27A**
- Firing Range
- Major Road
- Phase I Parker Flats RI/FS

### 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.

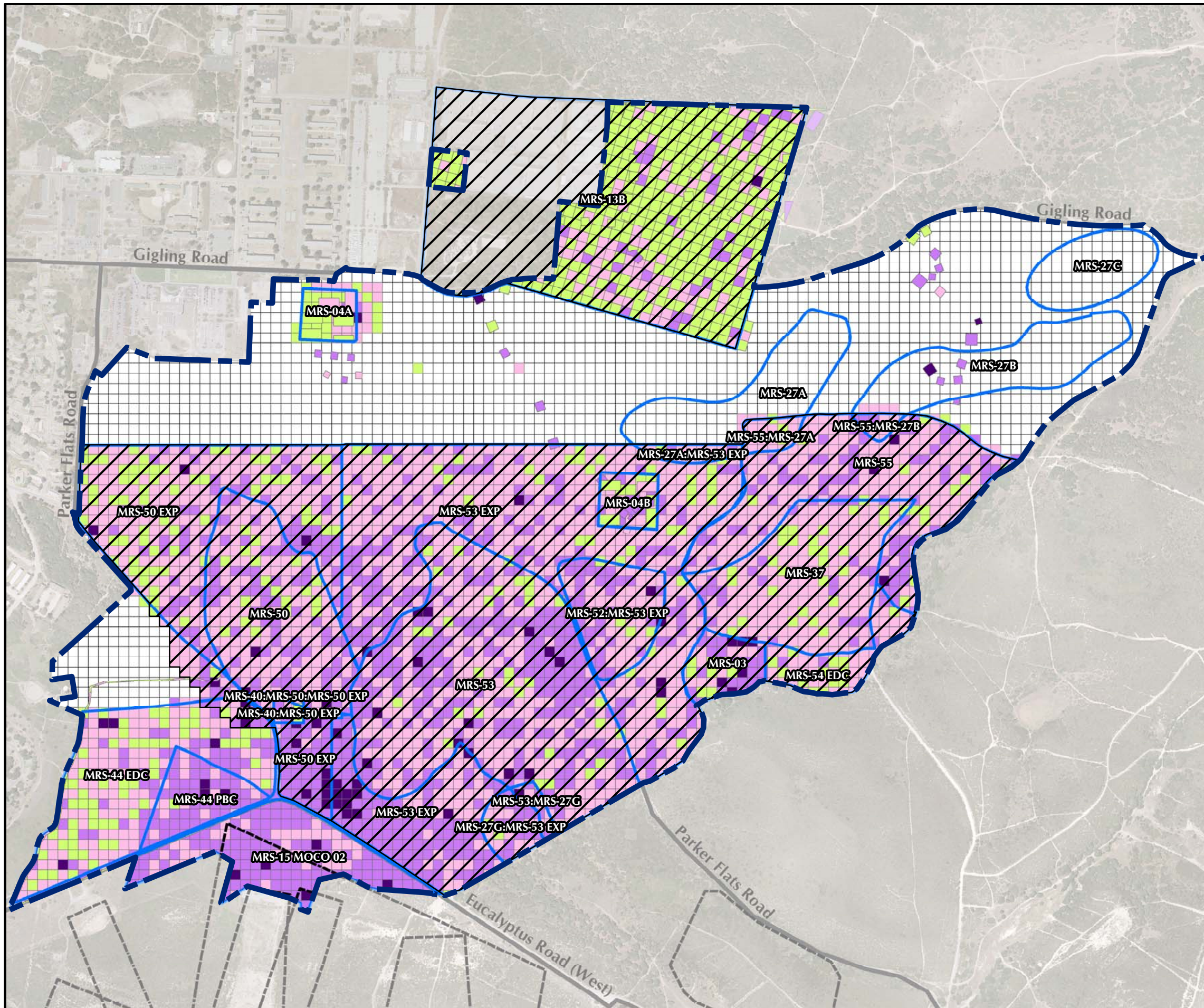


**Parker Flats MRA Release Profile  
MEC Locations**  
FORA ESCA RP  
Monterey County, California

Figure 5.3-2



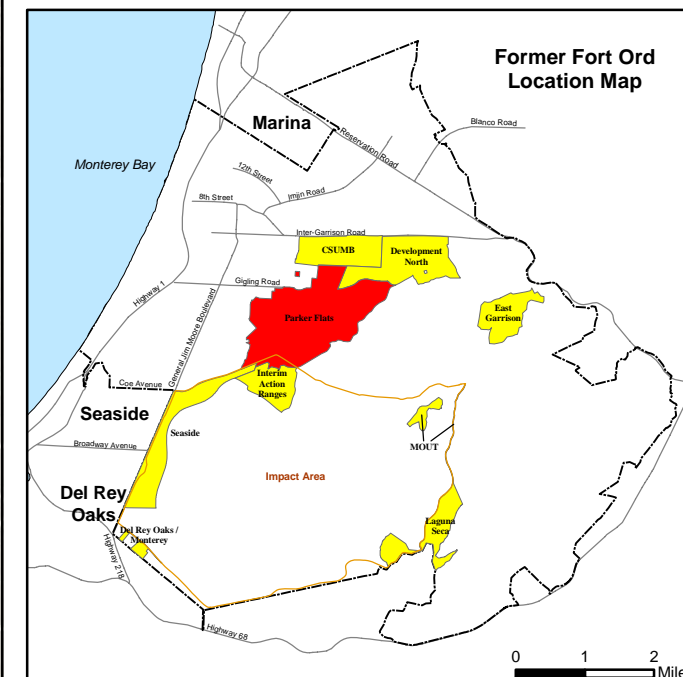
T:\Projects\SEDR\Parker Flats\MXD\5\_3-3 Release Profile MD Locations.mxd - 10/1/2008 @ 9:55:15 AM



### Legend

- Munitions Response Area
  - MRS-27A** Munitions Response Site
  - Firing Range
  - Major Road
  - Phase I Parker Flats RI/FS
- 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.

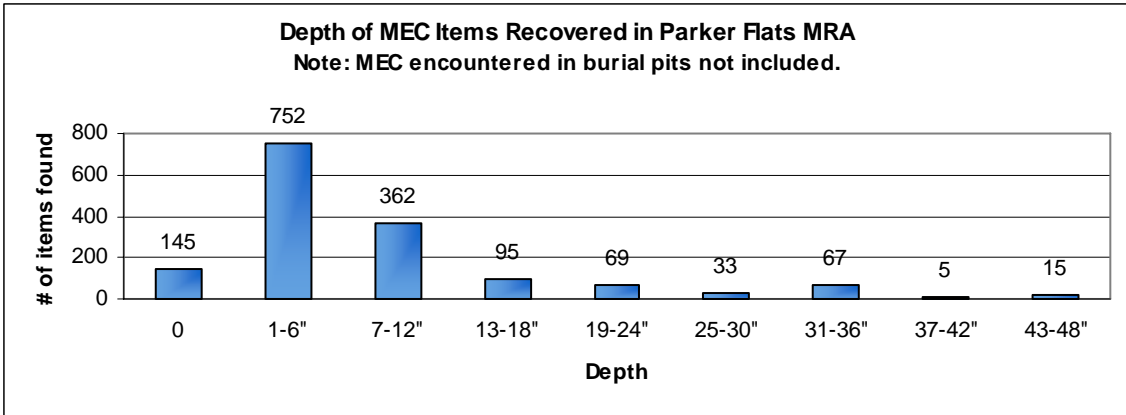


### Parker Flats MRA Release Profile MD Locations

FORA ESCA RP  
Monterey County, California

Figure 5.3-3





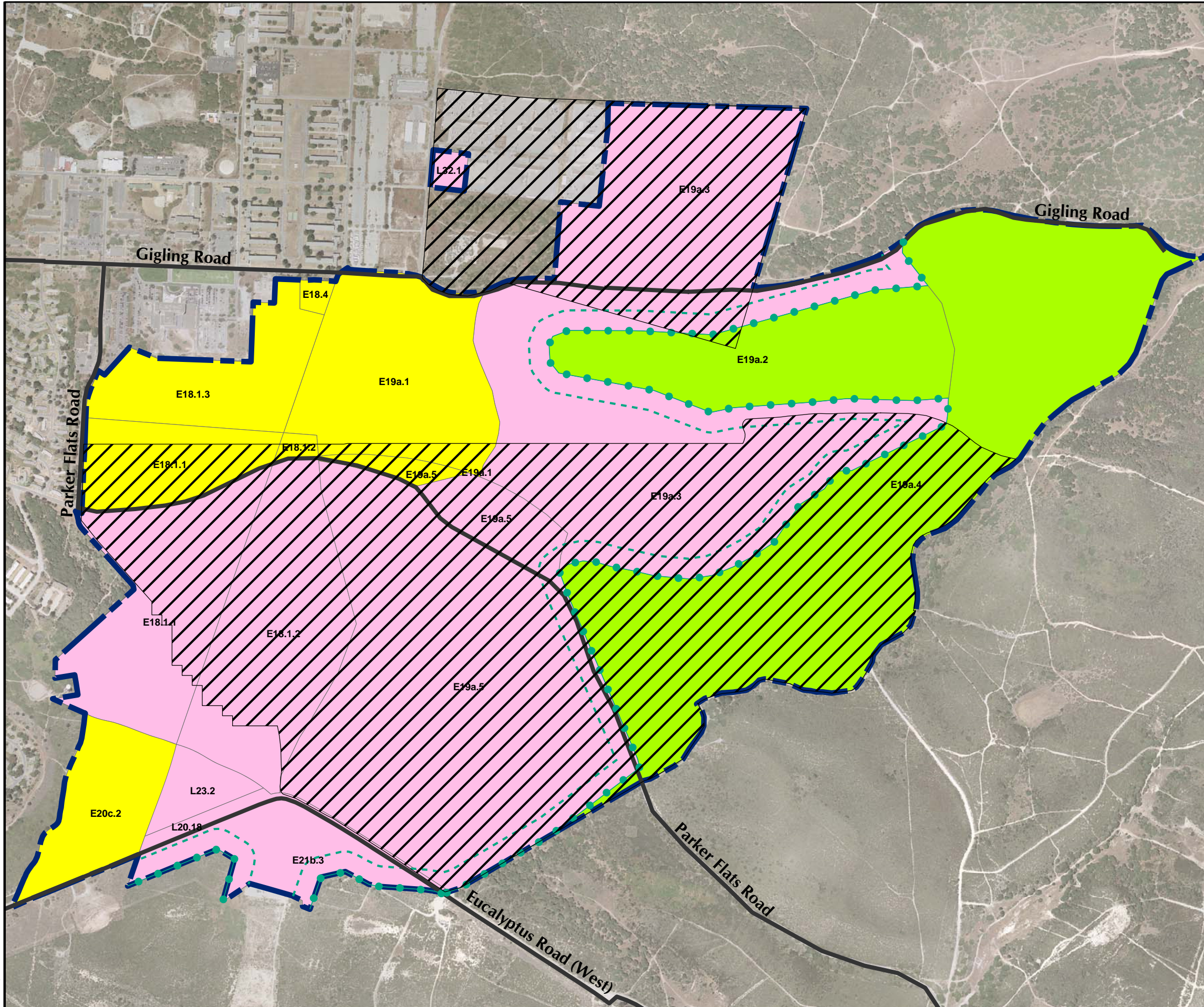
**Westcliffe  
 Engineers, Inc.**

**Parker Flats MRA  
 Distribution of MEC  
 Recovered by Depth Interval**

FORA ESCA RP  
 Monterey County, California

**Figure 5.3-4**

T:\Projects\SEDR\Parker Flats\MXD\5\_4-1 Land Use Profile Reuse Plan.mxd - 10/1/2008 @ 9:59:25 AM

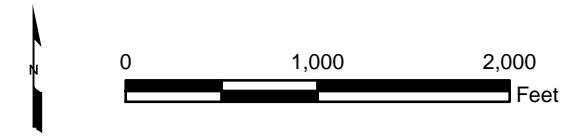
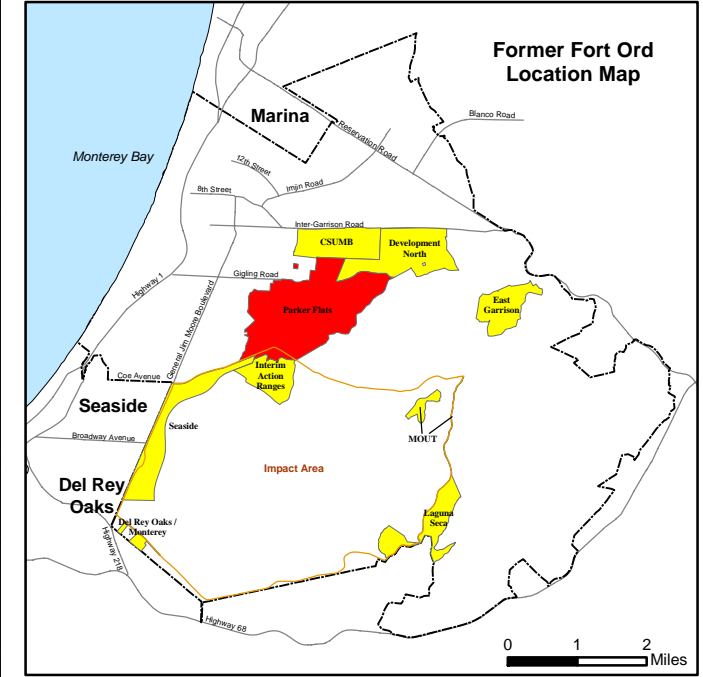


### Legend

- Munitions Response Area
- Major Road
- E19a.1 USACE Parcel
- Phase I Parker Flats RI/FS

### Future Land Use

- Residential
- Non-Residential
- Habitat Reserve
- Borderland Interface
- 200-Foot Buffer from Borderland Interface

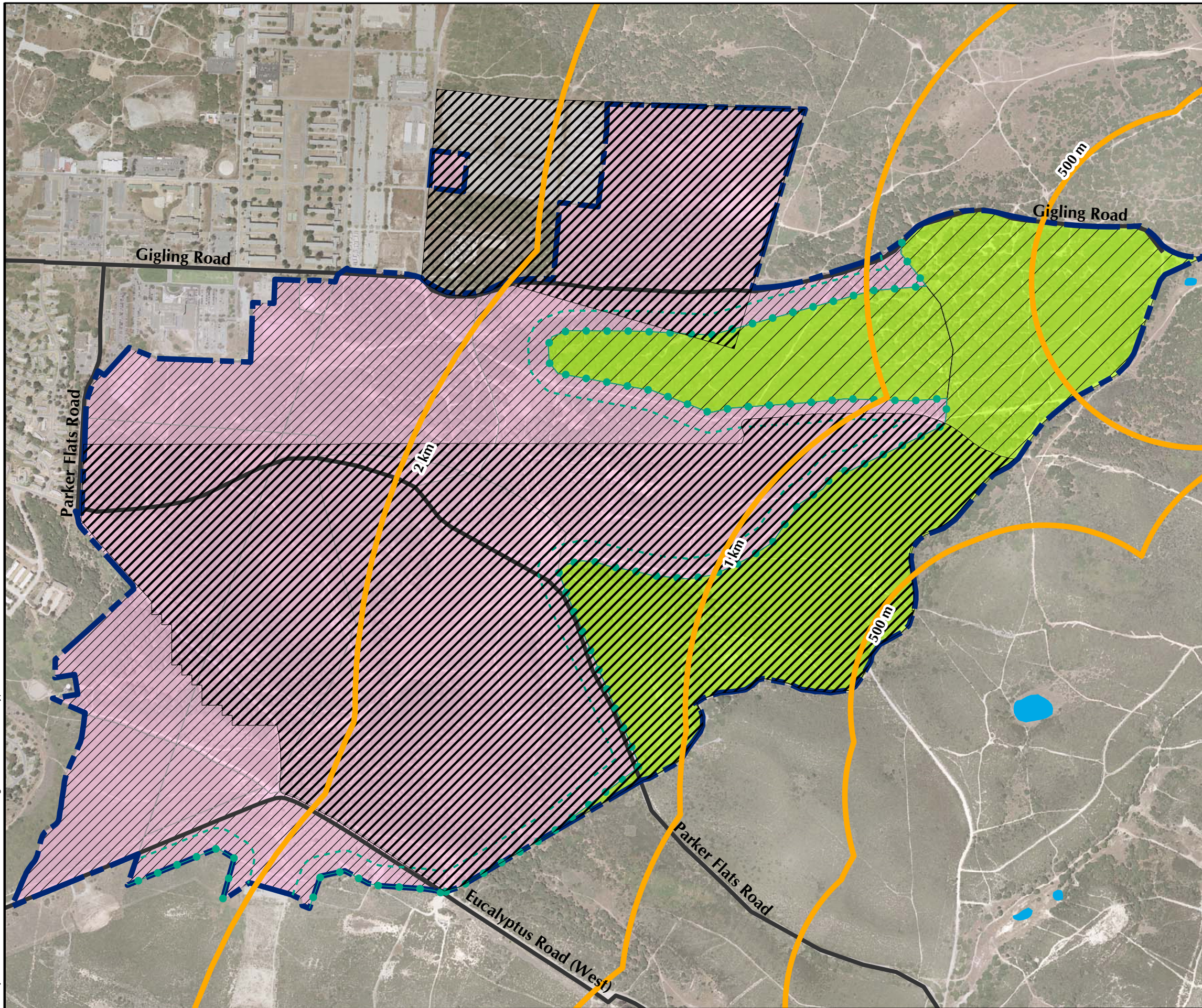


**Parker Flats MRA  
Land Use Profile  
Reuse Plan**  
FORA ESCA RP  
Monterey County, California

Figure 5.4-1



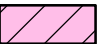




T:\Projects\SEDR\Parker Flats\MXD\5.5-1 Ecological Profile Habitat Type.mxd - 10/1/2008 @ 9:59:27 AM

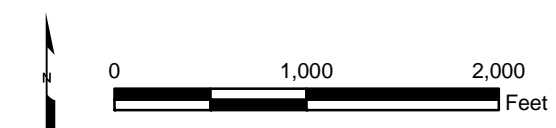
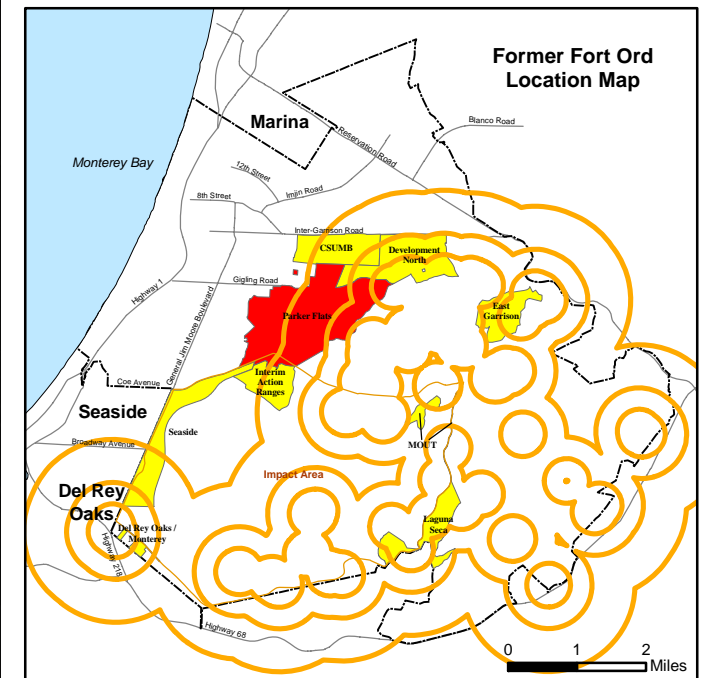


### Legend

-  Munitions Response Area
-  California Tiger Salamander Buffer
-  Major Road
-  Borderland Interface
-  200-Foot Buffer from Borderland Interface
-  Aquatic Features
-  Phase I Parker Flats RI/FS

### Habitat Management Plan Category

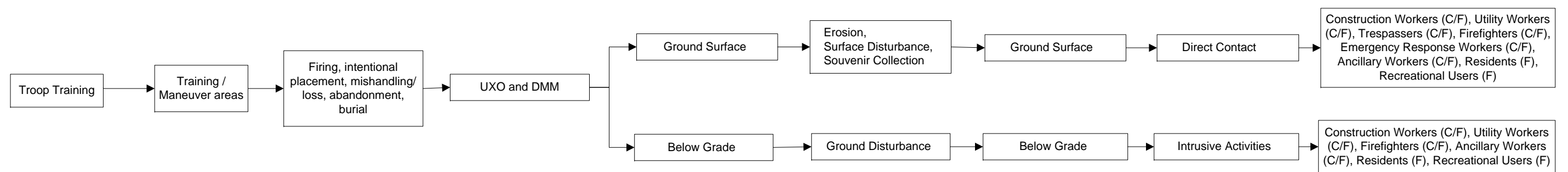
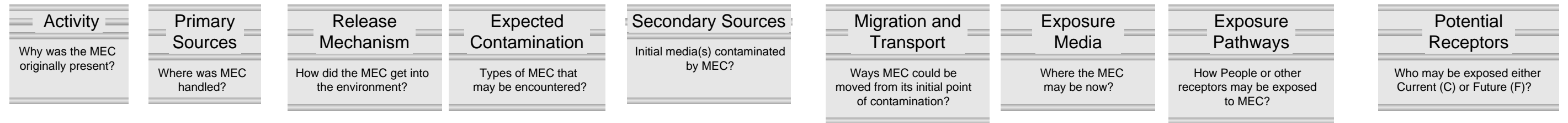
-  Development (includes future Residential and Non-Residential areas)
-  Development with Reserve or Restrictions
-  Habitat Corridor
-  Habitat Corridor with Development
-  Habitat Reserve



**Parker Flats MRA  
Ecological Profile  
Habitat Type**  
FORA ESCA RP  
Monterey County, California

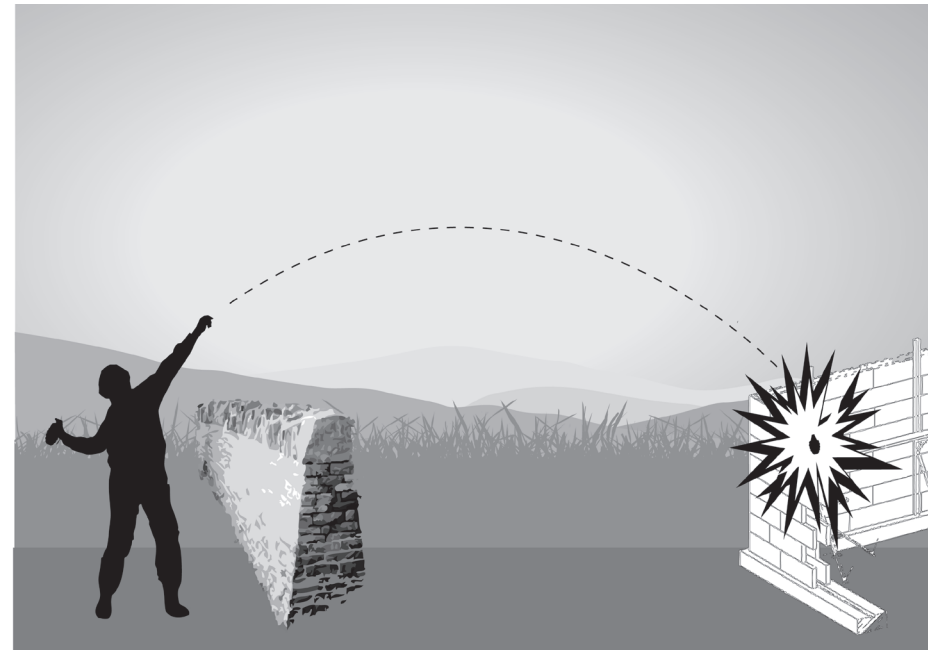
Figure 5.5-1





**Parker Flats MRA  
Pathway Analysis  
Flowchart**  
FORA ESCA RP  
Monterey County, California

Figure 5.6-1



Thrown Ordnance



Burial / Mishandling / Loss



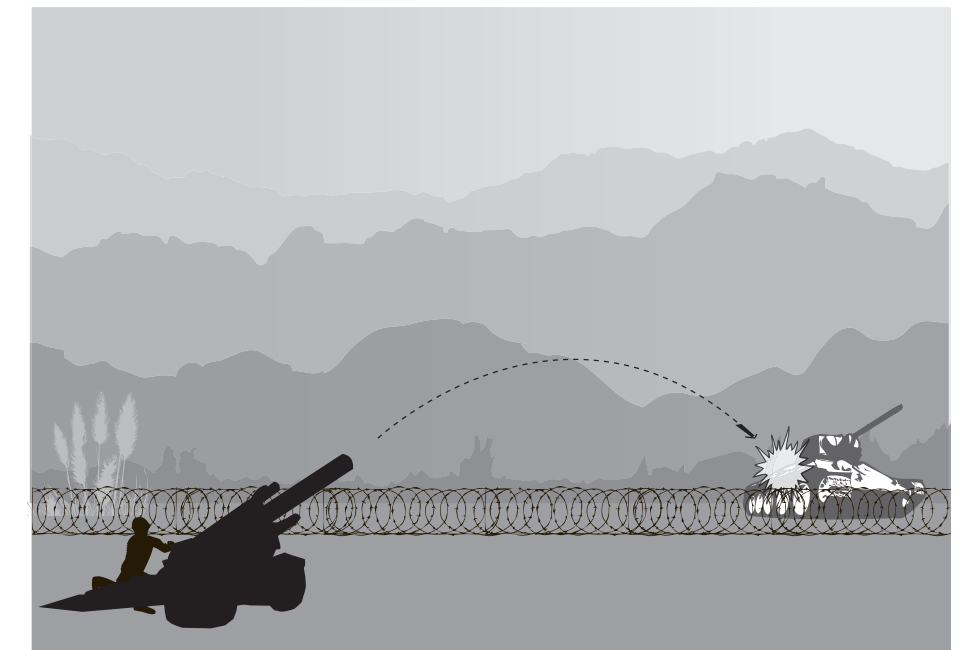
Firing



Direct Fire



Indirect Fire



Indirect Fire