APPENDIX C

Laguna Seca Parking MRA Conceptual Site Model
(Formerly Laguna Seca MRA)

10.0 LAGUNA SECA MRA CONCEPTUAL SITE MODEL

The Laguna Seca 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 Laguna Seca MRA are located at the end of Section 10.0.

10.1 Laguna Seca 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.

10.1.1 Boundaries and Access

The Laguna Seca MRA is located in the southeastern portion of the former Fort Ord adjacent to the Laguna Seca Raceway (Figure 10.1-1). The MRA is bordered by Barloy Canyon Road and the former impact area to the west, South Boundary Road and Laguna Seca Raceway to the south, and additional former Fort Ord property to the east and north. The Laguna Seca MRA is wholly contained within the jurisdictional boundaries of Monterey County.

The MRA encompasses approximately 276 acres and contains the following six USACE property transfer parcels: L20.3.1, L20.3.2, L20.5.1, L20.5.2, L20.5.3, and L20.5.4 (Table 10.1-1 and Figure 10.1-1).

Access into Laguna Seca MRA is currently restricted by fencing, barricades, gates, and warning signs. Locked gates and barricades across South Boundary Road restrict access to the MRA from the south. Barricades across Barloy Canyon Road at the intersection with Eucalyptus Road restrict access into the MRA from the north. The western side of the Laguna Seca MRA, along Barloy Canyon Road, is bounded by barbed-wire fencing. The eastern boundary of the MRA is not restricted by fencing. Warning and no trespassing signs are posted on the gates, barriers, and fencing.

South Boundary Road and Barloy Canyon Road are not usually open to vehicle traffic; however, the roadways are opened to controlled vehicle traffic during events at the Laguna Seca Raceway. There are also several dirt roads and trails throughout the Laguna Seca MRA (Figure 10.1-1). Detailed information on roadways and access is provided in Table 10.1-2.

10.1.2 Structures and Utilities

The only structure located within the Laguna Seca MRA is a field latrine on the western edge of the MRA (Figure 10.1-1; Army 2007). Detailed information concerning location, size, description of the structure, presence of ACM and/or LBP, if evaluated, and year constructed is provided in Table 10.1-3. A few structures exist within the Laguna Seca Raceway property located to the south of the MRA. The southwestern portion of the MRA (Parcels L20.3.1 and L20.3.2) is used as an overflow parking lot for raceway events.

The Laguna Seca MRA is not served by water, sewer, or storm drain utility systems. An overhead electrical line runs through the Laguna Seca MRA along Barloy Canyon Road and South Boundary Road (Figure 10.1-1). More detailed information on utilities within the MRA is provided in Table 10.1-2.

10.1.3 Historical Military Use

Initial use of the Laguna Seca 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 Laguna Seca MRA.

Figure 10.1-2 shows the locations of known firing ranges and training sites in the vicinity of the MRA. The vicinity of Laguna Seca MRA was identified as a training area on historical maps for the 1st Brigade and Division Artillery. A review of available documentation indicated the potential presence of 7- and 8-inch naval rounds within the MRA (USACE 1997a). To facilitate previous MEC investigations and removal activities, the MRA was divided into four MRS, which generally correspond to the six USACE parcels within the Laguna Seca MRA (Table 10.1-1). The four MRSs were designated as MRS-14A, MRS-29, MRS-30, and MRS-47 and are shown on Figure 10.1-3.

A summary of the historical military use for each MRS within the Laguna Seca MRA is provided in Table 10.1-4.

10.1.4 Administrative Controls

A number of administrative controls have been and will be imposed on the Laguna Seca 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 10.1-5. 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 Laguna Seca MRA.

10.2 Laguna Seca 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.

10.2.1 Topography and Geology

The terrain of the Laguna Seca MRA varies from flat to very steep terrain with slopes ranging from 15 to 50 percent. The elevation ranges from approximately 470 feet msl in the northern

portion of the MRA to approximately 950 feet msl in the southern portion of the MRA (Figure 10.2-1). The geology includes deposits from the Paso Robles Formation and sand and gravel deposits of Aromas Sandstone. Surface soil conditions in the Laguna Seca MRA are predominantly weathered dune sand (Figure 10.2-1), which provides a relatively good environment for conducting geophysical surveys, including electromagnetic and magnetic surveys. Table 10.2-1 provides more detailed information on the geology of the former Fort Ord and soil encountered within the MRA.

10.2.2 Vegetation

The vegetation of the Laguna Seca MRA consists primarily of grassland and maritime chaparral. Smaller areas of coast live oak woodland, coast live oak savanna, and coastal scrub are also present (Table 10.2-2 and Figure 10.2-2; USACE/Jones & Stokes 1992). The MRA is characterized as open grassland and dense vegetation. A number of sampling and removal actions have been performed at the Laguna Seca MRA, which required vegetation removal. Vegetation removal has been performed with prescribed burning and both manual and mechanical methods. During past field activities, the presence of poison oak was noted in the MRA.

10.2.3 Surface Water and Groundwater

Groundwater investigations associated with the Basewide RI/FS have resulted in the installation of one monitoring well adjacent to the Laguna Seca MRA (Figure 10.2-1). The Seaside Groundwater Basin is the main hydrogeologic structure that underlies the Laguna Seca MRA. The depth to groundwater is estimated to be greater than 100 feet and is not expected to influence geophysical surveys conducted for MEC remediation activities.

A number of aquatic features (i.e., vernal pools, ponds) are located within 1,600 feet (approximately 500 meters) of the Laguna Seca MRA (Figure 10.2-2).

10.3 Laguna Seca 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.

10.3.1 Investigation and Removal History

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

MRS-14A:

- Removal Action to Support Proposed Laguna Seca Raceway Parking on 50 acres from 1993 to 1994 (HFA 1994)

- 100 Percent Grid Sampling on 86 grids (10 percent of 193 acres) (UXB 1995c)
- 4-foot Removal Action on 427 grids and 1-foot Removal Action on 384 grids from June 1997 to April 1998 (USA 2001b)

MRS-29:

- Random Sampling – Converted to 100 percent Removal Action that was 53 percent completed (69 grids) from June to August 1995 (UXB 1995a)
- 4-foot Removal Action at 125 grids, including grids cleared by UXB, from February to July 1998 (USA 2000f)

MRS-30:

- 4-foot Removal Action from June to August 1995 (UXB 1995b)
- 30 feet to 40 feet of fill material were placed over most of MRS-30 in support of construction activities associated with the expansion of Laguna Seca Raceway Turn 11 (Army 2007)

MRS-47:

- Sampling Investigation at three grids in January 1994 (HFA 1994)
- 3-foot Removal Action Roads and Trails Southern and Western Perimeter on 39 grids in July 1994 (USA 2000c)
- 100 percent 4-foot Sampling Investigation at 32 Grids from July to September 1996 (USA 2000c)
- 4-foot Removal Action on 79 Acres from February to June 1997 (USA 2000c)

These investigation and removal actions are summarized in Table 10.3-1. It was reported that six 100-foot by 100-foot grids were omitted from the removal action at MRS-14A because of accessibility issues (i.e., steep grade, heavy brush, or deep ravine) (USA 2001b). During the removal actions, one burial pit containing MEC related to troop training was encountered in MRS-14A. Table 10.3-2 provides more detailed information on the specific types of MEC recovered from the burial pit. The results of these investigations and removal actions with respect to MEC and MD are summarized in Table 10.3-3 and are shown on Figures 10.3-1, 10.3-2, and 10.3-3.

10.3.2 Types of MEC Recovered and Hazard Classification

Table 10.3-3 includes a summary of MEC recovered from the Laguna Seca 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 Laguna Seca MRA. It should be noted that SAA is not considered in the risk assessment because SAA poses no explosive risk.

10.3.3 Location of MEC and MD

Figures 10.3-1, 10.3-2, and 10.3-3 show the location of MEC and MD previously removed from the Laguna Seca MRA. A summary of the MEC and MD encountered during previous investigations and removal actions in the Laguna Seca MRA is provided in Table 10.3-4 and included:

- 320 UXO items
- 1 DMM item
- 1 ISD item (MPPEH that could not be classified as UXO, DMM, or MD)
- 10,903 pounds of MD (includes MD-E and MD-F items if weights were documented)

The MMRP database indicates that the majority of MEC were found in the north-westernmost portion of MRS-47 (Figure 10.3-2). A small concentration of MEC was located in the southern portion of MRS-47, and individual MEC items were found along Barloy Canyon Road. A large number of MEC were also found outside of the MRA boundary to the northeast (Figure 10.3-2).

The MMRP database does not indicate that MD was found in most of the investigated grids within MRS-14A and MRS-30. A small percentage of the grids in these two MRSs and most of the grids in MRS-29 and MRS-47 contained up to 100 pounds of MD. Most of the MD (by weight) was recovered from MRS-47, especially in the northern portion of the MRS. A portion of the MD identified on Figures 10.3-1 and 10.3-3 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 10.3-4 shows the distribution of MEC recovered at specified depth intervals and does not include MEC recovered from the burial pit.

10.3.4 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 were 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 10.3-5 summarizes the findings of the BRA with respect to HTW for each MRS. As stated in the FOSET, based on the BRA, no further action has been recommended for HAs within this MRA (Army 2007). However, MRS-47 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.

10.3.5 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 Laguna Seca MRA, including development of an RI/FS, development of a Proposed Plan, and completion of a ROD

10.4 Laguna Seca 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.

10.4.1 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 Laguna Seca MRA is located in the southern portion of the former Fort Ord in an area designated as having low archaeological sensitivity.

Actions to be taken at the Laguna Seca 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.

10.4.2 Current Land Use

The current uses for the Laguna Seca MRA are associated with Laguna Seca Raceway events. These include parking, staging, and event-related roadway access along Barloy Canyon Road and South Boundary Road.

10.4.3 Reasonably Foreseeable Future Land Use

Table 10.4-1 and Figure 10.4-1 identify the proposed uses of the MRA by parcel. As indicated in the Base Reuse Plan, this area is predominantly planned for development reuse. These future uses continue to be associated with open space/recreation and maintained grasslands for overflow parking during Laguna Seca Raceway events. In addition, a roadway easement for a future bypass of Highway 68 is identified as a possible future use.

10.4.4 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
- Recreational Users (persons biking or on foot) – future

10.5 Laguna Seca 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 10.5-1.

As discussed in Section 10.3.4, 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 Laguna Seca MRA as development with reserve or development with restrictions (Figure 10.5-1). This is defined as lands slated for development that contain inholdings of reserve or require specific restrictions to protect biological resources values; management of reserve inholdings must match that for habitat reserves, while management in development areas must proceed with certain specific restrictions identified in the HMP. 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.

Threatened or endangered plant species identified as having possible occurrence in the Laguna Seca MRA include sand gilia (endangered) and Monterey spineflower (threatened). A portion of the Laguna Seca MRA has been designated as critical habitat for the Monterey spineflower by the USFWS.

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).

10.5.1 Major Plant Communities and Ecological Habitats

The vegetation of the Laguna Seca MRA consists primarily of grassland and maritime chaparral. Smaller areas of coast live oak woodland, coast live oak savanna, and coastal scrub are also present (Table 10.2-2 and Figure 10.2-2; USACE/Jones & Stokes 1992). The MRA is characterized as open grassland and dense vegetation. During past field activities, the presence of poison oak was noted in the area.

10.5.2 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 BO dated prior to issuance of the HMP in April 1997. Future MEC remediation is required to be consistent with the applicable conservation measures.

In 2004, the CTS was identified as a threatened species. CTS may be found as far as 2 km from aquatic breeding habitats. The Laguna Seca MRA may have a presence of CTS because the MRA is located within 500 meters of several aquatic features (Figure 10.5-1).

10.5.3 Other Communities and Species of Concern

As identified in the HMP, a number of species could be found on the Laguna Seca MRA, which have been identified in Table 10.5-2 by parcel. The following species are identified in the HMP as having possible occurrence in the Laguna Seca MRA: toro manzanita, sandmat manzanita, Hooker's manzanita, Monterey ceanothus, California linderiella, California red-legged frog, and Monterey ornate shrew.

10.6 Laguna Seca MRA Pathway Analysis

As discussed in Sections 10.3.4 and 10.5, 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 and ecological receptors to COCs relative to the HTW program is presented in this pathway analysis. The primary focus of the exposure pathway analysis for residual human health risk from MEC that are potentially present.

10.6.1 Exposure Pathways

An exposure pathway analysis was conducted for the Laguna Seca MRA using the information gathered in the CSM profiles. Exposure pathways include a source, access, receptor, and activity. The likelihood of exposure, however, has been significantly reduced as a result of previous surface and subsurface removal actions by the Army. Exposure pathways for the Laguna Seca MRA are presented on Figure 10.6-1 and discussed below.

Source

Source areas within the Laguna Seca MRA were addressed during the Army's previous removal actions except for omitted inaccessible grids in MRS-14A. The historical source areas within the Laguna Seca MRA are shown on Figure 10.1-3 and recovered MEC and MD from these areas are shown on Figures 10.3-1, 10.3-2, and 10.3-3. The sources include target areas for military weapons training activities at MRS-30 and MRS-47 and troop training/maneuver areas at MRS-14A and MRS-29.

Figure 10.6-2 illustrates the most likely release mechanisms for MEC being found in the Laguna Seca MRA, which include:

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

Access

Access to MRS-47 is restricted by the fence around the former impact area. Access to MRS-14A, MRS-29, and MRS-30 is restricted. Laguna Seca Raceway has a current lease for the use of the Laguna Seca MRA parcels.

Receptor / Activity

Table 10.6-1 identifies the potential human receptors and exposure media as Ground Surface or Below Grade.

10.6.2 Exposure Pathway Analysis

As discussed above, Figure 10.6-1 graphically presents the exposure pathways analysis for the Laguna Seca MRA. The graphic shows that current and future pathways are all incomplete for the anticipated activities in the Laguna Seca MRA.

The omitted six grids in MRS-14A, where removal actions were not complete due to access issues (Figures 10.3-1 and 10.3-3), are not considered a potential pathway, but will receive future consideration.

10.7 Laguna Seca 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 Laguna Seca 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 at the Laguna Seca MRA are consistent with the historical military use as a weapons and troop training area. Therefore, the Laguna Seca MRA falls into the category, of proceed to RI. Based on the existing data for Laguna Seca 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 10.1-1
Laguna Seca MRA – Parcel Numbers, Acreage, and MRS Identifiers

USACE Parcel Number (for land transfer)	Acreage (approximate)	MRS Identifier
L20.3.1	44	MRS-47
L20.3.2	36	MRS-30, MRS-47
L20.5.1	131	MRS-14A
L20.5.2	55	MRS-14A, MRS-29
L20.5.3	1.7	MRS-29
L20.5.4	0.5	MRS-30
MRA TOTAL	**276.2**	

Table 10.1-2
Laguna Seca MRA – Site Features

Feature	Description
Roadways	• Barloy Canyon Road and South Boundary Road border the MRA to the west and south, respectively. • Vehicle traffic on these roadways is associated with Laguna Seca Raceway events, otherwise the roadways are not open. • There are several dirt roads and trails throughout the MRA. • Other roadways (paved or unpaved) that cross or border the MRA include Impossible Canyon Road located to the west and Pilarcitos Canyon Road located to the east (not shown on figures).
Structures and Utilities	• The MRA is not served by water, sewer, or storm drain utility systems. • An overhead electrical line runs through the MRA along Barloy Canyon Road and South Boundary Road.
Fencing and Access	• Access into Laguna Seca MRA is restricted by fencing, barricades, gates, and warning signs. • Locked gates and barricades across South Boundary Road restrict access to the MRA from the south. • Barricades across Barloy Canyon Road at the intersection with Eucalyptus Road restrict access into the MRA from the north. • The western side of the Laguna Seca MRA, along Barloy Canyon Road, is bounded by barbed-wire fencing. • The eastern boundary of the MRA is not restricted by fencing.

Table 10.1-3
Laguna Seca MRA – Existing Structures and Buildings

Parcel Number	Facility Number	Area (square footage)	Description	Asbestos-Containing Material	Lead-Based Paint	Year Built
L20.3.1	4B21	727	Field Range Latrines	unknown	unknown	unknown

Table 10.1-4
Laguna Seca MRA – Historical Military Use

Location	Description
MRS-14A	• The MRS was identified as part of the Pilarcitos Canyon and Lookout Ridge Area (Lookout Ridge II) (USACE 1997a) • The MRS was suspected of containing 7- and 8-inch naval gun rounds that overshot the former impact area (USACE 1997a). • Historical maps show a mortar position and a "Lookout Ridge Training Area" in this MRS that was identified as part of the 1st Brigade and Division Artillery Training Area (USACE 1997a).
MRS-29	• The MRS was identified on historical maps as part of the 1st Brigade and Division Artillery Training Area (USACE 1997a).
MRS-30	• The MRS was located inside the multi-range area (i.e., former impact area) and identified on historical maps as being within the Division Artillery Training Area and adjacent to the Wolf Hill Training Area (USACE 1997a).
MRS-47	• The MRS was located within the multi-range area (i.e., former impact area) and identified as the Wolf Hill Training Area, and as being within the Division Artillery Training Area on historical maps (USACE 1997a).

Table 10.1-5
Laguna Seca 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 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). • 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 the 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 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.
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/ Critical Habitat	• 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. • A portion of the Laguna Seca MRA has been designated as critical habitat for the Monterey spineflower by the USFWS. • Future MEC work is required to be consistent with the applicable conservation measures.

Table 10.2-1
Laguna Seca MRA – Geology and Soils

	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 varies from flat to very steep slopes. • Elevation ranges from approximately 470 feet msl to approximately 950 feet msl. • Soils consist predominantly of the following Santa Ynez Fine Sandy Loam with 15 to 30 percent slopes, Arnold-Santa Ynez Complex, Xerothents (Dissected), and Arnold Loamy Sand with 15 to 50 percent slopes.

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

Table 10.2.2
Laguna Seca MRA – Vegetation

MRS Identifier	USACE Parcel Number	Vegetation
MRS-47	L20.3.1	Maritime chaparral and a small area of ice plant mats
MRS-30, MRS-47	L20.3.2	Maritime chaparral
MRS-14A	L20.5.1	Grassland, oak woodland, coast live oak savanna, and a small area of ice plant mats
MRS-14A, MRS-29	L20.5.2	Grassland, oak woodland, and coastal scrub
MRS-29	L20.5.3	Grassland and coastal scrub
MRS-30	L20.5.4	Maritime chaparral

Reference: USACE/Jones & Stokes 1992

Table 10.3-1
Laguna Seca MRA – Investigation, Sampling, and Removal Activities

Activity	Summary
MRS-14A	• Also known as Lookout Ridge II or LOR2. • During 1993 to 1994, a 3-foot removal action was conducted on 50 acres by Human Factors Application, Inc. (HFA) to support the proposed Laguna Seca Raceway parking area (HFA 1994). • In 1995, approximately 86 randomly placed 100-foot by 100-foot grids were 100 percent sampled to a depth of 4 feet by UXB (UXB 1995c). • From June 11, 1997 to April 9, 1998, a 4-foot removal action was conducted on 98 acres and a 1-foot removal action was conducted by USA on 95 acres. The 1-foot removal action was conducted in areas planned for use as habitat reserves. The 4-foot removal action was conducted in areas planned for development (parking). The area where the 4-foot removal was performed included the area previously cleared to 3 feet in 1993 and 1994. Six grids were omitted from the removal action (two grids located on a steep grade and covered with heavy brush and four grids located on a very steep grade and partially in a deep ravine) (USA 2001b).
MRS-29	• A random sampling of the MRS-29 (also known as Laguna Seca Bus Turnaround) was started by UXB on June 18, 1995. On July 22, 1995, the sampling operation was converted to a 100 percent surface and subsurface removal action. On August 17, 1995, the removal action was stopped only after 53 percent of the action was completed (UXB 1995a). • From June 26 to July 10, 1997, a 4-foot removal action was completed by USA on two of the original acres planned for removal action in 1995. From February 5 to July 5, 1998, a 4-foot removal action was performed over the remaining acres in the MRS. Areas included in the 1995 removal actions were also included in this effort (USA 2000f).
MRS-30	• From June 12 to August 9, 1995, a 4-foot removal action was conducted on MRS-30 (also known as Laguna Seca Turn 11 Expansion or LST11) by UXB (UXB 1995b). • Following completion of the munitions response, approximately 30 to 40 feet of fill material were placed over most of MRS-30 in support of construction activities associated with the expansion of the Laguna Seca Raceway Turn 11 (Army 2007).
MRS-47	• On January 6 1994, three grids were sampled within MRS-47 (also known as OE-47 or Wolf Hill) by HFA (HFA 1994). • From July 7, 1994 to July 12, 1995, a 3-foot removal action was conducted on roads and fire breaks to provide safe access for the fire department on the southern and western perimeters of the MRS by UXB (USA 2000c). • From July 29 to September 17, 1996, a 100 percent sampling effort was conducted on 32 grids to a depth of 4 feet by CMS Environmental, Inc. (CMS) (USA 2000c). • From February 6 to June 6, 1997, a 4-foot removal action was conducted over the entire 79-acre MRS by USA, including areas where 3-foot removals were previously conducted (USA 2000c).

Table 10.3-2
Laguna Seca MRA – Burial Pits Containing MEC

Site	Grid	Type	Description	Qty	Depth (inches bgs)
MRS-14A	B3A0I8	UXO	Pyrotechnic Mixture	5	4
		UXO	Grenade, Rifle, Smoke, Green, Red, Violet, or Yellow, Streamer, M23 & M23A1	5	4
		DMM	Signal, Illumination, Ground, Parachute, White Star, M127A1	1	4

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 10.3-3
Laguna Seca MRA – Types of MEC Removed and Hazard Classification

MEC ITEMS	UXO	DMM	ISD	Hazard Classification
Cap, blasting, electric, M6	185	0	0	1
Cartridge, 20mm, high explosive incendiary, M210	1	0	0	3
Cartridge, 40mm, practice, M781	1	0	0	1
Flare, surface, trip, M49 series	5	0	0	1
Fuze, chemical, mine, antitank, M600	1	0	0	0
Fuze, grenade, hand, M204 series	1	0	0	1
Fuze, grenade, hand, M213	2	0	0	1
Fuze, grenade, hand, practice, M205 series	12	0	0	1
Fuze, grenade, hand, practice, M228	1	0	0	1
Grenade, hand, practice, MK II	1	0	0	1
Grenade, hand, smoke, HC, AN-M8	4	0	0	1
Grenade, hand, smoke, M18 series	4	0	0	1
Grenade, rifle, smoke, M22 series	6	0	1	1
Grenade, rifle, smoke, M23 series	6	0	0	1
Pot, 2.5lb, smoke, HC, screening, M1	1	0	0	1
Primer, igniter tube, M57	1	0	0	1
Projectile, 37mm, armor piercing tracer, M51 series	4	0	0	0
Projectile, 3-inch, trench mortar, practice, MK I (Stokes)	14	0	0	1
Projectile, 4.2-inch, mortar, high explosive, M3 series	4	0	0	3
Projectile, 40mm, high explosive tracer, M677	1	0	0	3
Projectile, 40mm, high explosive, M381	1	0	0	3
Projectile, 40mm, practice, M385	1	0	0	0
Projectile, 57mm, HEAT, M307	1	0	0	3
Projectile, 75mm, high explosive (model unknown)	1	0	0	3
Projectile, 75mm, high explosive, MK I	7	0	0	3
Projectile, 81mm, mortar, high explosive, M43 series	22	0	0	3
Projectile, 81mm, mortar, illumination, M301 series	1	0	0	2
Projectile, 81mm, mortar, illumination (model unknown)	1	0	0	0
Projectile, 81mm, mortar, practice, M43 series	1	0	0	2
Propellant, 60mm, wafers, mortar	1	0	0	1
Pyrotechnic mixture, illumination	5	0	0	1
Rocket, 2.36-inch, HEAT, M6	1	0	0	3

MEC ITEMS	UXO	DMM	ISD	Hazard Classification
Signal, illumination, AN-M43 series	9	0	0	1
Signal, illumination, ground, M125 series	5	0	0	2
Signal, illumination, ground, M126 series	5	1	0	2
Signal, smoke, ground, M62 series	2	0	0	1
Simulator, projectile, ground burst, M115A2	1	0	0	2
MRA TOTAL	**320**	**1**	**1**	

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 10.3-4
Laguna Seca MRA –Summary of Recovered MEC and MD

Type	Summary
UXO	320 items
DMM	1 item
ISD	1 item (MPPEH that could not be classified as UXO ,DMM, or MD)
MD	10,903 pounds (includes MD-E and MD-F items if weights were documented)
Aerial Extent	• The most MEC were found in the northwesternmost portion of MRS-47. • A small concentration of MEC was located in the southern portion of MRS-47, with individual MEC items found along Barloy Canyon Road to the east. • A large number of MEC were also found outside of the MRA boundary to the northeast. • The MMRP database does not indicate that MD was found in most of the investigated grids within MRS-14A and MRS-30. A small percentage of the grids in these two MRSs and most of the grids in MRS-29 and MRS-47 contained up to 100 pounds of MD. • MRS-47 contained the most MD by weight, especially in the northern portion of the MRS. • A portion of the MD includes SAS but not SAA.
Vertical Extent	• All MEC and MD encountered and removed during previous removal operations were located within the removal depth. The majority of MEC and MD removed was located within 0 to 24 inches bgs. • One burial pit was encountered in MRS-14A that contained MEC.
Movement	• During a 1997 removal action in MRS-29, sweep teams encountered several trash pits. The trash pits were excavated using hand tools because the terrain was too steep and the ground too soft for a backhoe to gain access. No MEC were found during the removal action. Soil erosion was possibly a factor in the disposition of some of the MEC, because of the non-penetrating types of munitions found at MRS-29 (USA 2000f).

Table 10.3-5
Laguna Seca MRA – HTW History and Conditions

Location	Summary
MRS-14A	• The evaluation of HA-105 (MRS-14A) included a literature search, review of information gathered during the munitions response, and limited site reconnaissance. The reconnaissance identified one possible target and several debris piles; however, no evidence of small arms firing ranges was identified and no further action related to MC at HA-105 was recommended under the BRA.
MRS-29	• The evaluation of HA-159 (MRS-29) included a literature search, review of information gathered during the munitions response, and site reconnaissance. No SAA, military munitions, fighting positions, evidence of targets, or range features were found. No further action related to MC at HA-159 was recommended under the BRA.
MRS-30	• The evaluation of HA-160 (MRS-30) included a literature search and review of information gathered during the munitions response. Because no SAA firing ranges were present at MRS-30 and because fill was placed over most of the site during expansion of Laguna Seca Raceway, no further action related to MC was recommended at HA-160 under the BRA.
MRS-47	• The evaluation of HA-177 (MRS-47) included a literature search, review of the information gathered during the munitions response, site reconnaissance, and sampling for MC. Explosive compounds were detected at HA-177 during sampling. Additional soil samples were collected under the BRA in 2005. No explosive compounds were detected during this follow-up sampling. Based on the low concentrations detected, this site will be evaluated as a no further action site under the ROD.

Reference: Army 2007

Table 10.4-1
Laguna Seca MRA- Future Land Use by Parcel

USACE Parcel Number	MRS Number	Land Use Category	Description	Acreage
L20.3.1	MRS-47	Development with Reserve Areas or Development with Restrictions	Restricted – Parking/Easement for Highway Bypass	44
L20.3.2	MRS-30	Development with Reserve Areas or Development with Restrictions	Restricted – Parking/Expansion of Laguna Seca, Track and/or Parking	36
L20.5.1	MRS-14A	Development with Reserve Areas or Development with Restrictions	Restricted – Parking	131
L20.5.2	MRS-14A, MRS-29	Development with Reserve Areas or Development with Restrictions	Restricted – Parking/Easement for Highway Bypass	55
L20.5.3	MRS-29	Development with Reserve Areas or Development with Restrictions	Restricted – Parking/Expansion of Laguna Seca, Track and/or Parking	1.7
L20.5.4	MRS-30	Development with Reserve Areas or Development with Restrictions	Restricted – Parking/Expansion of Laguna Seca, Track and/or Parking	0.5
MRA TOTAL				**276.2**

Table 10.5-1
Laguna Seca MRA – Ecological Information

Type	Summary
Biological	• The MRA is characterized by open grassland and dense vegetation. • A number of sampling and removal actions have been performed at the Laguna Seca MRA that required vegetation removal. Vegetation removal has been performed by prescribed burning and with both manual and mechanical methods. • During past field activities, the presence of poison oak was noted in the area. • The vegetation of the Laguna Seca MRA varies from grasslands, maritime chaparral, and coastal scrub. Smaller areas of oak woodland and coast live oak savanna are also present. These biological communities are described below: • Maritime chaparral is one of the dominant vegetation types within 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. • Grasslands - Annual grasslands dominated by introduced species such as slender wild oats, soft chess, and ripgut brome are the most common grassland community within the MRA. 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. • Coastal Scrub - Coastal scrub occurs near the coast on sandy soils and on inland hills on shallow soils. The vegetation is characterized by sparse to dense cover of soft-leaved, low-stature shrubs such as coyote brush, California sagebrush, and black sage. Wildlife species using this habitat are similar to those species expected in the maritime chaparral. • 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.
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

Table 10.5-1
Laguna Seca MRA – Ecological Information

Type	Summary
	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). • Since April 1997, three 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 Laguna Seca MRA is identified as development with restrictions. This is defined as lands slated for development that contain inholdings of reserve or require specific restrictions to protect biological resources values; management of reserve inholdings must match that for habitat reserves, while management in development areas must proceed with certain specific restrictions identified in the HMP.
Threatened and Endangered Species / Critical Habitat	• 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. • 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 Laguna Seca MRA is within 500 meters of an aquatic feature in which CTS may be present. • A portion of the Laguna Seca MRA is identified as a critical habitat for Monterey Spineflower.

Table 10.5-2
Laguna Seca MRA - HMP Category by Parcel and Possible Occurrence of HMP Species

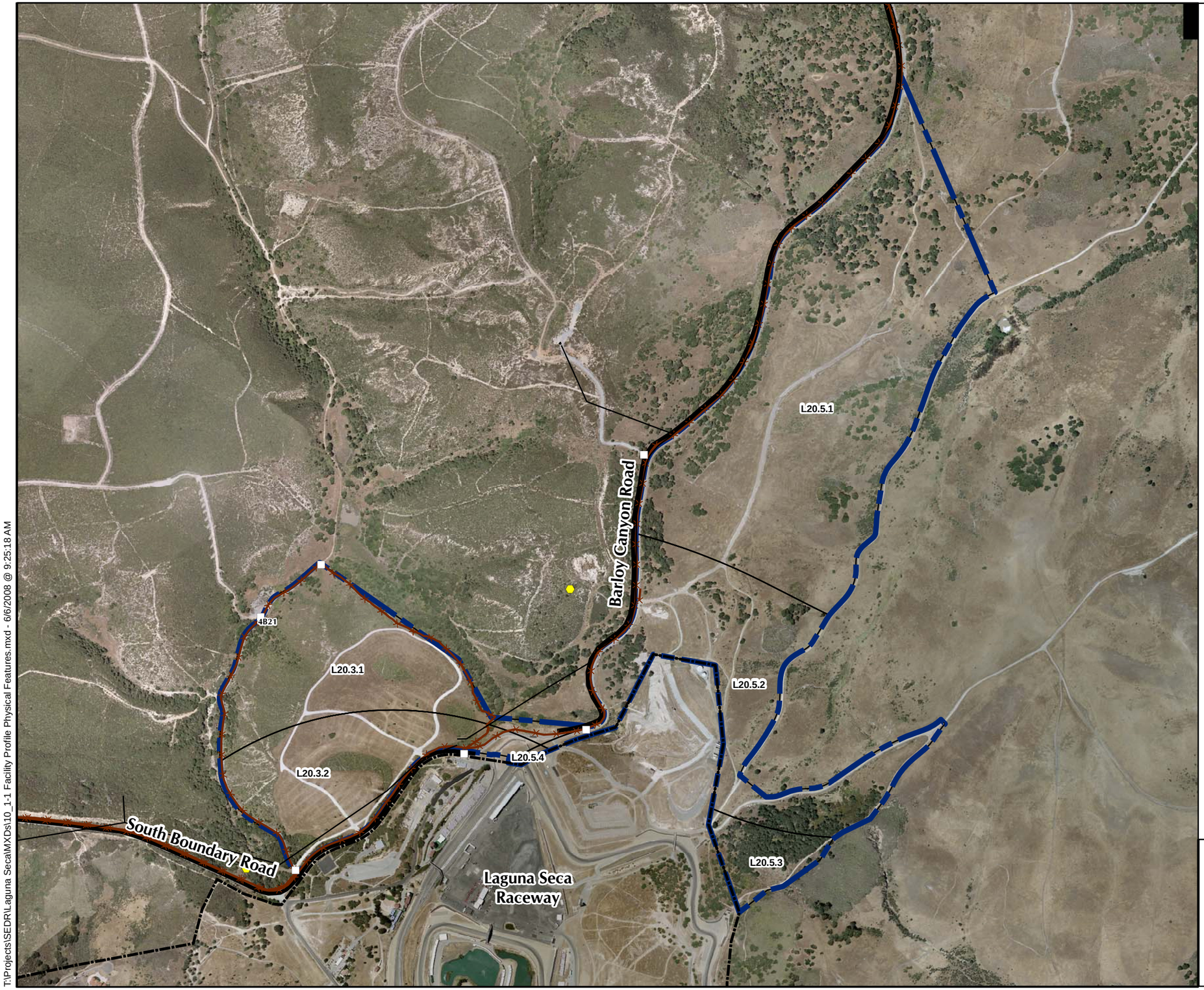
USACE Parcel Number	HMP Designated Use	HMP Species
L20.3.1	Development with Reserve Areas or Development with Restrictions (Development)	California linderiella, toro manzanita, Monterey ceanothus, Hooker's manzanita, California tiger salamander
L20.3.2	Development with Reserve Areas or Development with Restrictions (Development)	California linderiella, toro manzanita, Monterey ceanothus, Hooker's manzanita, California tiger salamander
L20.5.1	Development with Reserve Areas or Development with Restrictions (Development)	California linderiella, toro manzanita, Monterey ceanothus, Hooker's manzanita, California tiger salamander
L20.5.2	Development with Reserve Areas or Development with Restrictions (Development)	California linderiella, toro manzanita, Monterey ceanothus, Hooker's manzanita, California tiger salamander
L20.5.3	Development with Reserve Areas or Development with Restrictions (Development)	California linderiella, toro manzanita, Monterey ceanothus, Hooker's manzanita, California tiger salamander
L20.5.4	Development with Reserve Areas or Development with Restrictions (Development)	California linderiella, toro manzanita, Monterey ceanothus, Hooker's manzanita, California tiger salamander

Reference: USACE 1997b

Table 10.6-1
Laguna Seca MRA – Potential Receptors and Exposure Media

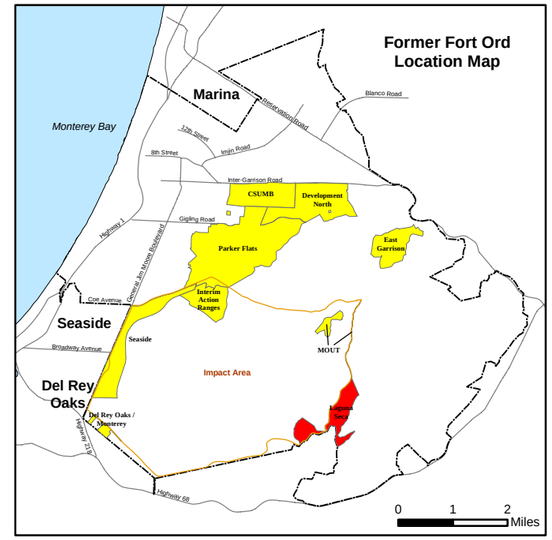
Potential Receptor	Exposure Media			Exposure Media		
	Current	Ground Surface	Below Grade	Future	Ground Surface	Below Grade
Construction Workers	✓	✓	✓	✓	✓	✓
Utility Workers	✓	✓	✓	✓	✓	✓
Trespassers	✓	✓		✓	✓	
Firefighters	✓	✓	✓	✓	✓	✓
Emergency Response Workers	✓	✓		✓	✓	
Ancillary Workers	✓	✓	✓	✓	✓	✓
Recreational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

T:\Projects\SEDR\Laguna SecaMXDs\10_1-1 Facility Profile Physical Features.mxd - 6/6/2008 @ 9:25:18 AM



Legend

- School
- Fire Station
- Gate
- Entry Forbidden Sign
- Sign
- Hydrant
- High-Power Transmission Line Tower
- Electrical Line Pole
- Former Fort Ord Boundary
- 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



N

0 800 1,600
Feet

LFR
WESTON SOLUTIONS
Westcliffe Engineers, Inc.

Laguna Seca MRA Facility Profile Physical Features

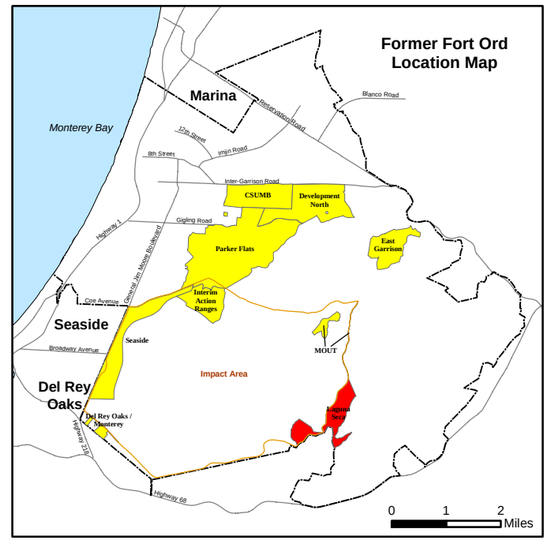
FORA ESCA RP
Monterey County, California

Figure 10.1-1

Unknown
70
33
32
Barloy Canyon Road
Lookout Ridge Area
Former Impact Area
67
69
Pilarcitos Canyon
31A
31
68
Wolf Hill Training Area
Laguna Seca Raceway
South Boundary Road

Legend

- Munitions Response Area
- 42 Firing Range
- Historical Range
- Major Road
- Fence
- Former Fort Ord Boundary



N

0 800 1,600 Feet

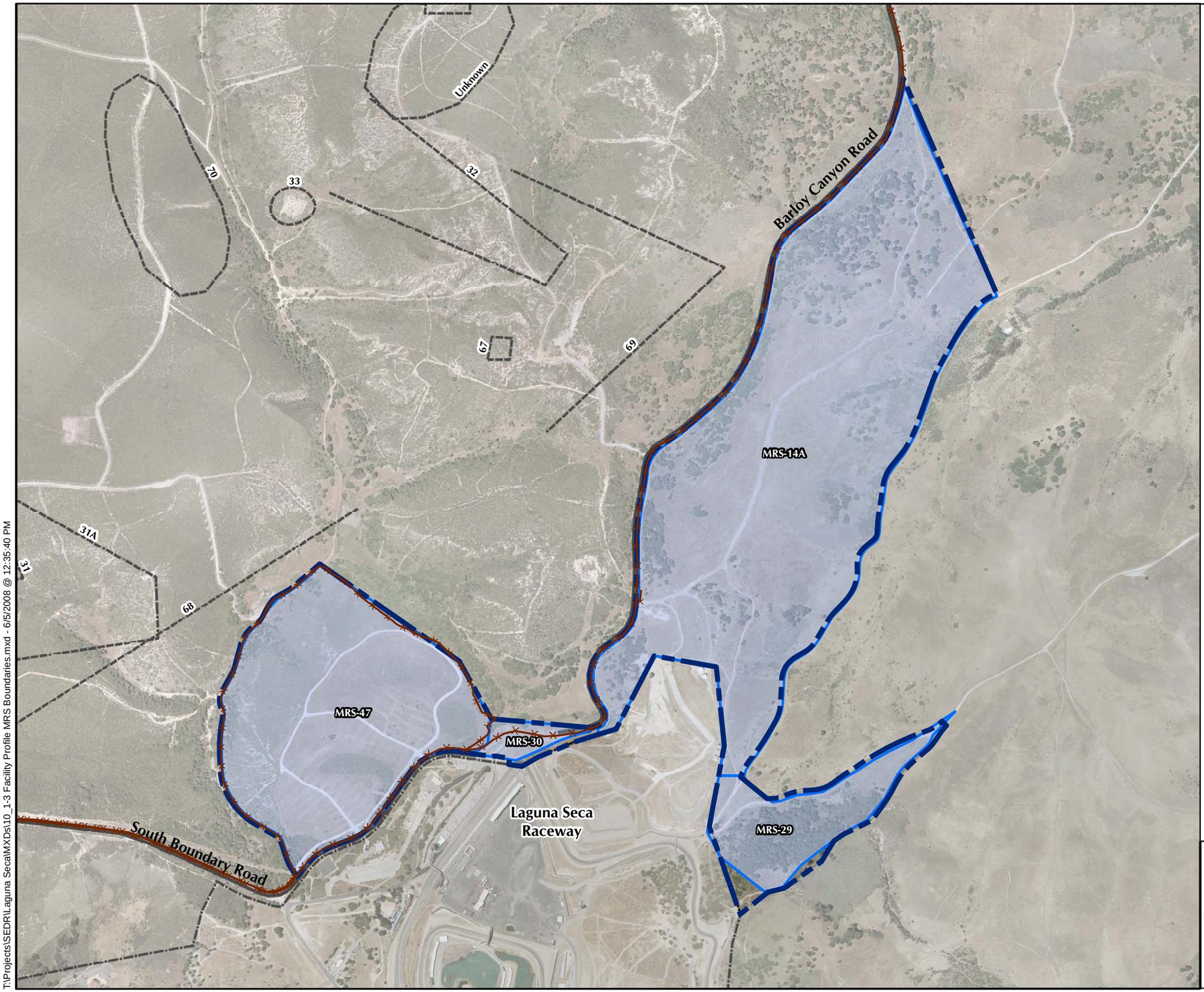
LFR
WESTON SOLUTIONS
Westcliffe Engineers, Inc.

Laguna Seca MRA Facility Profile
Ranges and Training Sites

FORA ESCA RP
Monterey County, California

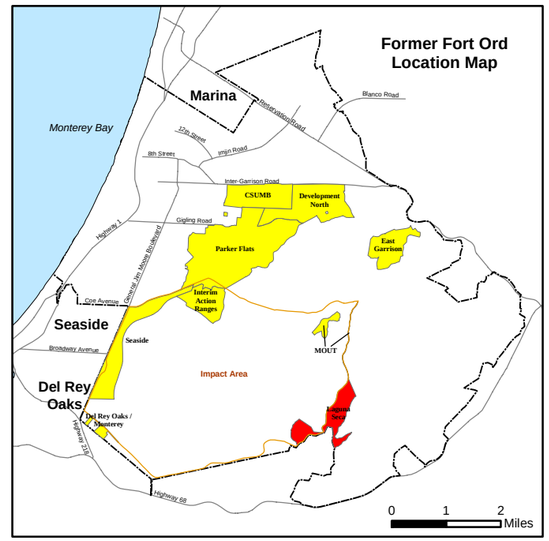
Figure 10.1-2

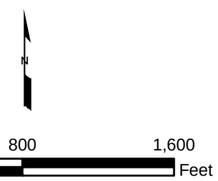
T:\Projects\SEDR\Laguna Seca\MXDs\10_1-2 Facility Profile Firing Ranges.mxd - 6/5/2008 @ 12:35:36 PM



Legend

- Munitions Response Area
- Major Road
- Fence
- 67 Firing Range
- Former Fort Ord Boundary
- MRS-14A Munitions Response Site





LFR
WESTON SOLUTIONS
Westcliffe Engineers, Inc.

Laguna Seca MRA Facility Profile Munitions Response Site Boundaries

FORA ESCA RP
Monterey County, California

Figure 10.1-3

T:\Projects\SEDR\Laguna Seca\MXDs\10_1-3 Facility Profile MRS Boundaries.mxd - 6/5/2008 @ 12:35:40 PM

T:\Projects\SEDR\Laguna Seca\MXDs\10_2-1 Physical Profile Topography and Soil Type.mxd - 6/5/2008 @ 1:09:33 PM

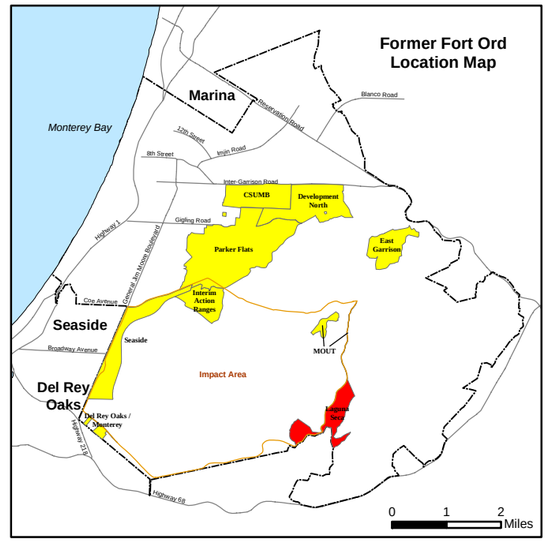
Laguna Seca Raceway

Legend

- Environmental Well
- 540 — Topography 10 ft
- Munitions Response Area
- Major Road
- Former Fort Ord Boundary

Soil Type

- Santa Ynez Fine Sandy Loam, 15 to 30 Percent Slopes
- Arnold-Santa Ynez Complex
- Xerorthents, Dissected
- Arnold Loamy Sand, 15 to 50 Percent Slopes
- Baywood Sand, 2 to 15 Percent Slopes
- Rock Outcrop, Xerorthent Association
- Saturated Soil



N

0 800 1,600 Feet

LFR

WESTON SOLUTIONS

Westcliffe Engineers, Inc.

Laguna Seca MRA Physical Profile Topography and Soil Type

FORA ESCA RP
Monterey County, California

Figure 10.2-1

L20.5.1

L20.3.1

L20.3.2

L20.5.2

L20.5.4

L20.5.3

Barloy Canyon Road

South Boundary Road

Laguna Seca Raceway

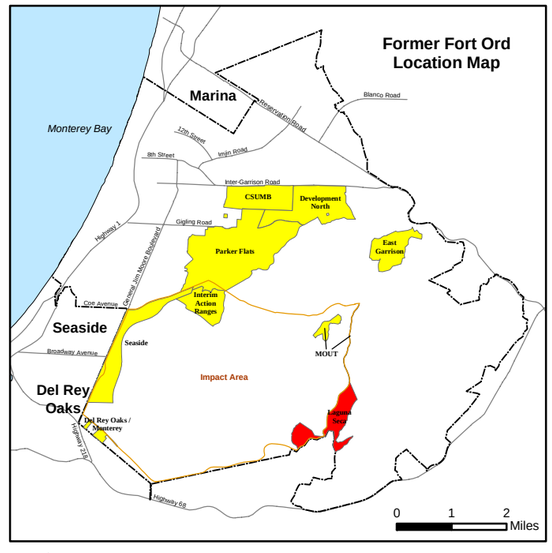
Legend

- Munitions Response Area
- Major Road
- Former Fort Ord Boundary
- L20.5.1 USACE Parcel

Vegetation Type

- Grassland
- Maritime Chaparral
- Inland Coast Live Oak Woodland
- Coast Live Oak Savanna
- Coastal Scrub
- Ice Plant Mats
- Valley Needlegrass Grassland (10-30%)
- Aquatic Feature
- Developed / Disturbed

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



N

0 800 1,600 Feet

LFR

WESTON SOLUTIONS

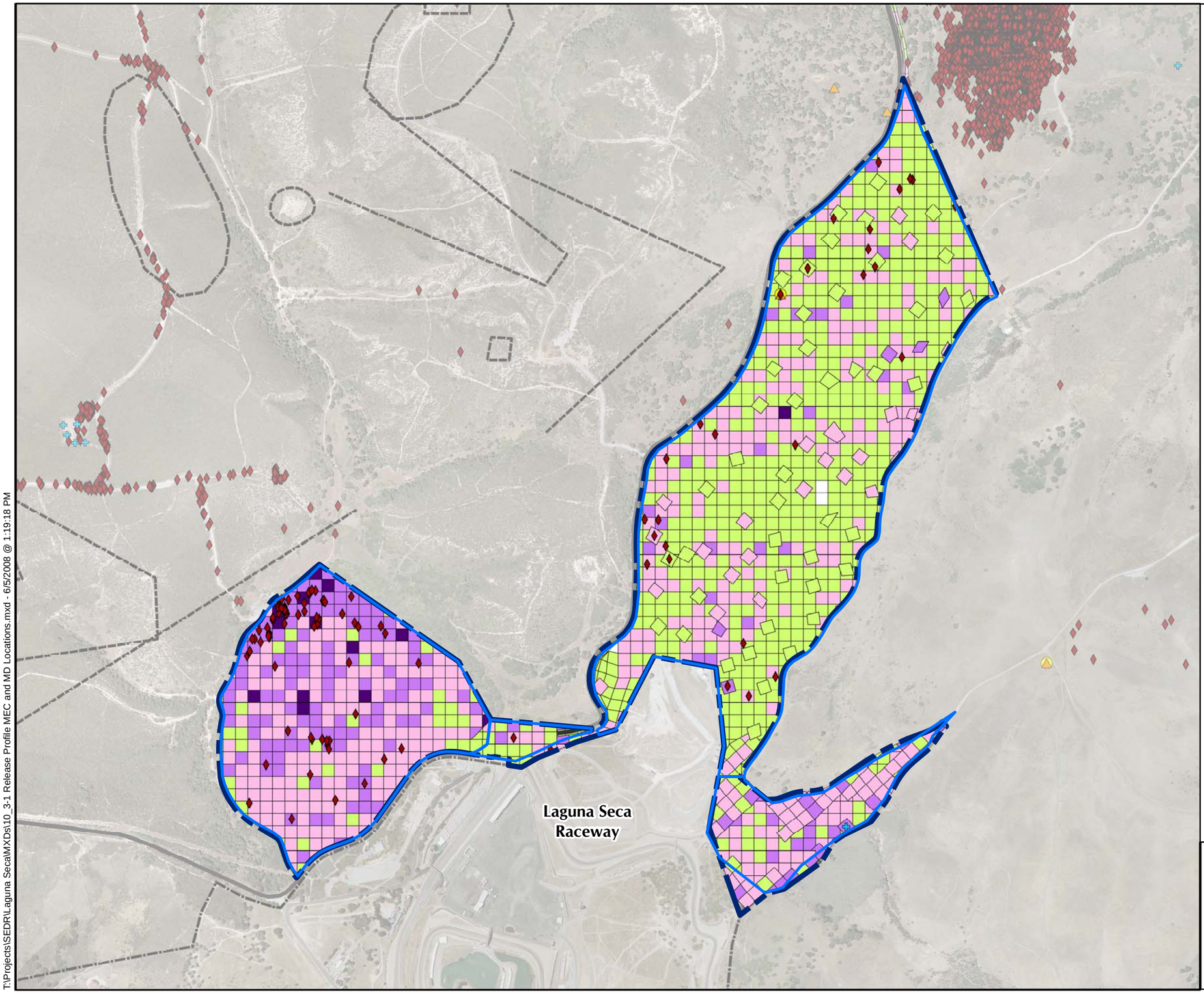
Westcliffe Engineers, Inc.

Laguna Seca MRA Physical Profile
Generalized Vegetation Communities

FORA ESCA RP
Monterey County, California

Figure 10.2-2

T:\Projects\SEDR\Laguna Seca\MXDs\10_2-2 Facility Profile Vegetation Communities.mxd - 6/5/2008 @ 1:10:22 PM



Legend

- Munitions Response Area
- Firing Range
- Munitions Response Site
- Major Road
- Former Fort Ord Boundary

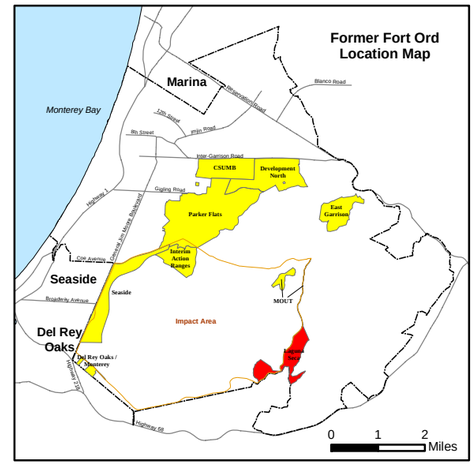
MEC Type

- 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.



N

0 800 1,600 Feet

LFR

WESTON SOLUTIONS

Westcliffe Engineers, Inc.

Laguna Seca MRA Release Profile MEC and MD Locations

FORA ESCA RP
Monterey County, California

Figure 10.3-1

T:\Projects\SEDR\Laguna Seca\MXDs\10_3-1 Release Profile MEC and MD Locations.mxd - 6/5/2008 @ 1:19:18 PM

Laguna Seca Raceway

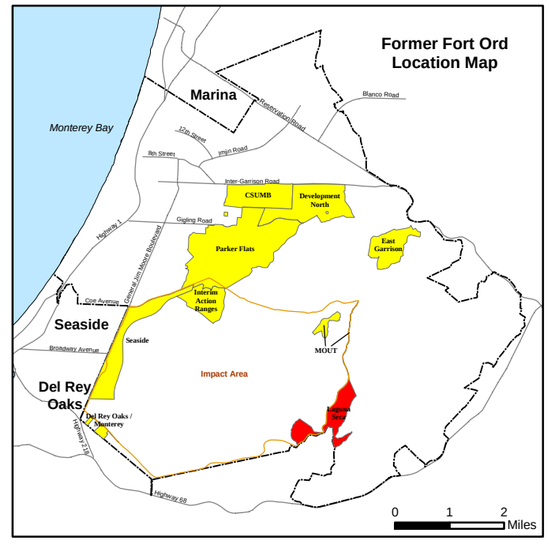
Legend

- Munitions Response Area
- Munitions Response Site
- Firing Range
- Major Road
- Former Fort Ord Boundary

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

LFR

WESTON SOLUTIONS

Westcliffe Engineers, Inc.

Laguna Seca MRA Release Profile MEC Locations

FORA ESCA RP
Monterey County, California

Figure 10.3-2

T:\Projects\SEDR\Laguna Seca\MXDs\10_3-2 Release Profile MEC Locations.mxd - 6/5/2008 @ 1:19:54 PM

Barloy Canyon Road

Laguna Seca Raceway

South Boundary Road

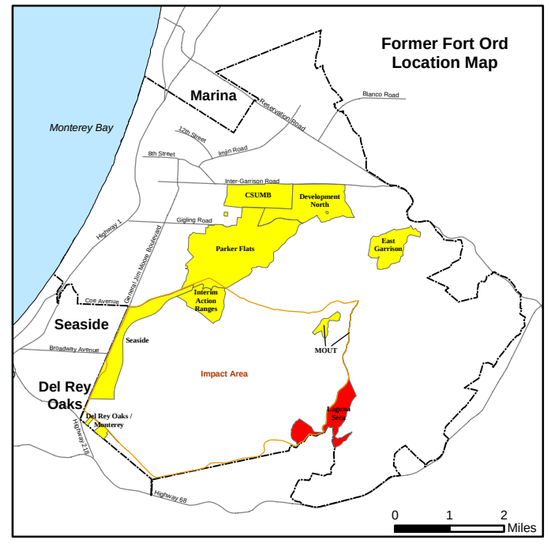
Legend

- Munitions Response Area
- Munitions Response Site
- Firing Range
- Major Road
- Former Fort Ord Boundary

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

LFR

WESTON SOLUTIONS

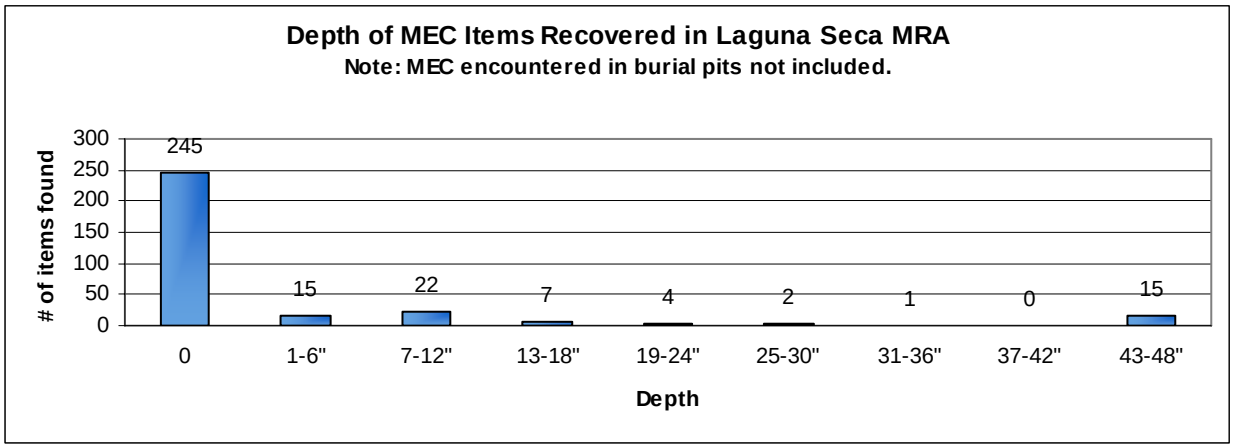
Westcliffe Engineers, Inc.

Laguna Seca MRA Release Profile MD Locations

FORA ESCA RP
Monterey County, California

Figure 10.3-3

T:\Projects\SEDR\Laguna Seca\MXDs\10_3-3 Release Profile MD Locations.mxd - 6/5/2008 @ 1:21:14 PM



LFR

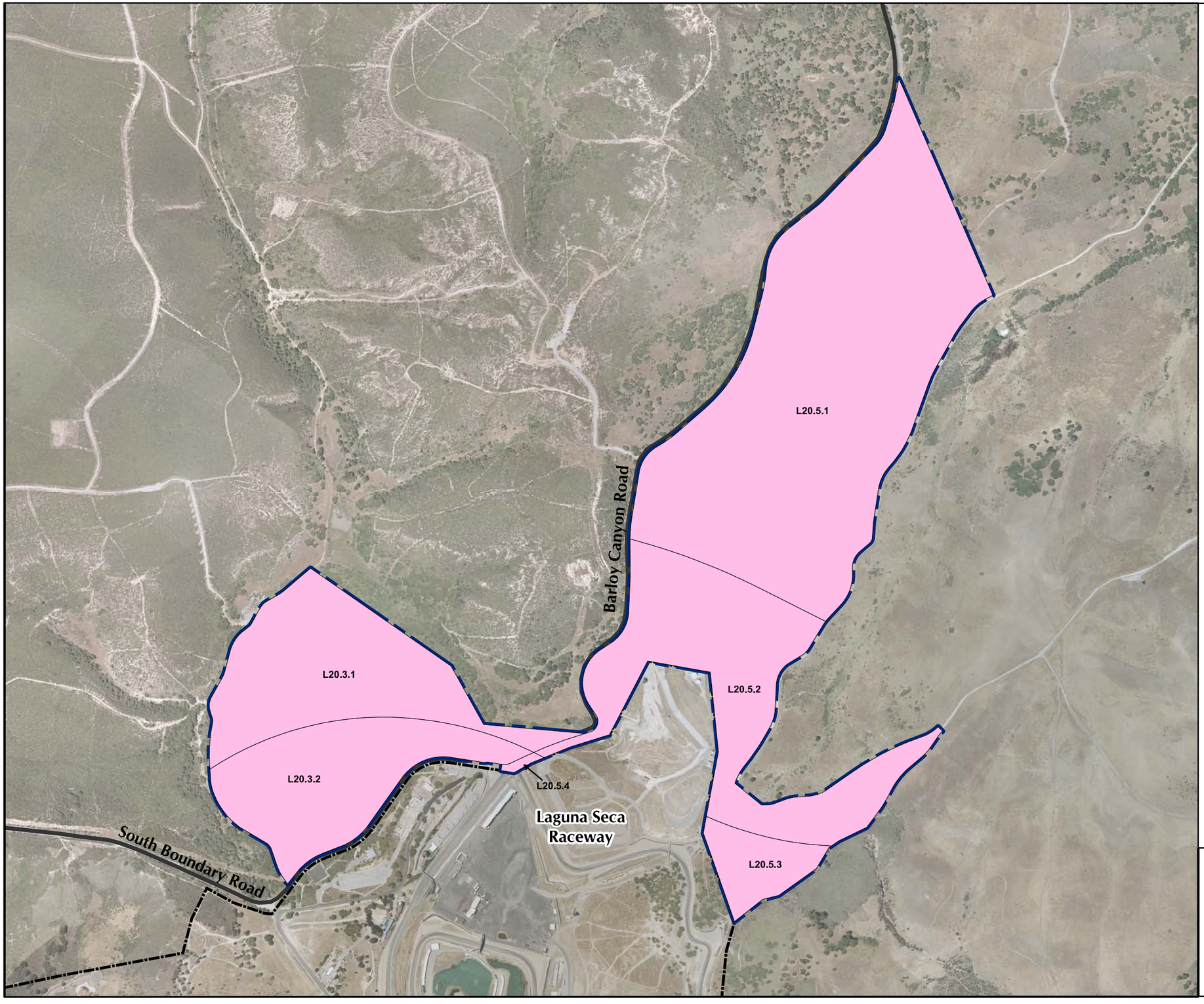
WESTON SOLUTIONS

Westcliffe Engineers, Inc.

Laguna Seca MRA
Distribution of MEC Recovered by Depth Interval

FORA ESCA RP
Monterey County, California

Figure 10.3-4

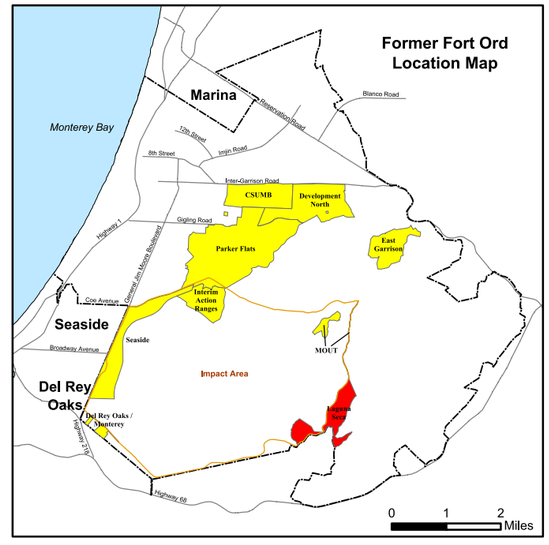


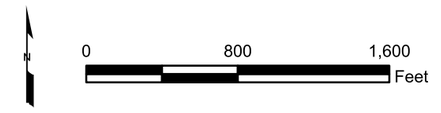
Legend

- Munitions Response Area
- Major Road
- Former Fort Ord Boundary
- L20.5.1 — USACE Parcel

Future Land Use

- Residential
- Non-Residential (Development with Reserve Areas or Development with Restrictions)
- Habitat Reserve





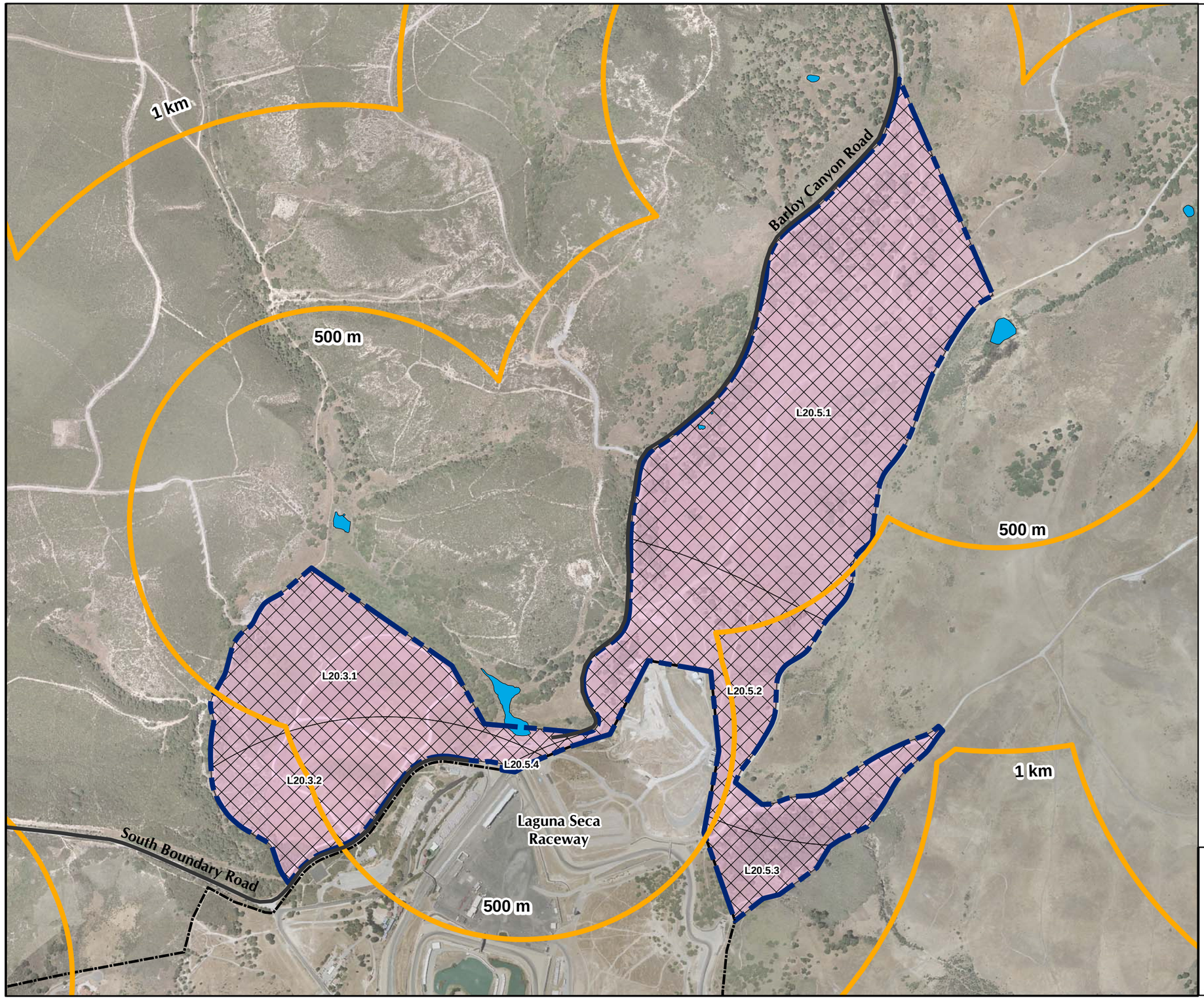
LFR
WESTON SOLUTIONS
Westcliffe Engineers, Inc.

Laguna Seca MRA
Land Use Profile
Reuse Plan

FORA ESCA RP
Monterey County, California

Figure 10.4-1

T:\Projects\SEDR\Laguna Seca\MXDs\10_4-1 Land Use Profile Reuse Plan.mxd - 6/6/2008 @ 9:31:22 AM

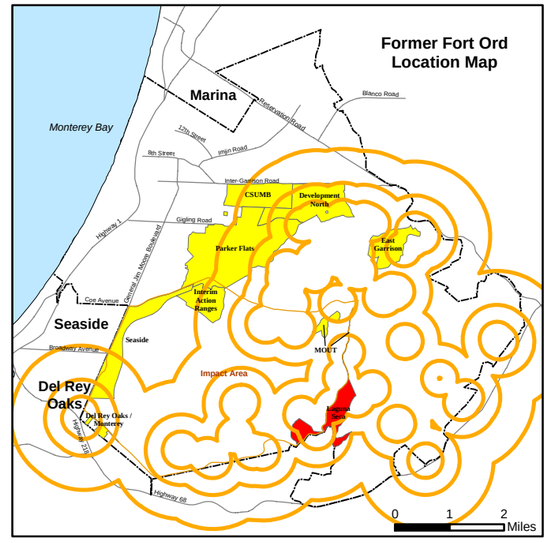


Legend

- Munitions Response Area
- California Tiger Salamander Buffer
- Major Road
- Former Fort Ord Boundary
- 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



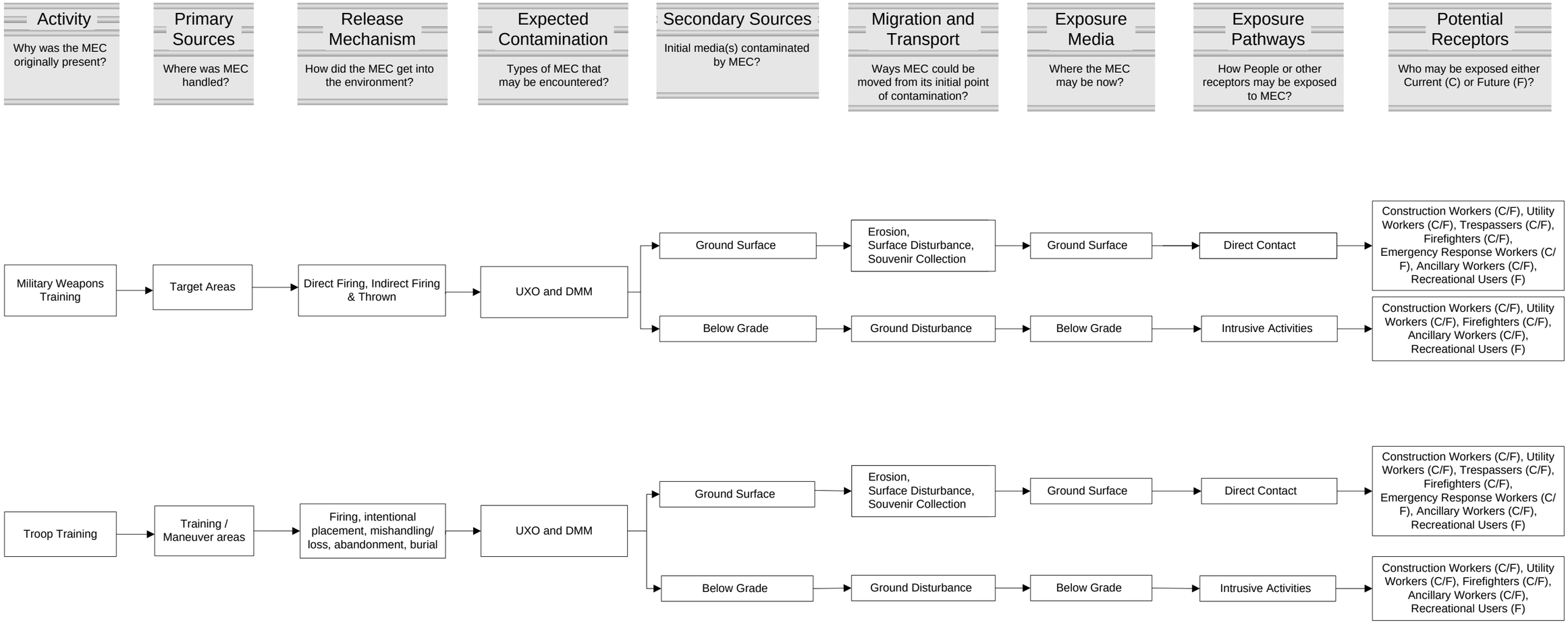
LFR
WESTON SOLUTIONS
Westcliffe Engineers, Inc.

Laguna Seca MRA
Ecological Profile
Habitat Type

FORA ESCA RP
Monterey County, California

Figure 10.5-1

T:\Projects\SEDR\Laguna Seca\MXDs\10_5-1 Ecological Profile Habitat Type.mxd - 6/5/2008 @ 1:16:56 PM



LFR

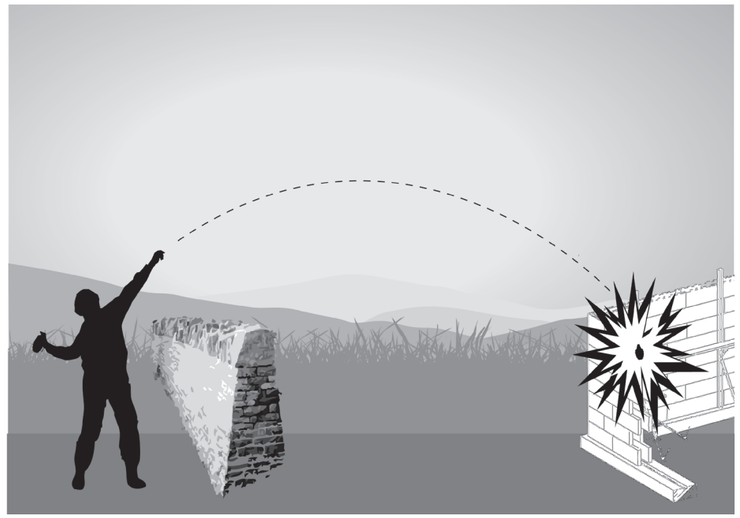
WESTON SOLUTIONS

Westcliffe Engineers, Inc.

Laguna Seca MRA
Pathway Analysis Flowchart

FORA ESCA RP
Monterey County, California

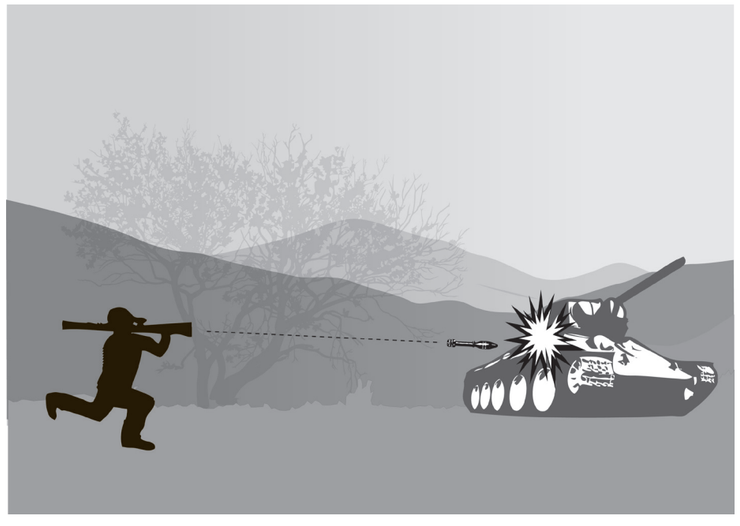
Figure 10.6-1



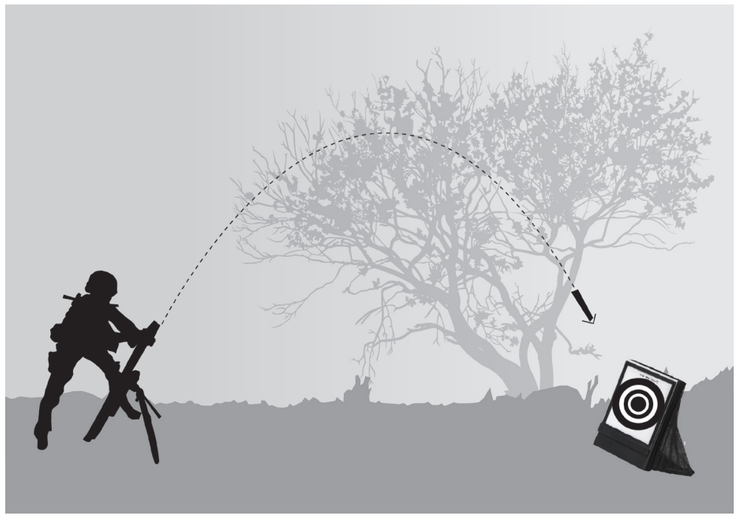
Thrown Ordnance

Intentional Placement / Burial / Mishandling / Loss

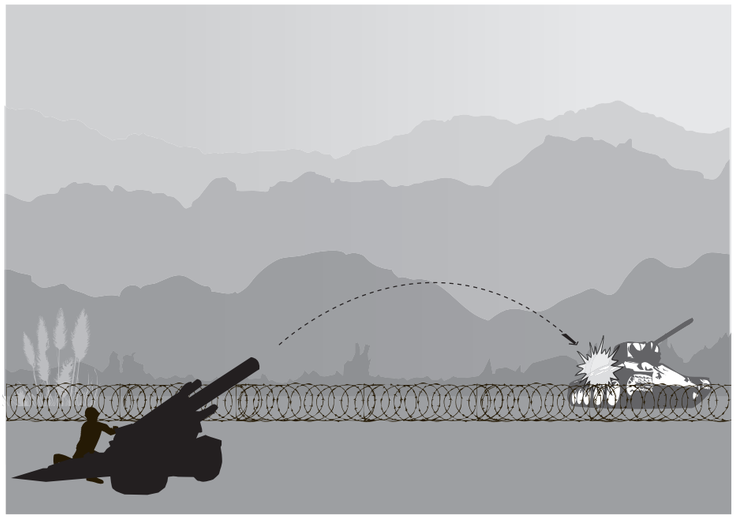
Firing



Direct Fire



Indirect Fire



Indirect Fire

LFR

WESTON SOLUTIONS

Westcliffe Engineers, Inc.

Laguna Seca MRA
Release Mechanism Illustrations

FORA ESCA RP
Monterey County, California

Figure 10.6-2