

## 1.0 Introduction

The U.S. Army is currently conducting a Remedial Investigation/Feasibility Study (RI/FS) for the former Fort Ord (Fort Ord) areas impacted with munitions and explosives of concern (MEC), with the intent of transferring the property to public and private land users.

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or Superfund) established the RI/FS process to identify the nature and extent of risks at a site and to determine the appropriate remedial methods. The RI/FS is an analytical process designed to support risk management decision-making for Superfund sites; risk assessment plays an essential role. According to CERCLA, the results of the risk assessment should help establish acceptable remediation levels for use in developing remedial alternatives during the FS. The MEC risk assessment does not establish acceptable remediation levels, but is used to develop and evaluate remedial alternatives during the FS. As part of the Fort Ord RI/FS process, the Army is required to conduct a MEC risk assessment.

A risk assessment is used, in this case, to describe the qualitative and quantitative factors leading to an encounter between a receptor and a MEC item. Several methods exist for performing risk assessments on munitions response sites (MRS); however, no MEC risk assessment methodology has been widely accepted, evaluated, and fully implemented for a variety of MRS. Thus, a protocol was developed to determine the current and future MEC risk at Fort Ord.

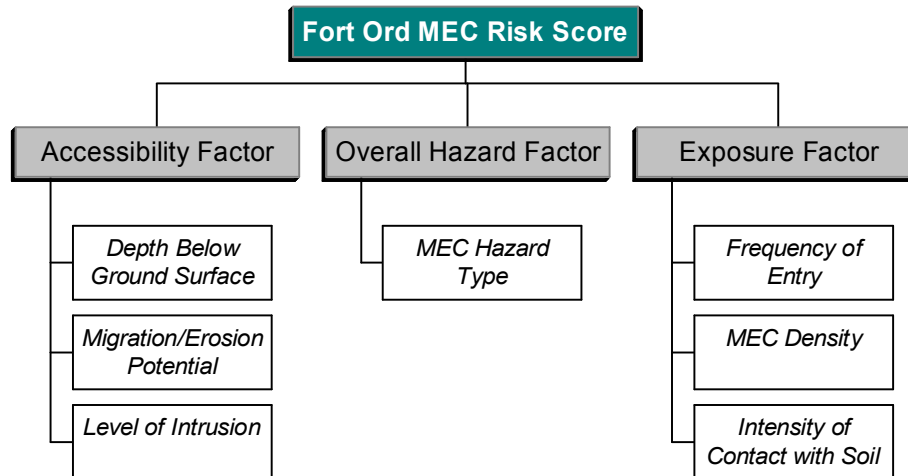
### 1.1. Fort Ord MEC Risk Assessment Protocol

The *Fort Ord Ordnance and Explosives (OE) Risk Assessment Protocol* (hereafter referred to as "Protocol") (Malcolm Pirnie, 2002) was prepared through a combined effort of the Army, the California Environmental Protection Agency's Department of Toxic Substances Control (DTSC), and the United States Environmental Protection Agency (USEPA). The purpose of the Protocol is to allow for comparative review of MEC risks at MEC-impacted sites at Fort Ord. The Protocol does not calculate the probability of adverse consequences, but instead assumes that encounters with MEC items will result in adverse consequences and, therefore, describes and estimates the MEC risk recognizing that basic assumption. This Protocol is not designed to assess absolute risk, but is rather an approach for understanding baseline risks and comparing the relative risk between remedial alternatives on a MEC-impacted site at Fort Ord. The Overall MEC Risk score produced by this Protocol should not be compared to risks from other MEC-impacted facilities, because the Protocol was developed for Fort Ord using site-specific conditions.

The Protocol is a qualitative risk assessment approach based on seven input factors; these input factors are both qualitative and quantitative. The

definition and correlation between the seven factors will be further discussed in Sections 2.0 and 3.0 and is illustrated in Figure 1 below:

Figure 1. Fort Ord MEC Risk Assessment

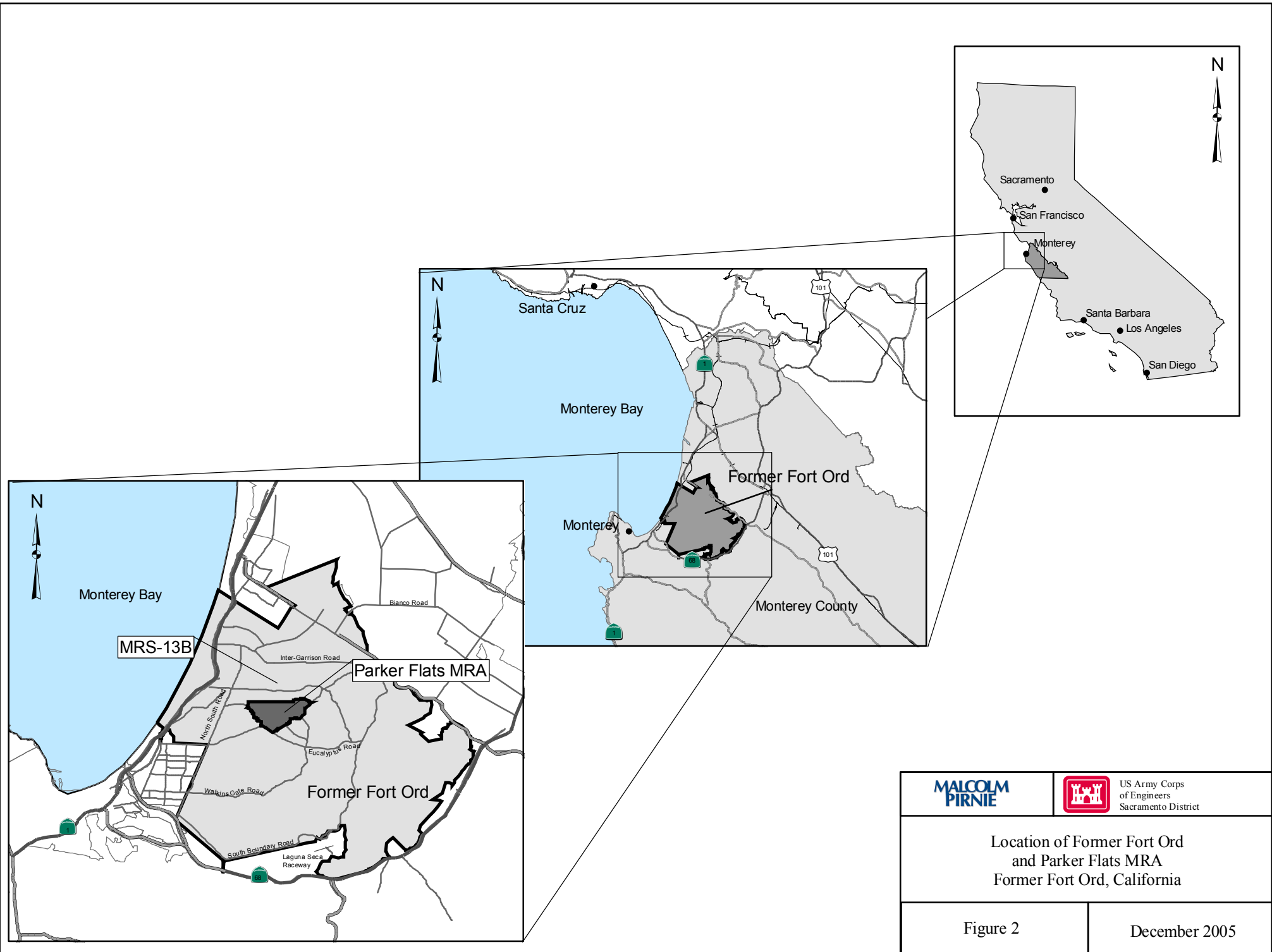




The output of the Fort Ord MEC Risk Assessment is an Overall MEC Risk Score designated by the letters A through E, with A represents the lowest risk and E represents the highest risk. These scores are supported by a narrative describing the assumptions used to develop the input factors. A summary of the protocol, including input scoring tables, is provided in Attachment A for the reader's ease of reference.

## 1.2. Purpose of This Risk Assessment

This risk assessment focuses on the site known as the Parker Flats Munitions Response Area (MRA). These sites location are shown on Figure 2. This risk assessment is prepared as Volume 2 of the Track 2 Military Munitions Response Program Remedial Investigation/ Feasibility Study Former Fort Ord, California, herein referred to as the RI/FS Report. The baseline risk scenario evaluates the conditions before removal actions were conducted and the after action scenario evaluates the current conditions after removal actions were conducted. The risks for the feasibility alternatives are assessed in the FS portion of the RI/FS report.

As an overview, the Parker Flats MRA is approximately 755 acres in size. It includes 13 former munitions response (MR) sites which were investigated beginning in 1994 after Fort Ord was closed (MRS-3, MRS-4B, MRS-27A, MRS-27B, MRS-27G, MRS-37, MRS-40 MRS-50, MRS-52, MRS-53, MRS-54EDC, MRS-55, and MRS-13B). Section 3 of the RI summarizes the history of these MR sites and the previous sampling activities conducted at each site. This risk assessment is based on both the field conditions and on the intended future land



	 US Army Corps of Engineers Sacramento District
<b>Location of Former Fort Ord and Parker Flats MRA Former Fort Ord, California</b>	
Figure 2	December 2005

use for Parker Flats MRA. The intended reuses for Parker Flats MRA are listed below, and the areas are shown in Figures 3 and 4.

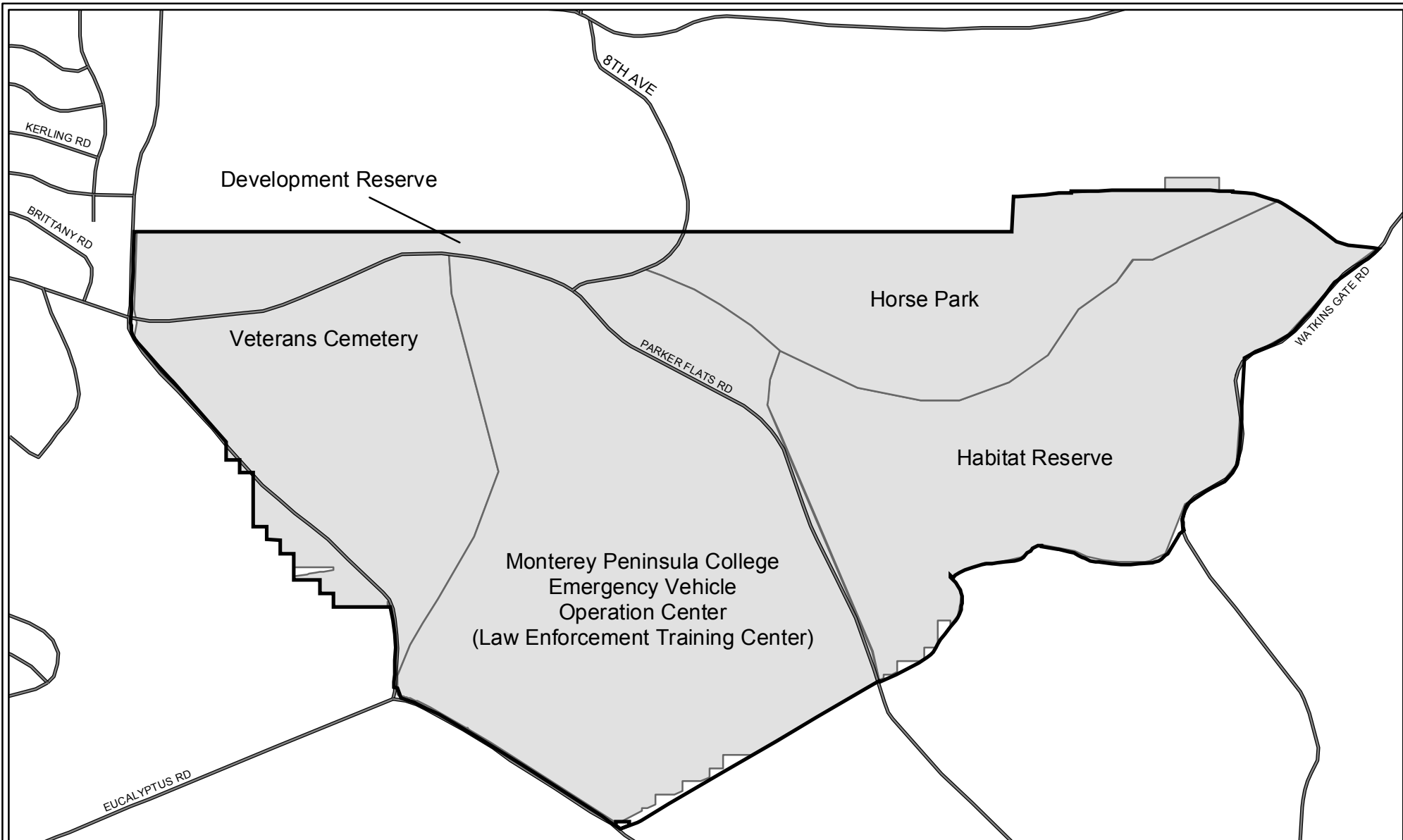
- Monterey Peninsula College (MPC) – A college for training of law enforcement personnel
- Parker Flats MRA Horse Park – A stable and horse riding facility including an recreational vehicle (RV) camping area
- MRS-13B Horse Park – A stable and horse riding facility including an recreational vehicle (RV) camping area
- Parker Flats MRA Habitat Reserve – An oak woodland and maritime chaparral habitat reserve.
- MRS-13B Habitat Reserve – An oak woodland and maritime chaparral habitat reserve.
- Veterans Cemetery
- Parker Flats MRA Development Reserve – An area reserved for development by Monterey County and the City of Seaside, which could include residential development.
- MRS-13B Development Reserve – An area reserved for development by Monterey County, which could include residential development.
- California State University Monterey Bay Expansion Area – An extension to the university which could include open space or development.
- Monterey County Public Facilities – A developed area for Monterey County activities.
- Army Maintenance Center – An area retained by the U.S. Army for various uses.
- Monterey Salinas Transit (MST) Park and Ride – A parking lot for commuter services.
- Monterey Salinas Transit (MST) Maintenance Center / Surplus – A maintenance facility for commuter vehicles.

The remainder of this risk assessment is organized as follows:




- Data and Data Usability
- Future Land Use Scenarios and Receptors
- Risk Input Scores and Results
- Uncertainty
- Conclusions

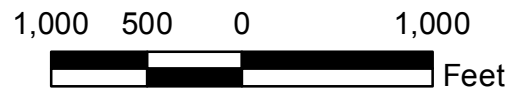
Excerpts from the risk protocol are provided in Attachment A to provide the reader the approved risk assessment approach on which this risk assessment was developed. Summary tables are included in Attachment B (MEC Items Found by Reuse Area) and Attachment C (Narrative Discussion of Risk Scores).

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**Legend**

-  Road
-  Reuse Area
-  Parker Flats Study Area

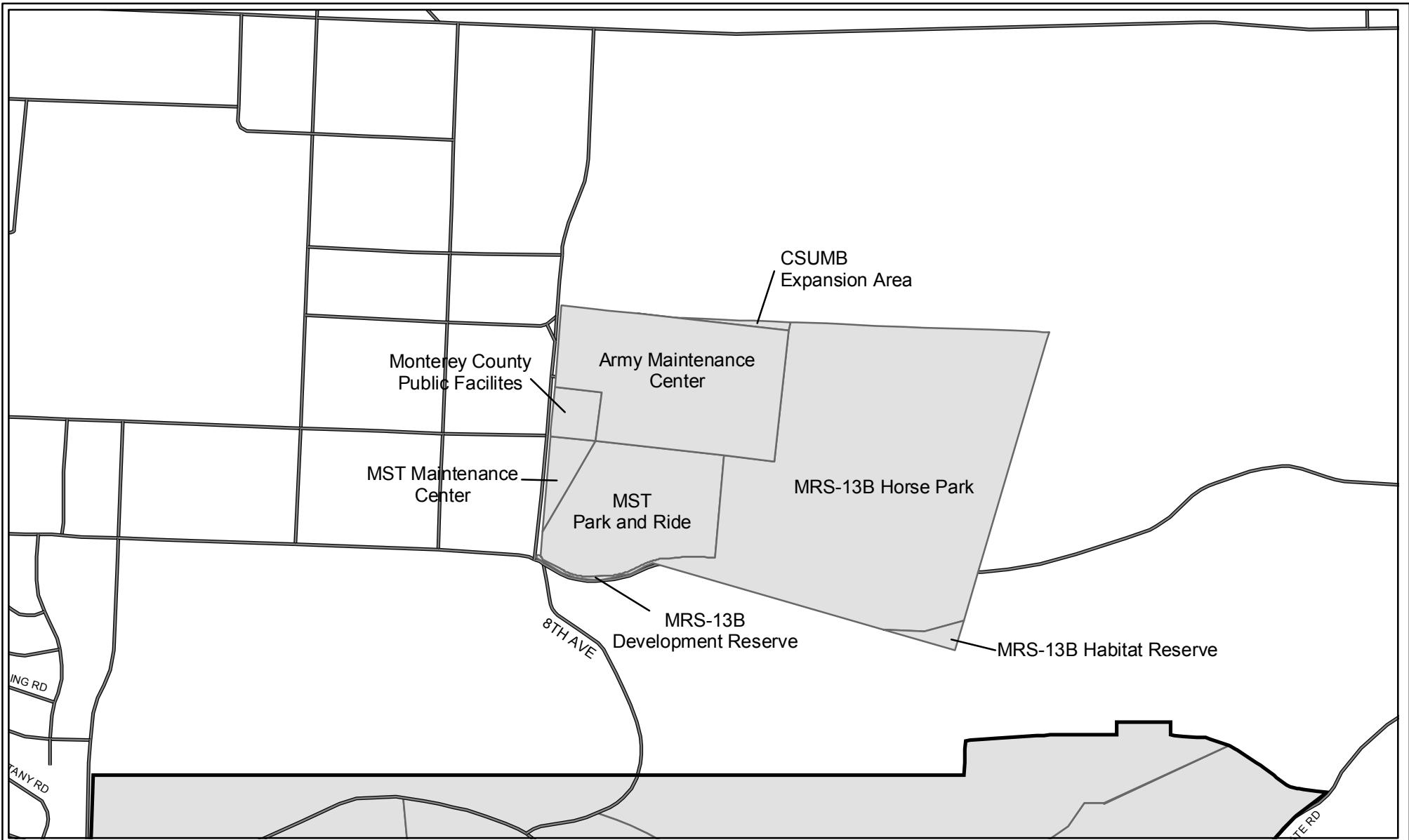


Planned Reuse Areas  
Parker Flats MRA  
Former Fort Ord, California




Figure 3

December 2005

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**Legend**

-  Road
-  Reuse Area
-  Parker Flats Study Area



Planned Reuse Areas  
 Parker Flats MRA  
 Former Fort Ord, California

Figure 4

December 2005