

**Bureau of Land Management Area B
Unit B
Technical Information Paper
for Public Access on Trails
Former Fort Ord, California**

March 2020

Prepared for



**U.S. Army Corps of Engineers
Sacramento District
1325 J Street
Sacramento, California 95814-2922**

Prepared by



**KEMRON Environmental Services, Inc.
1359A Ellsworth Industrial Blvd.
Atlanta, GA 30318
404-636-0928**

Table of Contents

List of Tables.....	ii
List of Figures.....	ii
List of Appendices.....	ii
List of Acronyms	iii
1.0 Introduction	1
1.1 Site Location and Existing Conditions	1
2.0 RAs Completed.....	2
2.1 Surface MEC Removal and DGM Survey.....	2
2.2 Subsurface MEC Removal	2
2.2.1 Summary of MEC/Munitions Debris Removed	2
3.0 Access Management Measures.....	3
4.0 Recommendation & Conclusion.....	4
5.0 References	5

List of Tables

Table 1 Subsurface MEC Removal Summary within Trails

List of Figures

Figure 1 Location
Figure 2 Trails
Figure 2A Trails Planned for Public Access
Figure 3 Subsurface MEC Remediation
Figure 4 Surface MEC Recovered

List of Appendices

Appendix A Unit B MEC Items Recovered Prior to RA
Appendix B Unit B MEC Items Recovered During Surface MEC Removal
Appendix C Unit B MEC Items Recovered During Subsurface MEC Removal
Appendix D Responses to Comments

List of Acronyms

AR	Administrative Record
Army	United States Department of the Army
BLM	Bureau of Land Management
DGM	Digital Geophysical Mapping
KEMRON	KEMRON Environmental Services, Inc.
MD	Munitions Debris
MEC	Munitions and Explosives of Concern
QA	Quality Assurance
QC	Quality Control
RA	Remedial Action
RWA	Remedial Work Area
SSWP	Site-Specific Work Plan
TIP	Technical Information Paper
TM	Technical Memorandum
UXO	Unexploded Ordnance

1.0 Introduction

This Technical Information Paper (TIP) provides an evaluation of site conditions in the Bureau of Land Management (BLM) Area B Unit B (Figure 1) and identifies specific trails to consider opening for public recreational use (Figure 2). The remedial actions (RAs) within BLM Area B, Unit B occurred under the following documents:

- *Final Record of Decision Track 2 Bureau of Land Management Area B and Munitions Response Site 16 Former Fort Ord, California* [United States Department of the Army (Army), 2017];
- *Final Work Plan Remedial Design (RD)/Remedial Action (RA) Track 2 Bureau of Land Management Area B and Munitions Response Site 16 Former Fort Ord, California* (KEMRON Environmental, Inc. [KEMRON], 2017a);
- *Final Site-Specific Work Plan Munitions and Explosives of Concern Remedial Action BLM Area B Former Fort Ord, California* (BLM Area B SSWP; KEMRON, 2017b); and
- *FINAL BLM Area B – Units A, B, and C PRESCRIBED BURN PLAN FORMER FORT ORD, MONTEREY, CALIFORNIA* (Burn Plan; Presidio of Monterey Fire Department, 2017).¹

Technology-aided surface Munitions and Explosives of Concern (MEC) removal (surface MEC removal), digital geophysical mapping (DGM), and subsurface MEC removal in the trails are complete and documented in the *Bureau of Land Management Area B Unit B Munitions and Explosives of Concern Remedial Action Technical Memorandum Former Fort Ord, California* (Unit B TM; KEMRON, 2020b). All planned subsurface MEC removals within Unit B are complete. This document presents the results of the subsurface MEC removal, RAs conducted in this area, and current access management measures. The Unit B trails will remain closed until regulatory agencies approve this TIP.

1.1 Site Location and Existing Conditions

The total acreage of Unit B is 266 acres. The RA occurred within approximately 233 acres [Unit B Remedial Work Area (RWA)] as identified in the BLM Area B SSWP (KEMRON, 2017b). Unit B is bounded by Eucalyptus Road to the south, West Machine Gun Flats Road to the north, Watkins Gate Road to the west, and Little Moab Road to the east (Figure 1). Little Moab Road was used as the eastern perimeter of the burn unit; therefore, Unit B includes approximately 33 acres in addition to the Unit B RWA. This area is a portion of sub-area B-4 where MEC removal was performed prior to the *Final, Revision 2, Track 2 Remedial Investigation /Feasibility Study BLM Area B and*

¹ A prescribed burn was conducted in accordance with the Burn Plan (Presidio of Monterey Fire Department, 2017). The prescribed burn is reported in the *FINAL Prescribed Burn 2017 BLM AREA B – UNITS B and C After Action Report Former Fort Ord, Monterey County, California* (Chenega Support Services, 2018).

MRS-16 Former Fort Ord, California (BLM Area B RI/FS; Gilbane; 2015). Work performed in the 33 acres consisted of surface, 1-foot or 4-foot removal, as described in the BLM Area B RI/FS (Gilbane, 2015). Unit B MEC items recovered prior to RA are provided in [Appendix A](#).

During RA operations, unit closure and restricted public access (using temporary fence with warning signs) occurred in accordance with the BLM Area B SSWP (KEMRON, 2017b). Unit B trails remain closed to the public. Following completion of the RAs within Unit B, BLM began trail construction on the new trail alignments in January 2020. BLM identified the trail alignments as shown on [Figure 2](#).

2.0 RAs Completed

2.1 Surface MEC Removal and DGM Survey

The Unit B TM (KEMRON, 2020b) described the surface MEC removal and DGM survey completed within the unit. Appropriate quality control (QC) and quality assurance (QA) were implemented. The Unit B TM (KEMRON, 2020b) identified the trail alignments and proposed subsurface removal areas associated with the trails.

2.2 Subsurface MEC Removal

KEMRON completed subsurface MEC removal ([Figure 3](#) and [Table 1](#)) in accordance with the BLM Area B SSWP (KEMRON, 2017b) within the trail alignments identified in the Unit B TM (KEMRON, 2020b). The BLM Area B SSWP (KEMRON, 2017b) specified subsurface MEC removal on trail alignments as a 12-foot wide area. Based on coordination with BLM, the 12-foot wide area included a 4-foot wide travel lane and a 4-foot wide area on both sides.

Subsurface MEC removal in the Unit B trails was conducted through an intrusive investigation using hand-held metal detector and an EM61 in analog mode. Subsurface MEC removal met the measurement quality objectives and the QC/QA practices outlined in the BLM Area B SSWP (KEMRON, 2017b). No QC failures occurred within Unit B. The United States Army Corps of Engineers did not issue any corrective action requests.

A DGM survey within the vernal ponds, totaling approximately 3 acres, was completed in 2016 to take advantage of dry conditions. The results of the geophysical anomaly investigation in select vernal ponds within BLM Area B are described in the Unit B TM (KEMRON, 2020b) and *BLM Area B Track 2 Ponds Geophysical Anomaly Investigation Technical Information Paper, Former Fort Ord, California* (BLM Area B Ponds TIP; KEMRON, 2020a).

2.2.1 Summary of MEC/Munitions Debris Removed

The Unexploded Ordnance (UXO) personnel managed MEC and munitions debris (MD) items encountered and removed during RAs in a manner consistent with the BLM Area B SSWP

(KEMRON, 2017b) and the *Final Quality Assurance Project Plan Former Fort Ord, California Volume II Appendix A Munitions and Explosives of Concern Remedial Action* (KEMRON, 2016). [Appendix B](#) provides the MEC items encountered during surface MEC removal. [Figure 3](#) and [Appendix C](#) provide the MEC items encountered during subsurface MEC removal.

Munitions with sensitive fuzes were not expected in Unit B. During surface MEC removal, one munition item with a sensitive fuze (projectile, 40 millimeter, high explosive dual-purpose, M433) was encountered and removed. The amount of MD associated with sensitive-fuze type munitions that was encountered and removed in Unit B was minimal. Based on these findings and historical information, there is no indication of a range for munitions with sensitive fuzes in Unit B. Based on the RA performed (prescribed burn, surface MEC removal, and subsurface MEC removal along trails), encounters of MEC with sensitive fuzes are not expected in Unit B.

Table 1. Subsurface MEC Removal Summary

Unit	Trail	Trail Clearance Area (approximate acreage)	Subsurface MEC Removal			
			Area of Target Acquisition (approximate acreage)		MD Recovered (approximate pounds)	MEC Items Recovered
			DGM Data (approximate acreage)	Analog (approximate acreage)		
B	91	1.76	0	1.76	163.50	11
	92	0.31	0	0.31	0.25	0
	93	0.29	0	0.29	7.00	0
	94	0.47	0	0.47	3.75	0
	Drainage Areas	0.30	0	0.30	20.00	0
	Total	2.83	0	2.83	194.50	11

The results of the geophysical anomaly investigation in select vernal ponds within BLM Area B are described in BLM Area B Ponds TIP (KEMRON, 2020a).

3.0 Access Management Measures

After the subsurface MEC removals were completed, BLM began trail construction on the new trail alignments in January 2020. Due to recent rain events and additional rainfall expected, the trail construction work is not expected to be completed until later in the spring. Given factors such as weather, staffing, and public interest, BLM is considering opening the completed-portions of the trails in Unit B and continuing to work on the new segments as weather and staffing allow. In the interim, the previously-used trail alignments will be used to provide access to the completed

new segments. These old alignments were previously open for recreational use and maintained by BLM; after the remedial actions in Unit B, these old alignments remain acceptable for public use. Their use will be discontinued once remaining trail construction work on the new segments is complete. The Army will work with BLM to clearly mark authorized trail entrances and close or block unauthorized entrance points during this interim period. The Army will work with BLM to conduct outreach and monitor public use of this area. Based on BLM's experience managing the Fort Ord public lands for many years, BLM expects users to stay on open, designated, and signed trails. BLM personnel regularly monitor user activities.

The Army continues to implement public education measures in coordination with BLM in a manner consistent with the *Final Interim Land Use Control Implementation Plan Track 2 Bureau of Land Management Area B and Munitions Response Site 16 Former Fort Ord, California* (KEMRON, 2018). These measures supplement the access management effort in BLM Area B. The following public education measures are in place in BLM Area B.

- Information in kiosks to provide information regarding current trail access status in BLM Area B.
- Brochures that describe the military's previous use of the property and the access management guidelines (e.g., staying on designated trails or roads, no camping, and no digging) for recreational users including actions to take if a suspected munitions item is encountered (3Rs of explosives safety).
- Public website fortordcleanup.com to provide current trail access status and information to encourage people to adhere to access management guidelines.

Once approval to open the trails is obtained, the Army will utilize these mechanisms to disseminate the new trail access information to the public in coordination with BLM.

4.0 Recommendation & Conclusion

Surface MEC removal and DGM are complete across Unit B RWA. Subsurface MEC removal along the trails shown in [Figure 3](#) is also complete. No additional subsurface MEC was identified in the Unit B TM (KEMRON, 2020b). As identified in [Section 3.0](#), mechanisms to distribute the new trail access information (kiosks, website) are in place. BLM began trail construction in the new trail alignments in January 2020. The completed segments supplemented by old alignments (shown in [Figure 2A](#)) are suitable for recreational use until the remaining trail construction can be completed. Based on the evaluation, the Army recommends opening the trails in Unit B ([Figure 2A](#)) for recreational users. Public use will transition to the new trail alignments ([Figure 2](#)) once all trail construction is complete.

5.0 References

Chenega Support Services, 2018. *FINAL Prescribed Burn 2017 BLM AREA B – UNITS B and C After Action Report Former Fort Ord, Monterey County, California* [Administrative Record (AR# OE-0922B)]

Gilbane Building Company, 2015. *Final, Revision 2, Track 2 Remedial Investigation /Feasibility Study BLM Area B and MRS-16 Former Fort Ord, California.* (AR# OE-0802D)

KEMRON Environmental Services, Inc. (KEMRON), 2016. *Final Quality Assurance Project Plan Former Fort Ord, California Volume II Appendix A Munitions and Explosives of Concern Remedial Action* (AR# OE-0884A)

KEMRON, 2017a. *Final Work Plan Remedial Design (RD)/Remedial Action (RA) Track 2 Bureau of Land Management Area B and Munitions Response Site 16 Former Fort Ord, California* (AR# OE-0899B)

KEMRON, 2017b. *Final Site-Specific Work Plan Munitions and Explosives of Concern Remedial Action BLM Area B Former Fort Ord, California* (AR# OE-0900B)

KEMRON, 2018. *Final Interim Land Use Control Implementation Plan Track 2 Bureau of Land Management Area B and Munitions Response Site 16 Former Fort Ord, California* (AR# OE-0907B)

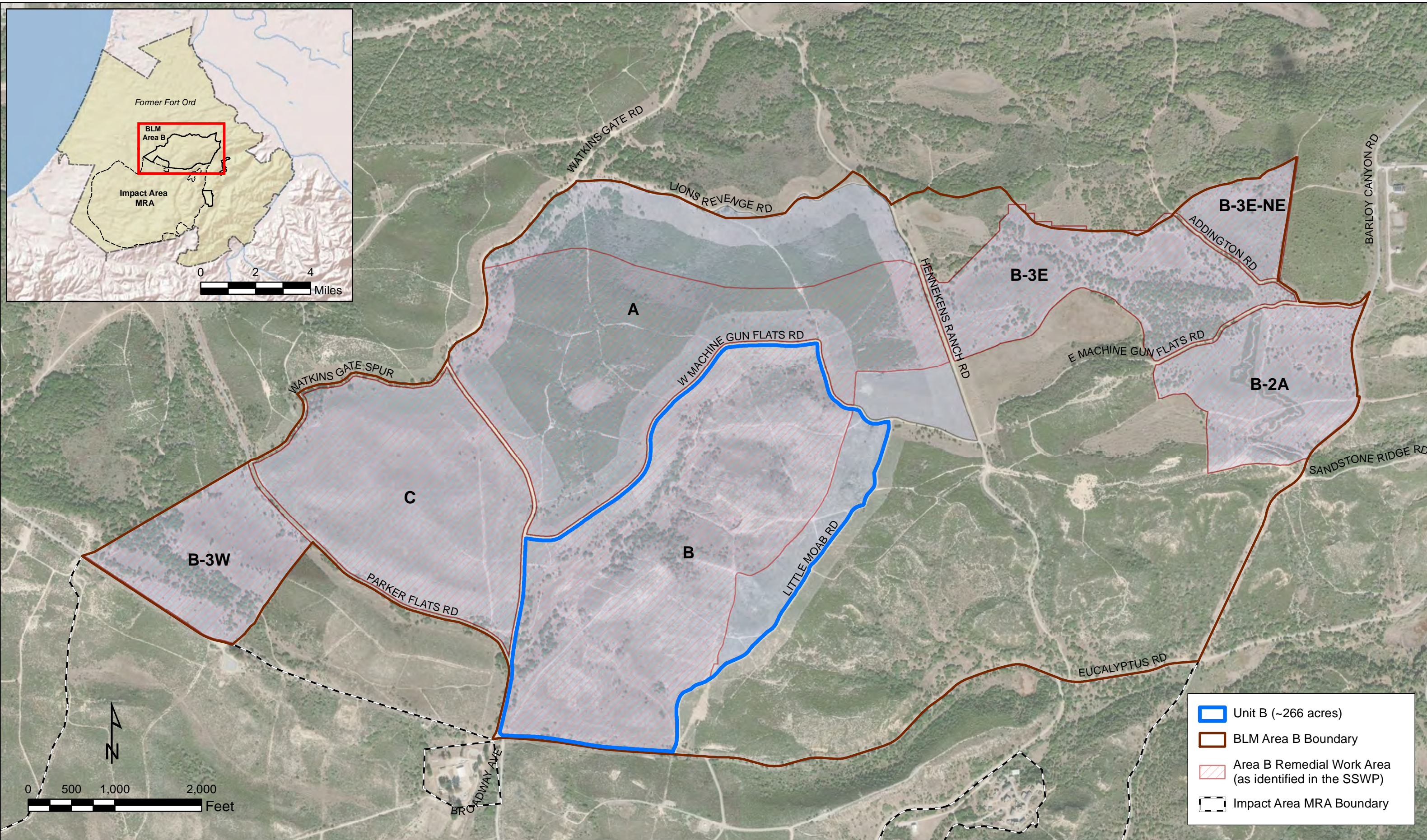
KEMRON, 2020a. *BLM Area B Track 2 Ponds Geophysical Anomaly Investigation Technical Information Paper, Former Fort Ord, California* (AR# OE-0966A)

KEMRON, 2020b. *Bureau of Land Management Area B Unit B Munitions and Explosives of Concern Remedial Action Technical Memorandum Former Fort Ord, California* (AR# OE-0969A)

Presidio of Monterey Fire Department, 2017. *FINAL BLM Area B – Units A, B, and C PRESCRIBED BURN PLAN FORMER FORT ORD, MONTEREY, CALIFORNIA* (AR# OE-0901B)

The United States Department of the Army (Army), 2017. *Final Record of Decision Track 2 Bureau of Land Management Area B and Munitions Response Site 16 Former Fort Ord, California* (AR# OE-0897)

Figures

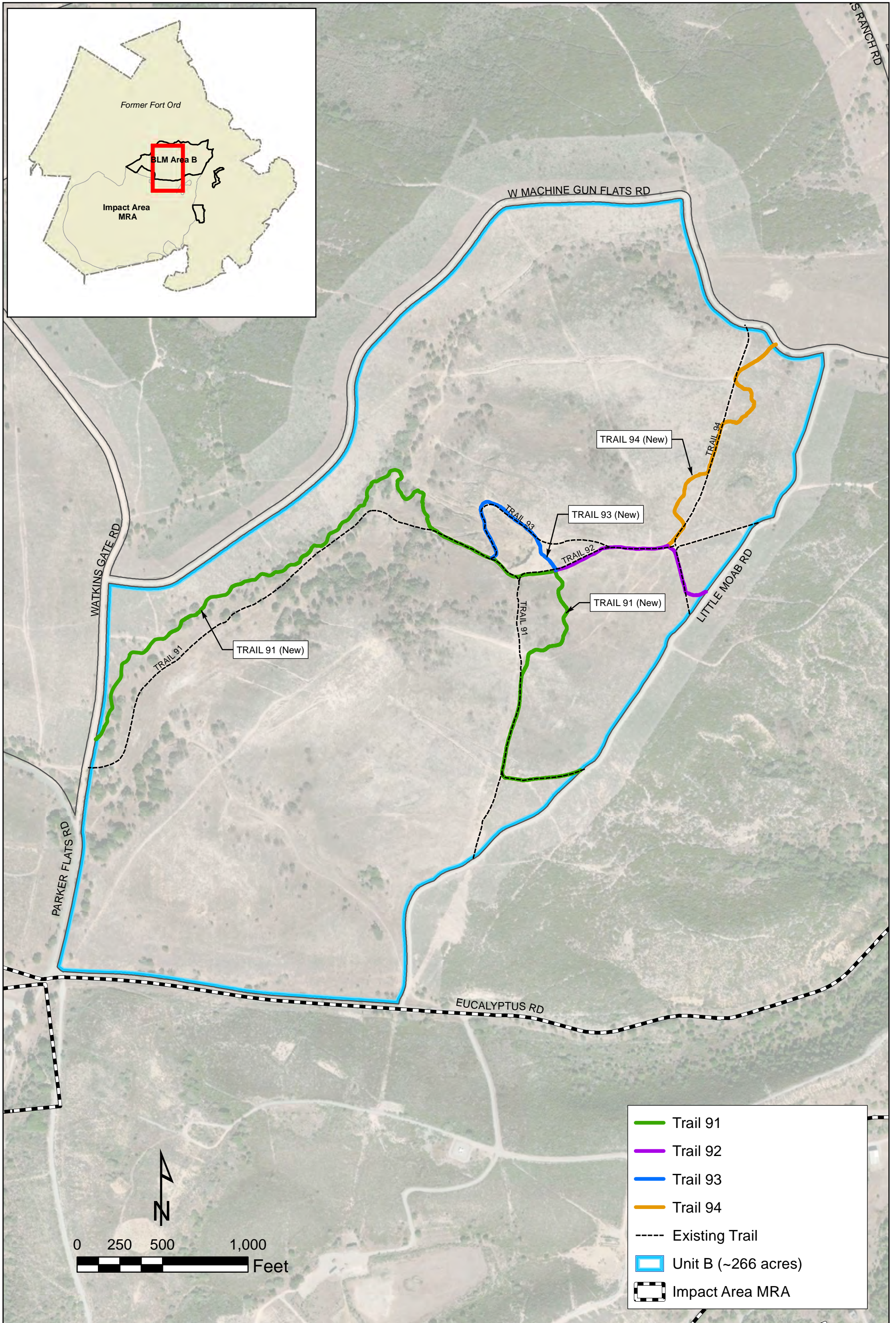


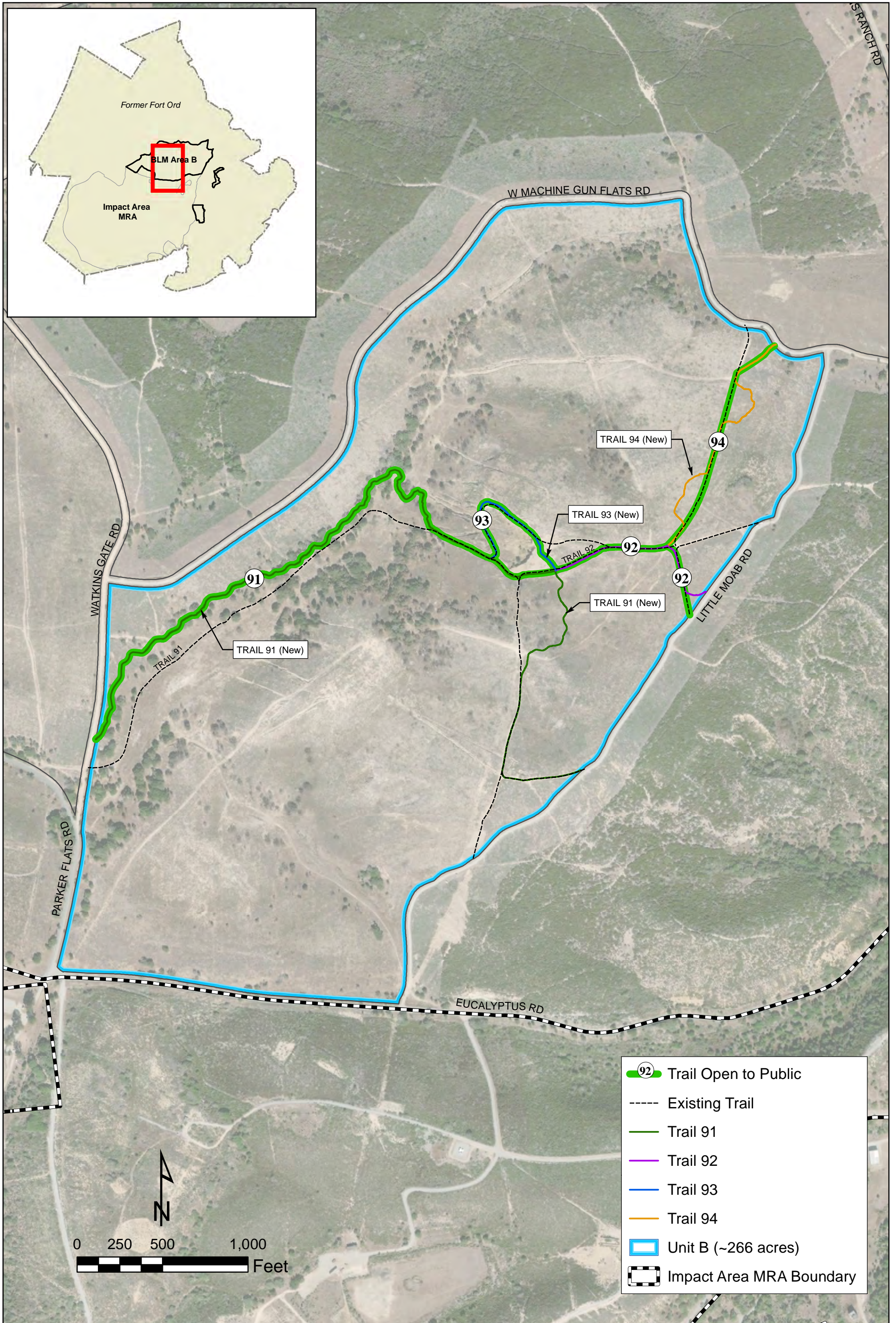
- Unit B (~266 acres)
- BLM Area B Boundary
- Area B Remedial Work Area (as identified in the SSWP)
- Impact Area MRA Boundary

Bureau of Land Management Area B
 Unit B Technical Information Paper
 for Public Access on Trails
 Former Fort Ord, California

Figure 1
 Location





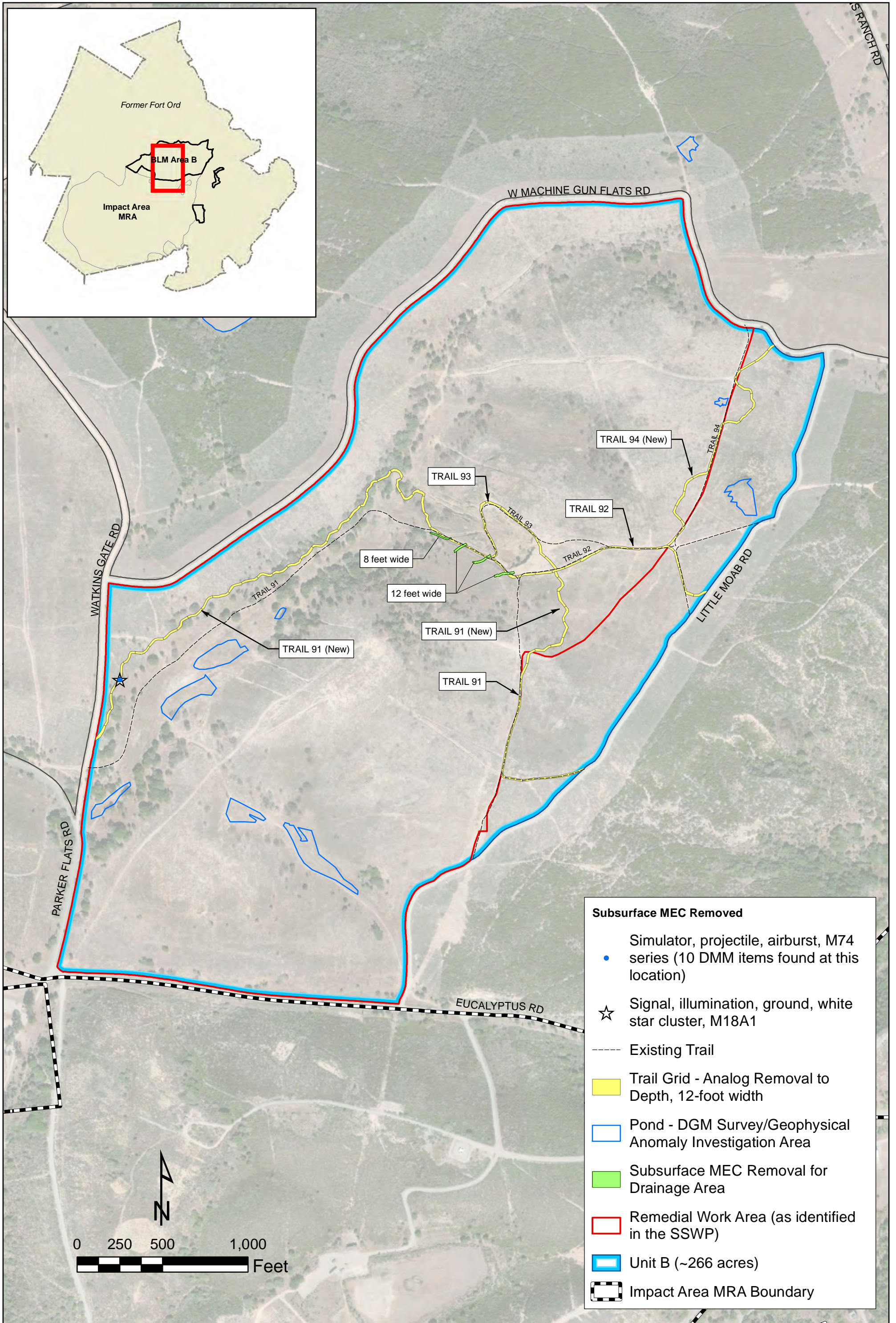


Bureau of Land Management Area B
 Unit B Technical Information Paper
 for Public Access on Trails
 Former Fort Ord, California

Figure 2A

Trails Planned for Public Access

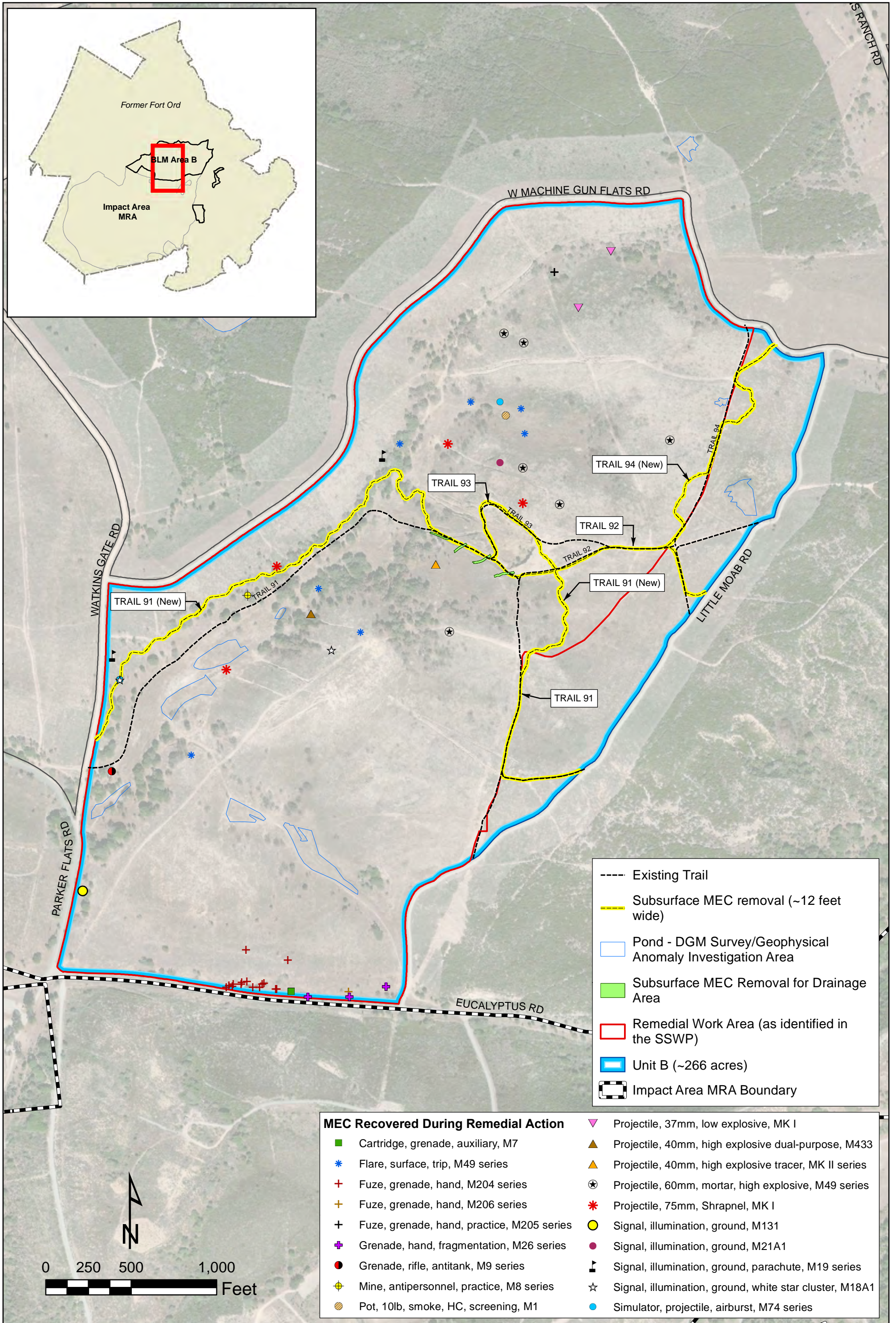




Bureau of Land Management Area B
Unit B Technical Information Paper
for Public Access on Trails
Former Fort Ord, California

Figure 3

Subsurface MEC Remediation



Bureau of Land Management Area B
 Unit B Technical Information Paper
 for Public Access on Trails
 Former Fort Ord, California

Figure 4
 MEC Remediation



Appendix A

*Unit B MEC Items Recovered
Prior to RA*

Date found	Unique ID	Item Type	Qty	Description	Contractor	Depth (Inches)
3/13/1996	80466	ISD	1	Projectile, 3inch, Stokes mortar, practice, MK I	CMS	--
5/8/1996	80457	ISD	1	Rocket, 3.5inch, high explosive antitank, M28 series	CMS	--
5/22/1996	80467	ISD	1	Projectile, 60mm, mortar, high explosive, M49 series	CMS	--
5/23/1996	80487	ISD	1	Projectile, 20mm, high explosive incendiary, M56A3	CMS	--
6/3/1996	79728	ISD	1	Projectile, 81mm, mortar, high explosive, M43 series	CMS	--
6/3/1996	79729	ISD	1	Projectile, 81mm, mortar, high explosive, M43 series	CMS	--
6/3/1996	79730	ISD	1	Projectile, 81mm, mortar, training, M68	CMS	--
6/4/1996	80489	ISD	1	Primer, ignition, percussion, M57	CMS	--
6/4/1996	80452	ISD	1	Projectile, 81mm, mortar, high explosive, M43 series	CMS	--
6/4/1996	80453	ISD	1	Projectile, 81mm, mortar, high explosive, M43 series	CMS	--
6/4/1996	80454	ISD	1	Projectile, 81mm, mortar, high explosive, M43 series	CMS	--
6/4/1996	80455	ISD	1	Projectile, 81mm, mortar, high explosive, M43 series	CMS	--
6/4/1996	80456	ISD	1	Projectile, 81mm, mortar, high explosive, M43 series	CMS	--
6/4/1996	80490	ISD	1	Projectile, 81mm, mortar, high explosive, M43 series	CMS	--
6/4/1996	80491	ISD	1	Projectile, 81mm, mortar, high explosive, M43 series	CMS	--
6/5/1996	79726	ISD	1	Projectile, 81mm, mortar, high explosive, M43 series	CMS	--
6/5/1996	79727	ISD	1	Projectile, 81mm, mortar, high explosive, M43 series	CMS	--
6/5/1996	80451	ISD	1	Signal, illumination, ground, M126 series	CMS	--
6/11/1996	79722	ISD	1	Projectile, 81mm, mortar, high explosive, M43 series	CMS	--
6/11/1996	79723	ISD	1	Projectile, 81mm, mortar, high explosive, M43 series	CMS	--
9/22/1998	72113	UXO	1	Projectile, 60mm, mortar, high explosive, M49 series	USA	6
10/1/1998	72476	UXO	1	Projectile, 60mm, mortar, high explosive, M49 series	USA	6
10/1/1998	72539	UXO	1	Projectile, 60mm, mortar, high explosive, M49 series	USA	2
10/1/1998	72347	UXO	1	Ash, pyrotechnic	USA	2
10/5/1998	71720	UXO	1	Projectile, 81mm, mortar, practice, M43 series	USA	13
10/5/1998	71729	UXO	1	Projectile, 81mm, mortar, practice, M43 series	USA	6
10/6/1998	72288	UXO	1	Projectile, 60mm, mortar, high explosive, M49 series	USA	8
10/7/1998	72567	UXO	1	Projectile, 60mm, mortar, high explosive, M49 series	USA	4
10/7/1998	71455	UXO	1	Projectile, 81mm, mortar, high explosive, M43 series	USA	12
10/7/1998	71730	UXO	1	Projectile, 81mm, mortar, practice, M43 series	USA	12
10/7/1998	71733	UXO	1	Projectile, 81mm, mortar, practice, M43 series	USA	5
10/7/1998	71734	UXO	1	Projectile, 81mm, mortar, practice, M43 series	USA	8
10/7/1998	71735	UXO	1	Projectile, 81mm, mortar, practice, M43 series	USA	8
10/8/1998	72569	UXO	1	Projectile, 60mm, mortar, high explosive, M49 series	USA	6
10/8/1998	71790	UXO	1	Projectile, 81mm, mortar, high explosive, M43 series	USA	12
10/13/1998	71634	UXO	1	Projectile, 81mm, mortar, high explosive, M43 series	USA	8
10/19/1998	72622	UXO	1	Projectile, 3inch, Stokes mortar, practice, MK I	USA	6
10/19/1998	72623	UXO	1	Projectile, 3inch, Stokes mortar, practice, MK I	USA	8
10/19/1998	71606	UXO	1	Projectile, 81mm, mortar, high explosive, M43 series	USA	12
10/19/1998	71627	UXO	1	Projectile, 81mm, mortar, practice, M43 series	USA	8
10/20/1998	72052	UXO	1	Projectile, 60mm, mortar, high explosive, M49 series	USA	1
10/20/1998	71570	UXO	1	Projectile, 81mm, mortar, high explosive, M43 series	USA	12
10/20/1998	71646	UXO	1	Projectile, 81mm, mortar, high explosive, M43 series	USA	13
10/20/1998	72087	UXO	1	Projectile, 81mm, mortar, high explosive, M43 series	USA	8
10/22/1998	72443	UXO	1	Projectile, 3inch, Stokes mortar, practice, MK I	USA	8
10/22/1998	71656	UXO	1	Projectile, 81mm, mortar, high explosive, M362	USA	4
10/26/1998	72620	UXO	1	Projectile, 60mm, mortar, high explosive, M49 series	USA	6
10/27/1998	72617	UXO	1	Projectile, 3inch, Stokes mortar, practice, MK I	USA	8
10/27/1998	71595	UXO	1	Projectile, 37mm, low explosive, MK I	USA	2
10/27/1998	71615	UXO	1	Projectile, 81mm, mortar, high explosive, M43 series	USA	10
10/27/1998	71767	UXO	1	Projectile, 81mm, mortar, high explosive, M43 series	USA	12
10/27/1998	71769	UXO	1	Projectile, 81mm, mortar, high explosive, M43 series	USA	12
10/27/1998	71770	UXO	1	Projectile, 81mm, mortar, high explosive, M43 series	USA	10
10/27/1998	71771	UXO	1	Projectile, 81mm, mortar, high explosive, M43 series	USA	12

Date found	Unique ID	Item Type	Qty	Description	Contractor	Depth (Inches)
10/27/1998	71737	UXO	1	Projectile, 81mm, mortar, practice, M43 series	USA	10
10/28/1998	72140	UXO	1	Grenade, hand, smoke, HC, AN-M8	USA	2
10/28/1998	71783	UXO	1	Projectile, 81mm, mortar, practice, M43 series	USA	12
10/28/1998	72224	UXO	1	Projectile, 81mm, mortar, practice, M43 series	USA	11
10/28/1998	72226	UXO	1	Projectile, 81mm, mortar, practice, M43 series	USA	12
10/28/1998	72572	UXO	1	Projectile, 81mm, mortar, practice, M43 series	USA	4
11/3/1998	71819	UXO	1	Rocket, 4.5inch, barrage, high explosive, MK III	USA	8
11/3/1998	71818	UXO	1	Projectile, 81mm, mortar, practice, M43 series	USA	12
11/5/1998	71880	UXO	1	Rocket, 4.5inch, barrage, high explosive, MK III	USA	8
11/9/1998	72061	UXO	1	Projectile, 81mm, mortar, high explosive, M43 series	USA	1
11/16/1998	72701	UXO	1	Projectile, 75mm, shrapnel, MK I	USA	4
11/19/1998	72009	UXO	1	Rocket, 4.5inch, barrage, high explosive, MK III	USA	6
11/23/1998	72693	UXO	1	Ash, pyrotechnic	USA	0
11/30/1998	71977	UXO	1	Rocket, 4.5inch, barrage, high explosive, MK III	USA	12
12/1/1998	72692	UXO	1	Flare, surface, trip, M49 series	USA	2
1/6/1999	71932	UXO	1	Rocket, 4.5inch, barrage, high explosive, MK III	USA	9
1/7/1999	71927	UXO	1	Rocket, 4.5inch, barrage, high explosive, MK III	USA	12
1/11/1999	71883	UXO	1	Rocket, 4.5inch, barrage, high explosive, MK III	USA	0
1/12/1999	71924	UXO	4	Signal, illumination, AN-M43 series	USA	0
2/1/1999	72448	UXO	1	Projectile, 60mm, mortar, high explosive, M49 series	USA	3
2/1/1999	72451	UXO	1	Projectile, 60mm, mortar, high explosive, M49 series	USA	4
2/1/1999	72640	UXO	1	Projectile, 60mm, mortar, high explosive, M49 series	USA	3
2/2/1999	72616	UXO	1	Grenade, hand, smoke, M18 series	USA	4
2/2/1999	72638	UXO	1	Projectile, 3inch, Stokes mortar, practice, MK I	USA	3
2/2/1999	72644	UXO	1	Projectile, 3inch, Stokes mortar, practice, MK I	USA	4
2/2/1999	72646	UXO	1	Projectile, 3inch, Stokes mortar, practice, MK I	USA	5
7/8/1999	71446	UXO	1	Projectile, 60mm, mortar, high explosive, M49 series	USA	18
7/8/1999	71451	UXO	1	Projectile, 81mm, mortar, practice, M43 series	USA	27
7/15/1999	71487	UXO	2	Base, coupling, firing device	USA	3
7/15/1999	71491	DMM	50	Fuze, grenade, hand, practice, M205 series	USA	8
7/15/1999	71492	UXO	1	Ash, pyrotechnic	USA	3
12/19/2001	83947	UXO	1	Flare, surface, trip, M49 series	Parsons	0
1/14/2002	84776	UXO	1	Grenade, hand, riot, CS-1, ABC-M25A2	Parsons	0
1/15/2002	84777	UXO	1	Pot, 2.5lb, smoke, HC, screening, M1	Parsons	0
1/16/2002	84778	UXO	1	Simulator, projectile, airburst, M74 series	Parsons	0
10/24/2013	374524	DMM	1	Mine, antipersonnel, practice, M8 series	BLM	0
Total Quantity Found			143			

-- : Not available in the Military Munitions Response Program database

BLM: Bureau of Land Management

CMS: CMS Environmental, Inc.

DMM: Discarded Military Munition

ISD: Insufficient data

lb: pound

mm: millimeter

USA: USA Environmental, Inc.

UXO: Unexploded ordnance

Appendix B

***Unit B MEC Items Recovered
During Surface MEC Removal***

Date Found	Unique ID	Item Type	Qty	Description	Operation
7/13/2017	2148384	UXO	1	Projectile, 75mm, shrapnel, MK I	Surface MEC Removal
7/17/2017	2148331	UXO	1	Signal, illumination, ground, parachute, M19 series	Surface MEC Removal
7/18/2017	2147901	UXO	1	Flare, surface, trip, M49 series	Surface MEC Removal
7/27/2017	2148318	UXO	1	Projectile, 37mm, low explosive, MK I	Surface MEC Removal
8/17/2017	2148247	DMM	1	Fuze, grenade, hand, M204 series	Surface MEC Removal
8/17/2017	2148256	DMM	1	Fuze, grenade, hand, M204 series	Surface MEC Removal
8/17/2017	2148350	DMM	1	Fuze, grenade, hand, M204 series	Surface MEC Removal
8/21/2017	2147951	DMM	1	Fuze, grenade, hand, M204 series	Surface MEC Removal
8/21/2017	2147980	DMM	1	Fuze, grenade, hand, M204 series	Surface MEC Removal
8/21/2017	2148091	DMM	1	Fuze, grenade, hand, M204 series	Surface MEC Removal
8/21/2017	2148201	DMM	1	Fuze, grenade, hand, M204 series	Surface MEC Removal
8/21/2017	2148202	DMM	1	Fuze, grenade, hand, M204 series	Surface MEC Removal
8/21/2017	2148297	DMM	1	Fuze, grenade, hand, M204 series	Surface MEC Removal
8/21/2017	2148389	DMM	1	Fuze, grenade, hand, M204 series	Surface MEC Removal
8/22/2017	2147962	DMM	1	Fuze, grenade, hand, M204 series	Surface MEC Removal
8/22/2017	2147981	UXO	1	Grenade, rifle, antitank, M9 series	Surface MEC Removal
8/22/2017	2148014	DMM	1	Fuze, grenade, hand, M204 series	Surface MEC Removal
8/22/2017	2148143	DMM	1	Fuze, grenade, hand, M204 series	Surface MEC Removal
8/22/2017	2148291	DMM	1	Fuze, grenade, hand, M204 series	Surface MEC Removal
8/22/2017	2148444	DMM	1	Fuze, grenade, hand, M204 series	Surface MEC Removal
8/23/2017	2147952	UXO	1	Signal, illumination, ground, M131	Surface MEC Removal
8/23/2017	2148129	UXO	1	Signal, illumination, ground, M131	Surface MEC Removal
8/23/2017	2148369	DMM	1	Fuze, grenade, hand, M206 series	Surface MEC Removal
8/23/2017	2148371	UXO	1	Grenade, hand, fragmentation, M26 series	Surface MEC Removal
8/28/2017	2148015	UXO	1	Grenade, hand, fragmentation, M26 series	Surface MEC Removal
8/28/2017	2148280	UXO	1	Signal, illumination, ground, parachute, M19 series	Surface MEC Removal
8/29/2017	2147885	DMM	1	Cartridge, grenade, auxiliary, M7	Surface MEC Removal
8/29/2017	2148000	DMM	1	Cartridge, grenade, auxiliary, M7	Surface MEC Removal
8/29/2017	2148094	DMM	1	Cartridge, grenade, auxiliary, M7	Surface MEC Removal
8/29/2017	2148149	DMM	1	Cartridge, grenade, auxiliary, M7	Surface MEC Removal
8/29/2017	2148209	DMM	1	Cartridge, grenade, auxiliary, M7	Surface MEC Removal
8/29/2017	2148217	DMM	1	Cartridge, grenade, auxiliary, M7	Surface MEC Removal
8/29/2017	2148293	DMM	1	Cartridge, grenade, auxiliary, M7	Surface MEC Removal
8/29/2017	2148407	DMM	1	Cartridge, grenade, auxiliary, M7	Surface MEC Removal
8/29/2017	2148430	DMM	1	Cartridge, grenade, auxiliary, M7	Surface MEC Removal
8/29/2017	2148510	DMM	1	Cartridge, grenade, auxiliary, M7	Surface MEC Removal
8/30/2017	2148362	UXO	1	Grenade, hand, fragmentation, M26 series	Surface MEC Removal
1/29/2018	2150577	UXO	1	Mine, antipersonnel, practice, M8 series	Surface MEC Removal
2/28/2018	2151748	UXO	1	Projectile, 60mm, mortar, high explosive, M49 series	Surface MEC Removal
3/6/2018	2151700	UXO	1	Projectile, 37mm, low explosive, MK I	Surface MEC Removal
3/8/2018	2151650	DMM	63	Fuze, grenade, hand, practice, M205 series	Surface MEC Removal
3/8/2018	2151761	UXO	1	Projectile, 60mm, mortar, high explosive, M49 series	Surface MEC Removal
3/12/2018	2151189	DMM	35	Fuze, grenade, hand, practice, M205 series	Surface MEC Removal
3/12/2018	2151239	UXO	1	Projectile, 75mm, shrapnel, MK I	Surface MEC Removal
3/15/2018	2151186	UXO	1	Projectile, 40mm, high explosive dual-purpose, M433	Surface MEC Removal
3/15/2018	2151228	UXO	1	Flare, surface, trip, M49 series	Surface MEC Removal
3/21/2018	2151609	UXO	1	Signal, illumination, ground, white star cluster, M18A1	Surface MEC Removal
3/27/2018	2151449	UXO	1	Flare, surface, trip, M49 series	Surface MEC Removal
4/3/2018	2151475	UXO	1	Projectile, 60mm, mortar, high explosive, M49 series	Surface MEC Removal
4/4/2018	2151163	UXO	1	Simulator, projectile, airburst, M74 series	Surface MEC Removal
4/5/2018	2151324	UXO	1	Projectile, 60mm, mortar, high explosive, M49 series	Surface MEC Removal
4/16/2018	2151672	UXO	1	Grenade, rifle, smoke, white phosphorous, M19 series	Surface MEC Removal
4/19/2018	2151623	DMM	1	Flare, surface, trip, M49 series	Surface MEC Removal
5/7/2018	2152421	UXO	1	Grenade, rifle, smoke, white phosphorous, M19 series	Surface MEC Removal
5/8/2018	2151953	UXO	1	Flare, surface, trip, M49 series	Surface MEC Removal
5/8/2018	2151958	UXO	1	Projectile, 60mm, mortar, high explosive, M49 series	Surface MEC Removal
5/8/2018	2152272	UXO	1	Flare, surface, trip, M49 series	Surface MEC Removal

Date Found	Unique ID	Item Type	Qty	Description	Operation
5/9/2018	2151997	DMM	1	Signal, illumination, ground, M21A1	Surface MEC Removal
5/10/2018	2151833	UXO	1	Flare, surface, trip, M49 series	Surface MEC Removal
5/10/2018	2152253	DMM	12	Pot, 10lb, smoke, HC, screening, M1	Surface MEC Removal
5/14/2018	2152013	UXO	1	Projectile, 75mm, shrapnel, MK I	Surface MEC Removal
5/16/2018	2152400	UXO	1	Projectile, 75mm, shrapnel, MK I	Surface MEC Removal
5/29/2018	2152693	DMM	1	Projectile, 40mm, high explosive tracer, MK II series*	Surface MEC Removal
5/31/2018	2152695	UXO	1	Projectile, 60mm, mortar, high explosive, M49 series	Surface MEC Removal
Total Quantity Found			171		

DMM: Discarded military munition

mm: millimeter

UXO: Unexploded Ordnance

* The rotating band was not engraved; therefore, the item was determined to not have been fired.

Appendix C

*Unit B MEC Items Recovered
During Subsurface MEC Removal*

Date Found	Unique ID	Description	Item Type	Qty	Depth (Inches)
9/9/2019	2165957	Simulator, projectile, airburst, M74 series	DMM	1	18
9/9/2019	2165958	Simulator, projectile, airburst, M74 series	DMM	1	18
9/9/2019	2165964	Simulator, projectile, airburst, M74 series	DMM	1	18
9/9/2019	2165990	Simulator, projectile, airburst, M74 series	DMM	1	18
9/9/2019	2166003	Simulator, projectile, airburst, M74 series	DMM	1	18
9/9/2019	2166018	Simulator, projectile, airburst, M74 series	DMM	1	18
9/9/2019	2166032	Simulator, projectile, airburst, M74 series	DMM	1	18
9/9/2019	2166036	Simulator, projectile, airburst, M74 series	DMM	1	18
9/9/2019	2166044	Simulator, projectile, airburst, M74 series	DMM	1	18
9/9/2019	2166057	Simulator, projectile, airburst, M74 series	DMM	1	18
9/9/2019	2166043	Signal, illumination, ground, white star cluster, M18A1	UXO	1	18
Total Quantity Found				11	

DMM: Discarded military munition

UXO: Unexploded Ordnance

Appendix D
Responses to Comments



RESPONSES TO COMMENTS

Document: Bureau of Land Management Area B Unit B Technical Information Paper for Public Access on Trails Former Fort Ord, California, January 2020

Commenting Organization: United States Environmental Protection Agency Region IX (EPA)

Name: Maeve Clancy

Date of Comments: March 12, 2020

General Comment 1:

The Bureau of Land Management Area B Unit B Technical Information Paper for Public Access on Trails, dated January 2020, (the BLM Area B Unit B TIP PAT), presents limited details of the information presented in the public information measures provided concerning the trails noted. It would be helpful if the following was provided:

- A figure/map showing the locations of the kiosks that are present in Unit B
- A statement as to where the noted brochures containing the trails information may be acquired by those using the trails

Please revise the BLM Area B Unit B TIP PAT to provide the noted information.

Response to General Comment 1:

The *Final Site-Specific Work Plan Munitions and Explosives of Concern Remedial Action BLM Area B Former Fort Ord, California* (OE-0900B) included a figure in Appendix B displaying the BLM Area B kiosks (Figure 4, Locations 1, 3, 4, 5, 6, 7, 8 and 11). Frequently used parking areas and trail entrances were selected to inform recreational users about the BLM Area B munitions cleanup project and trail access information. Kiosks are not located specifically in Unit B.

The factsheet “Frequently Asked Questions, Munitions Cleanup: Fort Ord National Monument (Northern Portion)” is available on the Army’s website, www.fortordcleanup.com. Hardcopies are available in the map boxes that are attached to the kiosks. The factsheet is also distributed at community information events such as Community Involvement Workshops. The factsheet provides information about the status of the BLM Area B remedial action and current trail access status. It informs recreational users about the potential for munitions of explosives of concern (MEC) to be present and actions to take should a suspected munitions item be encountered, and includes the Army’s 3Rs of explosives safety. It contains a message to encourage recreational users to stay on designated roads and trails.

RESPONSES TO COMMENTS

The website and the kiosks have been used throughout the duration of the BLM Area B remedial action to provide timely trail access information to the recreational users. Immediately after receiving agency approvals to reopen the Unit B trails (a combination and some new and old trail routes, as described in the TIP), the Army distributed the new trail access map on the website and at the kiosks. Several weeks later, when BLM completed the trail construction work in the remaining new segments, the Army informed the regulatory agencies and distributed an updated information on the website and the kiosks.

Specific Comment 1:

Section 2.2, Subsurface MEC Removal, Page 2: The last sentence in the second paragraph of the section states that, "The United Stated Army Corps of Engineers did not issue any corrective action requests." This sentence should be revised to read that, "The United States Army Corps of Engineers did not issue any corrective action requests." Please make this correction.

Response to Specific Comment 1:

The text has been revised to read "The United States Army Corps of Engineers did not issue any corrective action requests."



RESPONSES TO COMMENTS

Document: Bureau of Land Management Area B Unit B, Technical Information Paper for Public Access on Trails, Former Fort Ord, California, January 2020

Commenting Organization: Fort Ord Community Advisory Group (FOCAG)

Name: Mike Weaver

Date of Comments: February 12, 2020

Comment 1:

“The following are the FOCAG comments and questions:

1) The FOCAG received their document on January 30, 2020. Comments are requested by February 12, 2020. That is 13 days. This is an unusually short amount of time for responses. Don't you agree?”

Response to Comment 1:

Trails within Unit B were temporarily closed during the duration of the remedial action in the unit. The site-specific work plan identified a process to coordinate with the regulatory agencies prior to reopening the trails. After the subsurface removal of munitions and explosives of concern (MEC) on the trail alignments was completed, Bureau of Land Management (BLM) began trail construction on the new trail alignments in January 2020. Due to rain events that occurred soon after, and additional rainfall expected in the rain season, the planned completion of the trail construction work was delayed until later in the spring. Given factors such as weather, staffing, and public interest, BLM proposed to open the completed-portions of the trails in the near-term. Based on information presented in the document the Army requested regulatory agency approval on the recommendation to open the Unit B trails as soon as possible. The trails were reopened for public use after receiving approvals from the regulatory agencies.

Comment 2:

“2) Page 1 of this document describes Unit B as being 266 acres in size, 33 acres of which previously had MEC removal at surface and performed at depths of 1 foot or 4 foot. FOCAG question: Why the differences in remediation depths?
3) Page 2, regarding the other 233 acres, no depths are found in this portion as to where MEC was found. FOCAG question; a) Why aren't depth MEC was found, or a range of depths disclosed

RESPONSES TO COMMENTS

here? b) Why are the trail alignments 12-foot wide? c) Why is there a 4-foot clearance on either side of the 4-foot wide trail? d) Will the 12-foot wide trails be used as roads? or, horse trails?

4) The tools for the subsurface MEC removal are listed, analog, but again no depths are listed for MEC found. Why?

5) Section 2.2.1 MEC and Munitions Debris Removed again does not list depths found. One sensitive fuze munition was found. Because this area was previously part of a Prescribed Burn, is it possible fuzed munition exploded during the burn? How many types of munitions explode during prescribed burns? Table 1. Subsurface MEC removal Summary reveals that Trail #91 is a dangerous one given the 11 MEC items recovered. At what depths were these 11 items discovered?"

Response to Comment 2:

As described in Section 1.1, the 33 acres of Unit B were part BLM Area B sub-area B-4 where MEC removal was previously performed. This portion of sub-area B-4 is part of Munitions Response Site 10A (MRS-10A). As described in the *Final, Revision 2, Track 2 Remedial Investigation/Feasibility Study BLM Area B and MRS-16 Former Fort Ord, California* (BLM Area B and MRS-16 RI/FS; Administrative Record [AR] number: OE-0802D), the investigation of MRS-10A included removal to a depth of 4 feet on unimproved roads; and 1-foot and surface removals on portions of the site. The removal depths were based on the munitions types and designated uses of the area as a habitat reserve.

Based on the evaluation presented in the BLM Area B and MRS-16 RI/FS, the remedial action in this portion of BLM Area B includes surface MEC removal in the remediation area, and subsurface removal in selected areas such as the designated roads and trails. The depths of MEC items removed from Unit B during the subsurface removal as part of the remedial action are provided in Appendix C. The 11 items removed from Trail 91 were recovered at a depth of 18 inches. MEC items removed during surface removal are listed separately in Appendix B.

As stated in Section 2.2, the BLM Area B Site-Specific Work Plan (AR number: OE-0900B) specified subsurface MEC removal on trail alignments as a 12-foot wide area. Based on coordination with BLM, the 12-foot wide area included a 4-foot wide travel lane and a 4-foot wide area on both sides. The width is sufficient to support BLM's trail maintenance to be conducted in addition to recreational use on the travel lane.

Within the Fort Ord National Monument, non-motorized use such as hiking, biking, and horseback riding are authorized on roads and trails that are signed open. BLM trails are designed and managed in a manner that supports these authorized activities including horseback riding. There is no plan to widen these trails into a road in the future.

The Army does not estimate the number or types of munitions that detonate during a prescribed burn.

RESPONSES TO COMMENTS

Comment 3:

“6) Section 3.0 is titled ‘Access Management Measures’. Both weather and staffing are considered reasons trails alignments started have not been completed, yet BLM is considering opening portions of the new incomplete trails utilizing portions of the previous (older) trails. It is stated the Army will work with BLM to induce outreach and monitor public use of this area. FOCAG question a) How many Army personnel will be monitoring this area and at what times? Is there a regular schedule, or is it hit and miss?

7) It is also stated that BLM personnel regularly monitor user activities. a) How many BLM personnel will be monitoring this? Is it more than two? Will there be a regular schedule?”

Response to Comment 3:

The Unit B trails were reopened for public use after receiving approvals from the regulatory agencies. The completed trail segments are supplemented by previously-used trail alignments. The Army is conducting outreach to inform public users about using only the trails and roads that are signed open, and is monitoring the site regularly. The schedule is not published. BLM personnel (law enforcement and other personnel) monitor user activities regularly, consistent with the types and levels of activities in various portions of the BLM lands.

Comment 4:

“8) Figure 3. Please identify the ponds names”

Response to Comment 4:

The ponds within Unit B are identified in the *BLM Area B Munitions and Explosives of Concern Remedial Action Technical Memorandum, Former Fort Ord, California* (AR number: OE-0969A).

Comment 5:

“9) Figure 4 contains a list of very dangerous munitions recovered "during remedial action", again with no depths listed. Why?

10) Appendix A reveals that underground munitions recovered in year 1996 by Contractor CMS did not record "depths" the munitions were found. Thus, the regulators, the Army, BLM, and the public have no way of knowing.

11) Appendix A also lists munitions recovered in year 1998 that do have depths found listed, however none are listed below 13 inches below ground surface (bgs). Year 1999 reveals one High Explosive 60 mm mortar was discovered at 18 inches bgs and an 81 mm mortar projectile, practice was discovered at 27 inches bgs. FOCAG question; a) What specific equipment was being used to seek below ground munitions during this time?

12) Appendix B has a two-page list of very dangerous MEC found on the surface in years 2017 and 2018. This is many years following the sweeps of 1996 and 1998. a) No reason given ... FOCAG question; Why?

RESPONSES TO COMMENTS

13) Appendix C shows us Projectile Airburst Simulators all found at 18 inches bgs. FOCAG question; a) Was 18 inches the maximum depth set seeking MEC?"

Response to Comment 5:

Figure 4 shows the MEC items removed during the remedial action in Unit B. MEC items removed during the surface removal are listed in Appendix B. MEC items removed during the subsurface removal are listed along with their recovery depths in Appendix C.

MEC items that were removed during investigations and removal actions, conducted within the area of Unit B prior to the development of the BLM Area B and MRS-16 RI/FS, are listed in Appendix A. As described in the BLM Area B and MRS-16 RI/FS, depths of recovered items were not required to be recorded until mid-1997. Therefore, in Appendix A, depths are not available for MEC items listed as having been recovered by CMS in 1996.

As noted earlier, the 33 acres of Unit B were part BLM Area B sub-area B-4 where MEC removal was performed prior to the development of the BLM Area B and MRS-16 RI/FS. The investigation of MRS-10A included removal to a depth of 4 feet on unimproved roads; and 1-foot and surface removals on portions of the site. Schonstedt magnetometers were used in these investigations. Detected anomalies were intrusively investigated to the removal depth. Recovery depths are listed in Appendix A. Additional information is available in the BLM Area B and MRS-16 RI/FS.

After the decision to close Fort Ord, MEC investigations and removal actions were conducted in identified munitions response sites. As part of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), a comprehensive evaluation of BLM Area B and MRS-16 was conducted to support long-term use of the property as a habitat reserve including recreational access as part of the Fort Ord National Monument. The evaluation is presented in the BLM Area B and MRS-16 RI/FS. Based on the evaluation, the resulting record of decision required additional munitions cleanup in portions of BLM Area B.

Subsurface MEC removal in Unit B as part of the remedial action was completed to the depth of detection.

Comment 6:

"FOCAG Conclusion; Given the types of MEC found, this area was a regular part of the Army Infantry training area for mock battles and night time war games maneuver training. Underground burial pits were a part of this, following regular war games. Army bulldozers would dig pits on site to bury spent and unspent munitions. These munitions may find their way to the surface with time and/or erosion. It remains a dangerous place.

The FOCAG looks forward to your substantive answers to our questions and concerns. One final question; What company might replace KEMRON now that their contract has run out and the money is gone?"

RESPONSES TO COMMENTS

Response to Comment 6:

As you noted, the current contract for Fort Ord munitions remediation will end in March 2020. That contract will not be immediately followed up by another contract until Fort Ord receives funding to award another munitions remediation contract. All planned MEC removals within Unit B have been completed. The Unit B trails were reopened for public use after receiving approvals from the regulatory agencies. The Remedial Action Report will document all remedial actions completed in BLM Area B. The Army will continue to implement public education and outreach to support the authorized recreational uses consistent with the BLM's public use rules.