

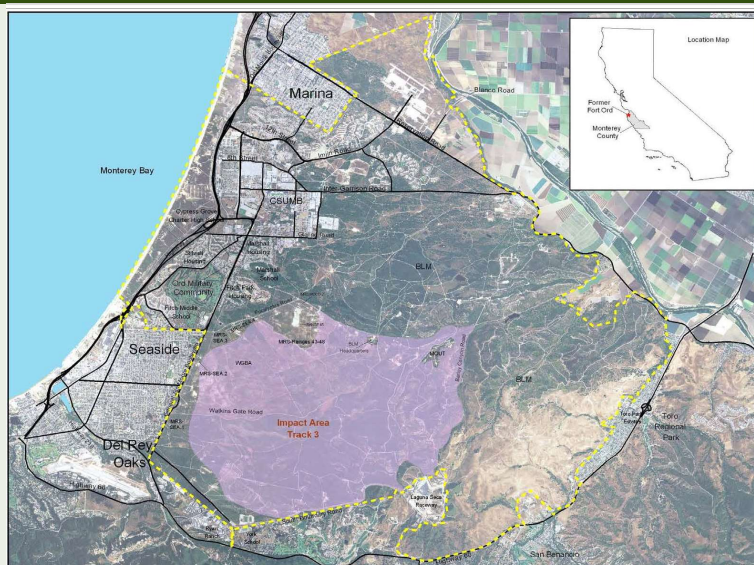
Case Study: Fort Ord



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Fort Ord



3a 2

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Fort Ord

- ◆ **Started in 1917 as a horse garrison, closed in 1994, training and staging for infantry troops (7th Infantry)**
- ◆ **27,827 acres/12,000 acres are known or suspected to contain MEC**
- ◆ **Types of MEC: artillery projectiles, rockets, hand grenades, practice land mines, pyrotechnic bombs, and demolition materials**
- ◆ **Reuse: 3 Es—Economy, Education, Environment**
 - » Fort Ord won the 2020 Excellence in Site Reuse Award in the BRAC NPL category.
- ◆ **Privatized cleanup**
 - » In 2007, Army funded Fort Ord Reuse Authority to conduct MEC cleanup on 3,340 acres. Cleanup was completed in 2020. Land use controls implementation is ongoing.



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Impact Area Munitions Response Area

- ◆ **6,560 Acres**
- ◆ **Part of the Fort Ord National Monument**
- ◆ **Threatened and Endangered Species**
 - » Central Maritime Chaparral
- ◆ **Final Record of Decision Signed in 2008**
 - » Prescribed Burns/Vegetation Cutting
 - » Technology Aided Surface MEC Remediation
 - » Subsurface Remediation in Select Areas (roads and trails)
 - » Institutional Controls
 - » Digital survey post cleanup



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Why Prescribed Burns - Habitat



3a 5

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Why Prescribed Burns - Safety




3a 6

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Fuel Break Cutting

Before


After

 EPA 3a 7

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Prescribed Burn Video

- ◆ Fort Ord prescribed burns (47 sec) Published on Oct 5, 2017
- ◆ <https://youtu.be/qCkB36OeGJ4>

 EPA 3a 8

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Prescribed Burn Before and After



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Analog Detection



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Digital Geophysical Mapping (DGM)



Towed Digital Geophysical Mapping



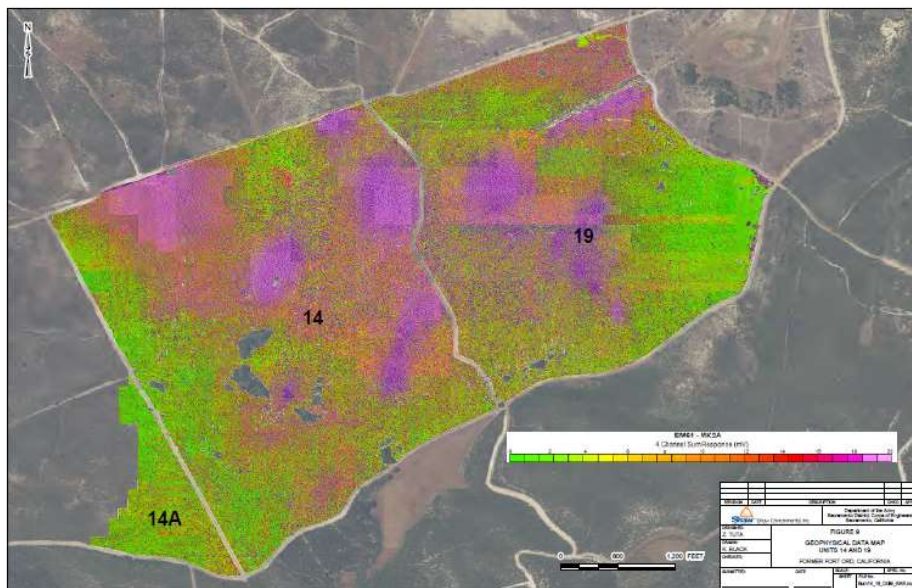
Manual Digital Geophysical Mapping



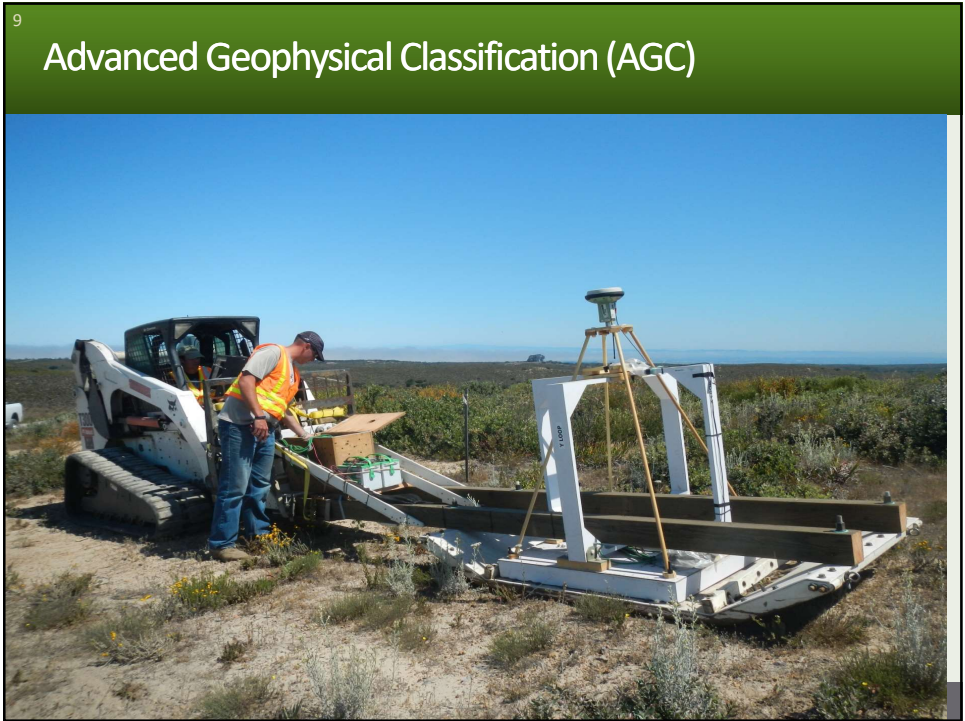
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Digital Geophysical Map



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Types of UXO Found



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Institutional Controls, Education, and Outreach

◆ Institutional Controls

- » Land Use Restrictions
- » Access Restrictions
 - › Signage and Fencing
- » Construction Support
 - › MEC Recognition and Safety Training
 - <http://18.188.218.43/>

◆ Education and Outreach

- » School outreach
- » Outreach at public events
- » Saturday open houses and bus tours



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Mind the Signs

NOTICE
ROADS AND TRAILS
TEMPORARILY CLOSED AHEAD
 Fort Ord National Monument
 Munitions Cleanup



For more information:
 U.S. Army 1-800-852-9699
www.fortordcleanup.com/programs/blm-area-b/

DANGER PELIGRO

EXPLOSIVES AREA
 KEEP OUT BY ORDER OF THE COMMANDER
AREA DE EXPLOSIVOS
 MANTENGASE AFUERA POR ORDEN DEL COMANDANTE

TRESPASSERS WILL BE PROSECUTED
INTRUSOS SERAN PROCESADOS

CA PC 602 (f), (k), (l), (m), (n), (o), (p)
 43 C.F.R. § 8364.1 (d)
 Title 18, U.S.C. Section 1382

WARNING
 Roads and Trails
 Temporarily Closed

Fort Ord National Monument
Munitions Cleanup



For More Information:
 U.S. Army 1-800-852-9699
www.fortordcleanup.com/programs/blm-area-b/

NO TRESPASSING
NO TRASPASAR

CA PC 602 (f), (k), (l), (m), (n), (o), (p)
 43 C.F.R. § 8364.1 (d)
 Title 18, U.S.C. Section 1382

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Examples of Outreach Material

CALL 911



TO REPORT UXO

STOP!
DON'T TOUCH



UXO
CAN HURT OR KILL



REMEMBER the 3 Rs



of UXO Safety!



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Cleanup Status:

◆ Estimated remedial BRAC completion in 2030

◆ Items recovered:

- » BRAC
 - › 78,982 MEC items recovered
 - 12,106 high explosive items
 - › 300+ type of munitions found to date
- » Privatized cleanup – completed all investigations
 - › 4,900+ munitions items recovered
 - › 50,000 lbs of munitions debris recovered
 - › 150,000 cubic yards soil sifted
 - › 115,000 lbs Army cultural debris removed



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Lessons Learned (So Far . . .)

- ◆ Munitions cleanup is resource intensive.
- ◆ In many cases long-term efforts are required (LUCs/ICs/5YRs).
- ◆ Collaboration and innovative thinking is key.
- ◆ Local knowledge and perspectives are important.



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Questions?

Special Thank you to:

Judy Huang, EPA Region 9

Melissa Broadston, US Army, Fort Ord BRAC Office

Stan Cook, Fort Ord Reuse Authority/City of Seaside

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