

**FORMERLY USED DEFENSE SITE (FUDS)
MILITARY MUNITIONS RESPONSE PROGRAM (MMRP)
REMEDIAL ACTION
FORMER MOJAVE GUNNERY RANGE "C"
CALIFORNIA CITY, CALIFORNIA**

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Versar-Arcadis JV

Date: 26 January 2021



**US Army Corps
of Engineers®**



AGENDA

- Introductions
- Project Overview
- Schedule of Activities
- Health and Safety / Property Damage
- Available Outreach Materials
- Questions and Answers





INTRODUCTIONS



INTRODUCTIONS



U.S. Army Corp of Engineers (USACE) – Project Oversight

- Carmen De Fazio: Project Manager
- James Lukasko: Technical Manager
- Amber Vincent: Public Affairs Officer

Versar-Arcadis Joint Venture (JV) – Project Execution

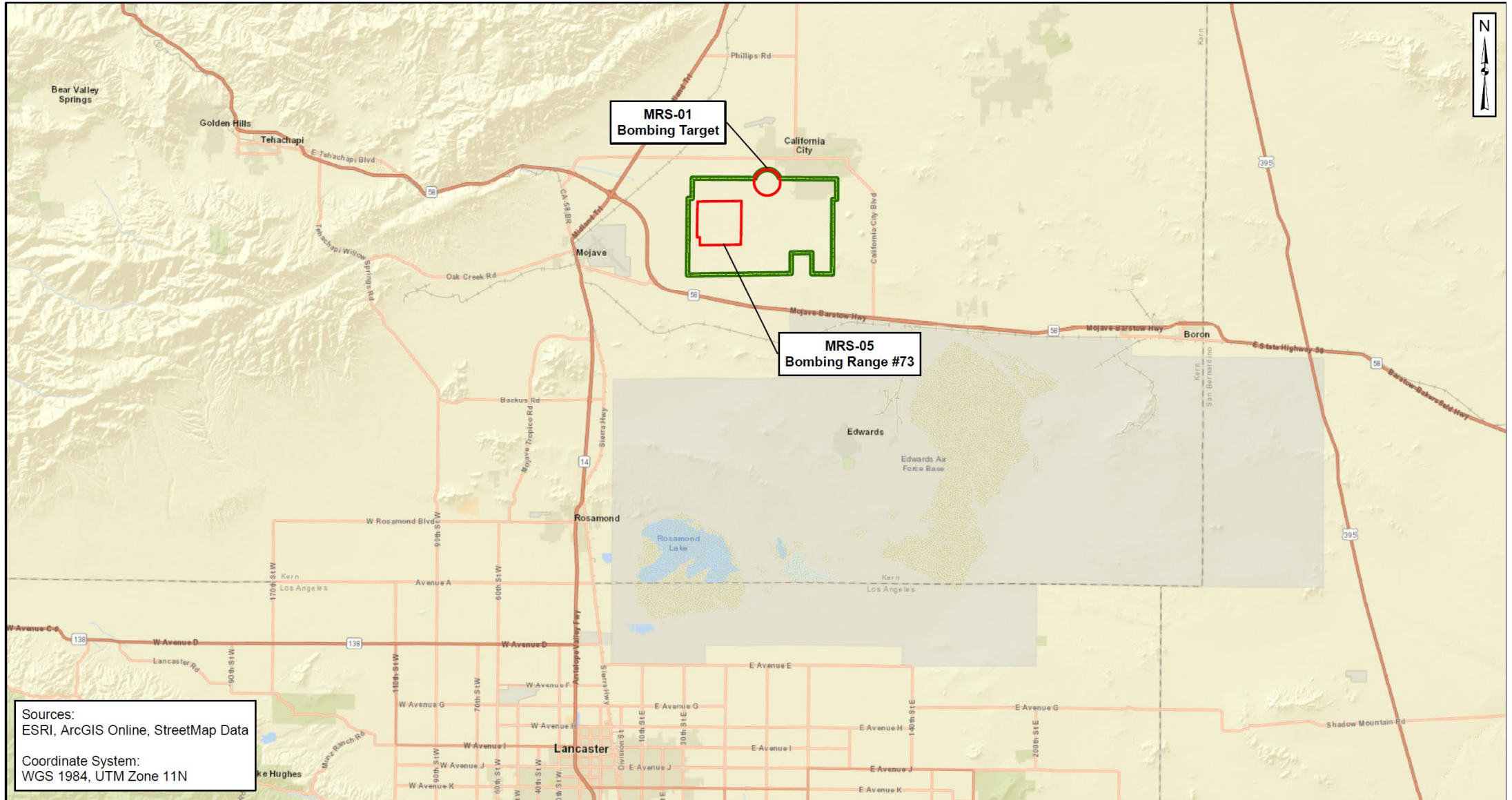
- Afton Hess, Project Manager
- Bridget Butterly, Public Affairs Manager



PROJECT OVERVIEW

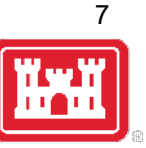


PROPERTY SUMMARY: GENERAL INFORMATION





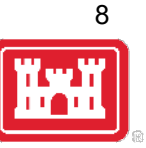
PROPERTY SUMMARY: GENERAL INFORMATION



- Project includes two Munitions Response Sites (MRS): MRS-05 and MRS-01
- Sites were used by United States Navy and Marine Corps personnel for rocket firing and other air-to-ground training between 1944 and 1954
- Prior remedial investigation (RI) has shown munitions and explosives of concern (MEC) including unexploded ordnance (UXO) and discarded military munitions (DMM) are located on these sites
- USACE intends to perform surface clearance on these sites (remedial action = removal of MEC)
- USACE needs Rights of Entry (ROE) from each property owner to perform cleanup



PROJECT SUMMARY: MUNITIONS OF INTEREST



- Anticipated munitions: 2.25-inch SCAR, 2.75-inch FFAR practice rockets, 5-inch HVAR, AN-MK5/23 3-pound (lb) practice bombs*, MK76 25-lb practice bombs*, and MK4 Mod 4 100-lb HE bombs
- Items Found During the RI at MRS-05
 - Two MEC (MK5/23 3-lb and MK76 25-lb practice bombs each with unfired MK 4 signal cartridge)
 - 3,541 MD items
- Items Found During the RI at MRS-01
 - Two MEC (MK4 Mod 4 100-lb HE bomb)
 - 145 MD items



AN MK-23



2.75-in practice

* Note: practice bombs are not necessarily inert and often have spotting charges



PROJECT SUMMARY: PLANNED ACTIVITIES



- Biological and Cultural Surveys to confirm resources will not be impacted
- Authorized Biologist with extensive desert tortoise experience
- Early and continuous communications with USACE Heritage Resource Staff and thorough records searches
- Biological surveys on 10-meter belt transects with geographic information system (GIS) documentation
- Archeological surveys on 15-meter belt transects with GIS documentation
- A Biological Monitor and Cultural Monitor (as needed) embedded within each UXO team during:
 - Civil survey and non-munitions related debris (NMRD) surface removal
 - Surface MEC removal
 - Detection and classification of subsurface munitions
 - Intrusive investigations (for the 400 digs)



Desert Tortoise



Mohave Ground Squirrel



PROJECT SUMMARY: PLANNED ACTIVITIES



– Surface Clearance

- Civil survey of site boundaries
- Vegetation removal (limited trimming at MRS-05; clearance to 6 inches in height will be done at MRS-01)
- Removal of non-munitions debris
- Instrument-assisted surface MEC removal

– Digital Geophysical Mapping/Classification

- MRS-01 only
- Detection and classification of subsurface munitions

– Institutional Controls

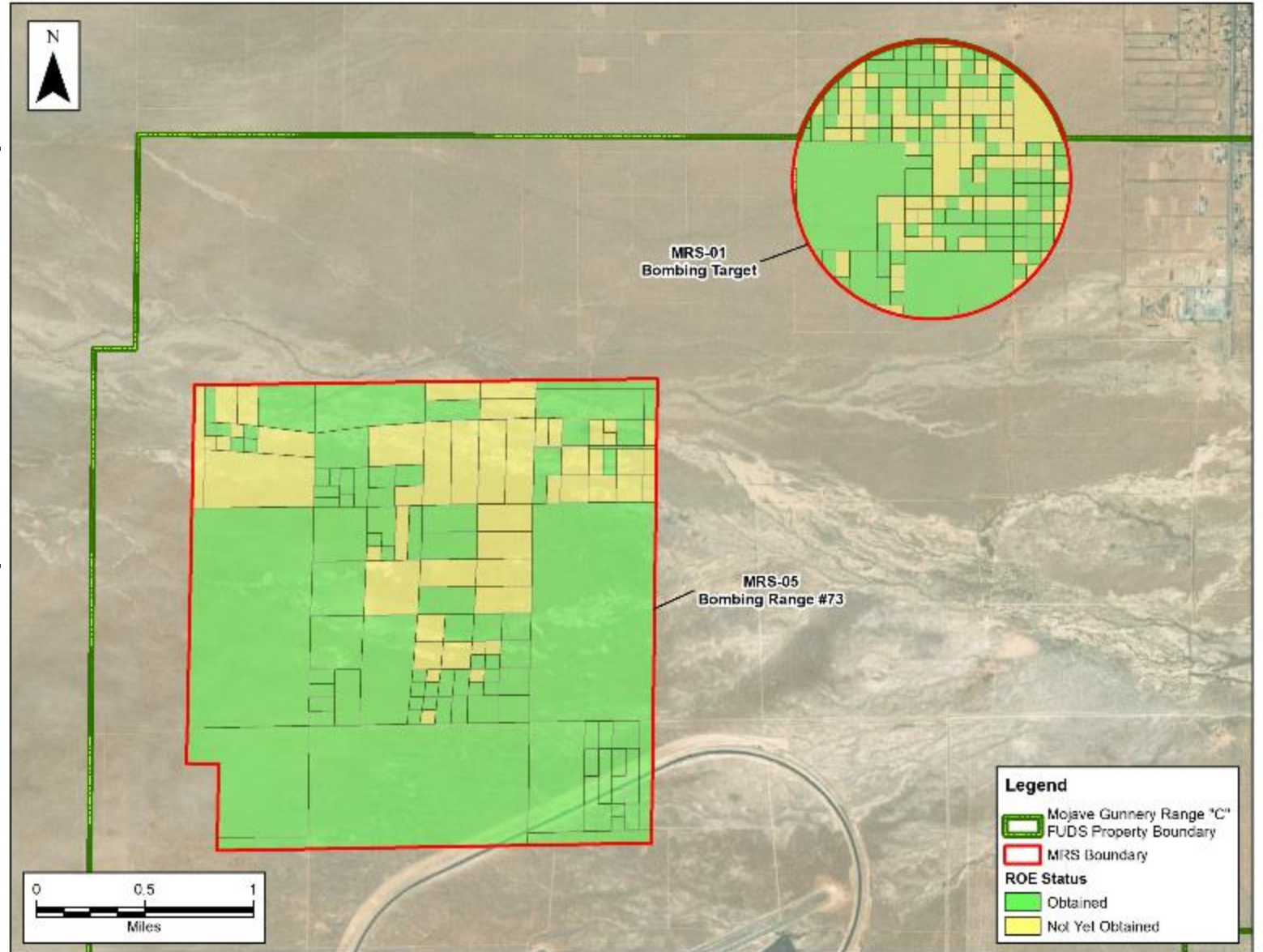
- After the surface clearance activities have been completed, institution controls will be implemented (e.g., educational awareness training)





ROE SUMMARY

- MRS-05: 2,906 acres consisting of 144 parcels – to date we have obtained ROEs for 92 parcels comprising approximately 2,247 acres
- MRS-01: 828 acres consisting of 222 parcels – to date we have obtained ROEs for 126 parcels comprising approximately 537 acres



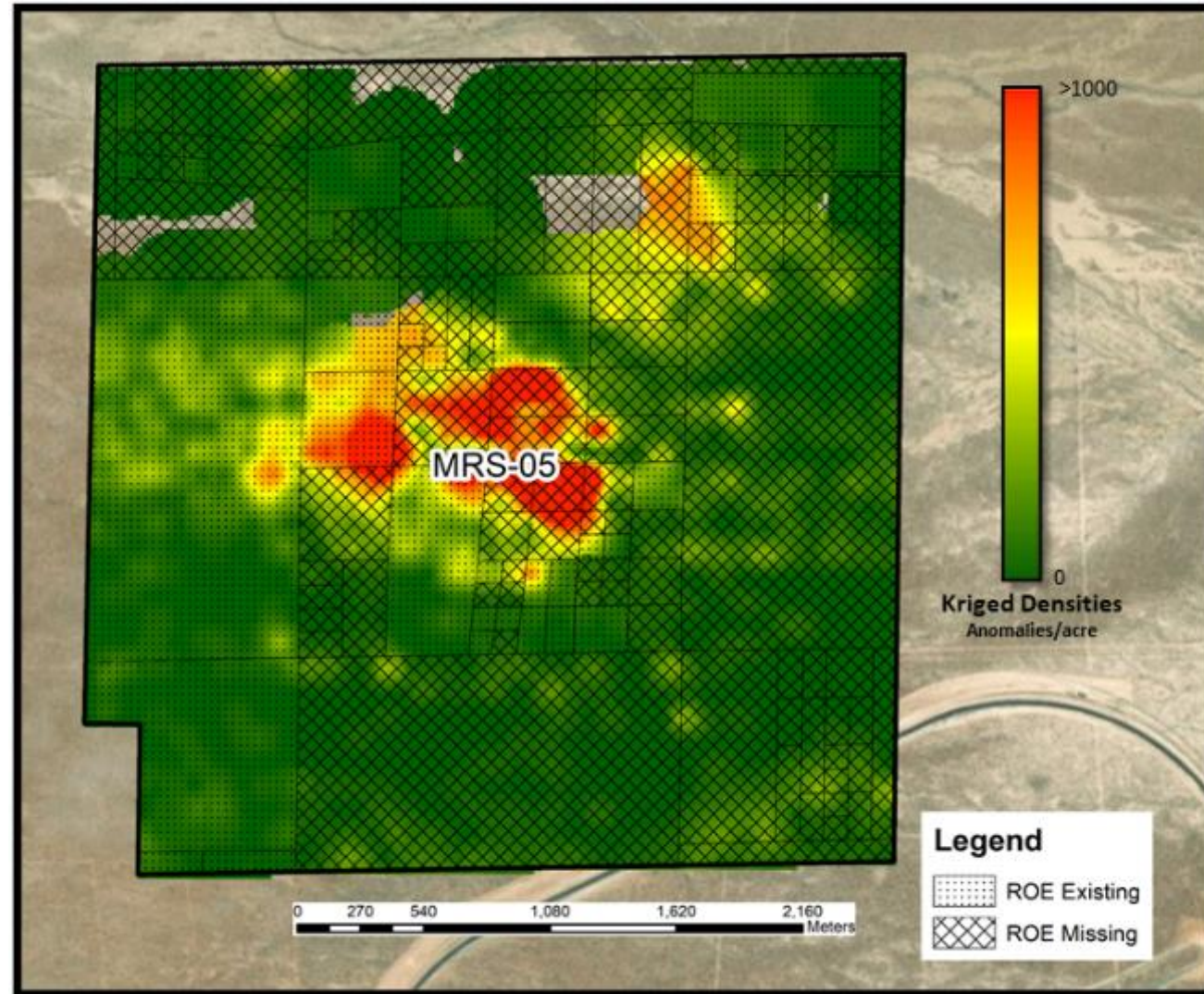


SITE SUMMARY: MRS-05 (BOMBING RANGE #73)



- Anomaly Densities

- Green = Low density
- Red = High density



Note: ROEs denoted on map represent those made available as GFI at the site visit

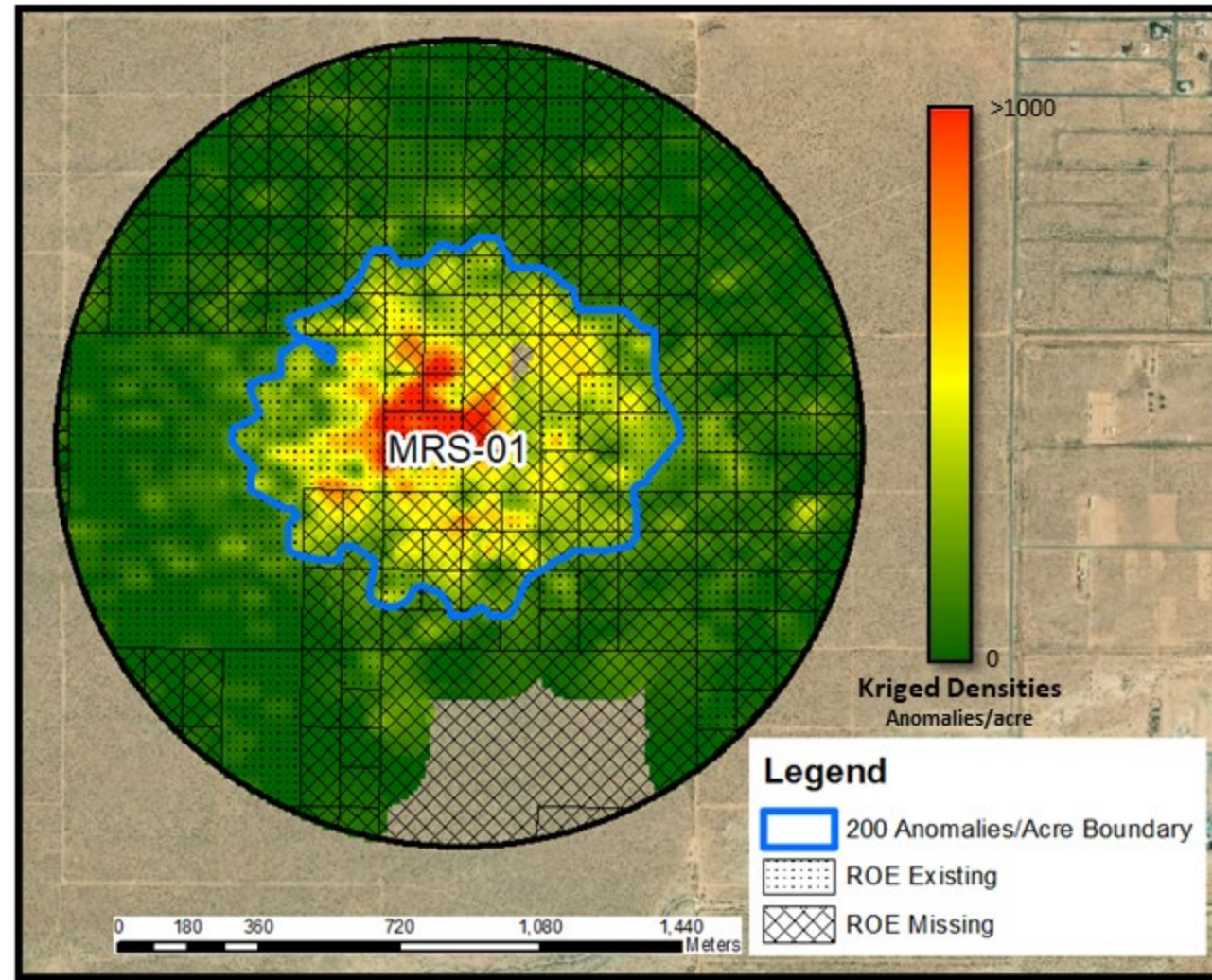


SITE SUMMARY: MRS-01 (BOMBING TARGET)



– Anomaly Densities

- Green = Low density
- Red = High density
- Blue outline = Target center



Note: ROEs denoted on map represent those made available as GFI at the site visit



SCHEDULE OF ACTIVITIES



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Activity (Documents)	Planned Completion
Biological/Cultural Surveys	March-April 2021
Site Mobilization (Including Vegetation Removal) – MRS-01	September 2021
Site Mobilization (Including Vegetation Removal) – MRS-05	January 2022
Surface Clearance – MRS-01	October 2021-January 2022
Surface Clearance – MRS-05	February 2022 and October 2022 – January 2023
Geophysical Mapping – MRS-01	January – February 2022 and October – November 2022
Possible Additional Surface Clearance	Fall 2023 and Fall 2024



HEALTH AND SAFETY / PROPERTY DAMAGE



HEALTH AND SAFETY / PROPERTY DAMAGE



- Property access is required over a 5-year period; this allows for 2-3 years of planning before actual field work which reduces health and safety concerns
 - The JV follows a rigorous Accident Prevention Plan that outlines potential hazards and mitigations
- ROE does not grant the right to enter into any structure or building located on the property
- If any action in the exercise of ROE results in damage to the real property, the Government will, in its sole discretion, either repair such damage or make an appropriate settlement with the Owner.





AVAILABLE OUTREACH MATERIALS



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- USACE Website (www.spk.usace.army.mil/Missions/Military-Projects/FUDS/Former-Mojave-Gunnery-Range-C/) includes the following information:
 - Site Maps
 - Fact Sheets
 - Right-of-Entry (ROE) Forms
 - Calendar of Events
- If you have any questions regarding either the USACE FUDS Program or the Former Mojave Gunnery Range "C" Cleanup Project, please contact:
 - Sacramento District Public Affairs Office: (916) 557-5100 or spk-pao@usace.army.mil
 - Sacramento FUDS Program Manager: (916) 557-6796 or spk_fuds@usace.army.mil



OTHER AVAILABLE AIDS



- Kern County Assessor-Recorder Website (<http://assessor.co.kern.ca.us/>) includes parcel information, property assessment, change of mailing address, etc.



QUESTIONS AND ANSWERS



SUBMITTED QUESTIONS

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LIST OF ACRONYMS



AGC	Advanced Geophysical Classification	TP	target practice
DGM	digital geophysical mapping	U.S.	United States
DMM	discarded military munitions	USACE	United States Army Corps of Engineers
GIS	geographic information system	UXO	unexploded ordnance
FFAR	folding-fin aerial rocket		
FUDS	formerly used defense sites		
JV	Joint Venture		
HE	high explosive		
HVAR	high velocity aircraft rocket		
lb	pound		
MD	munitions debris		
MEC	munitions and explosives of concern		
MGRC	Mojave Gunnery Range “C”		
MRS	Munitions Response Site		
NMRD	non-munitions related debris		
RI	Remedial Investigation		
ROE	right of entry		
SCAR	sub-caliber aircraft rocket		



SAFETY REMINDER



Remember the 3Rs of Military Munitions Safety:

Recognize:

you may have encountered a munitions item.

Retreat:

from munitions item. Do not touch or disturb it; instead move away carefully, walking out the same way you entered the area. Do not use two-way radios or cell phones within 100 feet of the item.

Report:

what you saw and where you saw it by calling 911.