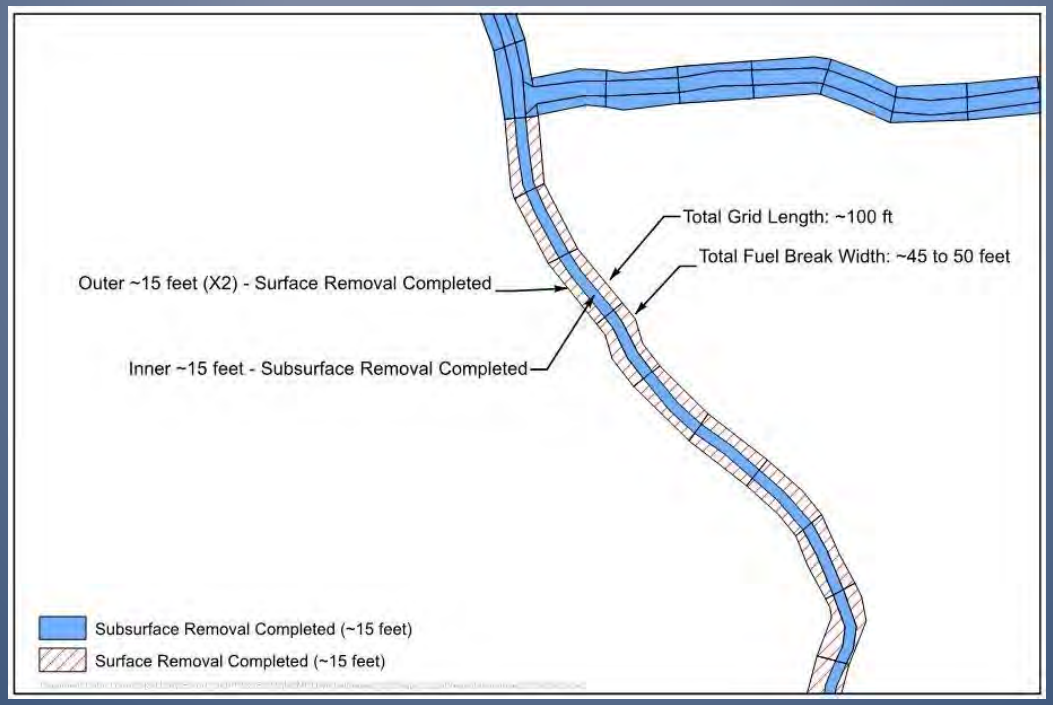
Impact Area MRA Fuel Breaks Supplemental QC Investigation

Impact Area Fuel Break System

- Total width of 45 to 50 feet
- Subsurface MEC removal along 15 to 20-foot central roadway
- Surface MEC removal and on-going fuel reduction in 15-foot corridor in each side of central road



Non-Burn Areas SSWP

- Identified a permanent fuel break system of approximately 180 acres
- Tasks for fuel break system:
  - Digital geophysical mapping
  - Subsurface removal utilizing the DGM data in areas where subsurface MEC removal was not previously conducted
  - QC and QA inspection of DGM data in areas where subsurface MEC removal was previously conducted
- FWV 03-002 (2011; OE-0685D.3) – investigation of 10% of the anomalies in the DGM data

Non-Burn Areas SSWP Fuel Breaks

Technical Information Paper
Supplemental Quality Control Investigation
Impact Area Munitions Response Area Permanent Fuel Breaks
Former Fort Ord, California

Figure 1
Impact Area MRA Permanent Fuel Break System Defined in the Non-Burn Areas SSWP

Supplemental QC Investigation

Technical Information Paper
Supplemental Quality Control Investigation
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Former Fort Ord, California

Figure 2
Impact Area MRA Permanent Fuel Breaks
Included in the Supplemental QC Investigation

Supplemental QC Investigation Targets

- 3 phases between 2011 and 2017
  - Phase A – 2011-2012 (260 intrusive investigations)
  - Phase B – 2014 (480 intrusive investigations)
  - Phase C – 2017 (1,082 intrusive investigations)
- 1,822 total investigations

QC Investigation Targets

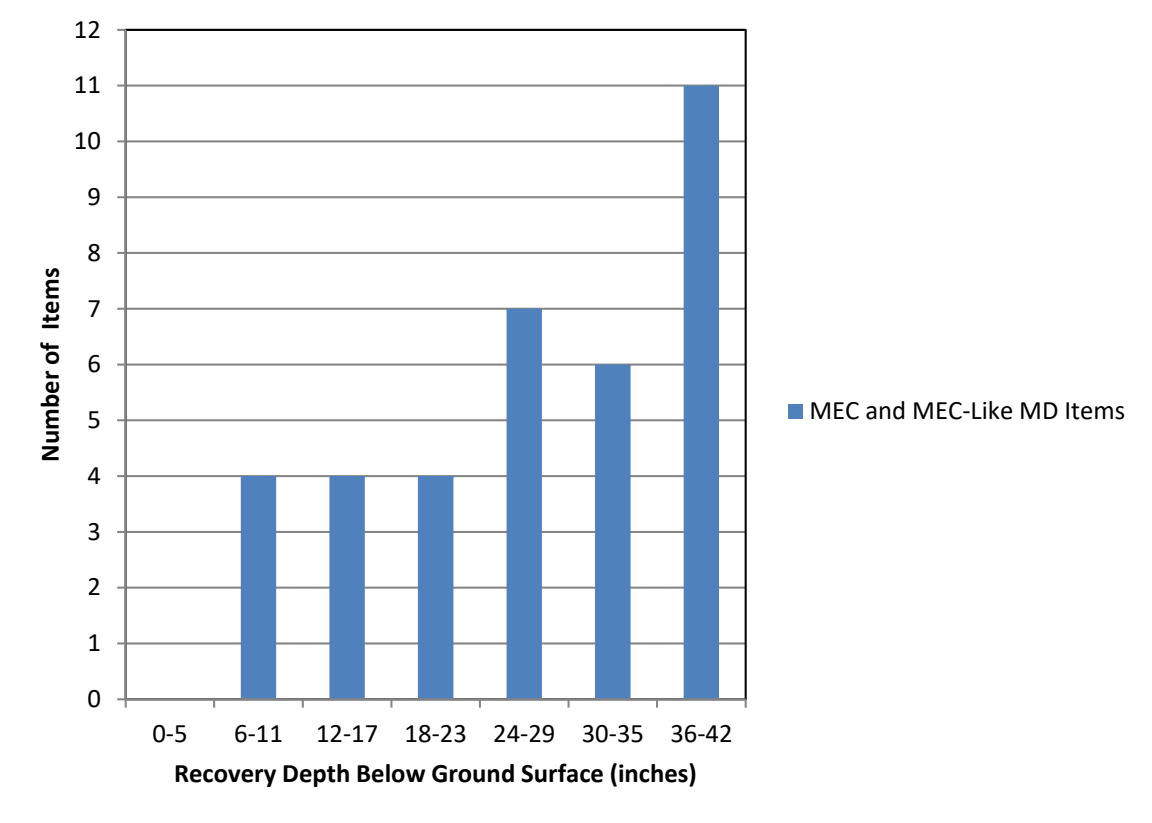
QC Investigation Results

- 36 investigated anomalies resulted in the recovery of items of interest – 14 MEC items and 24 MEC-like MD items
- Recovered MEC:
  - 10 HE 81mm mortar projectiles
  - 2 WP 81mm mortar projectiles
  - 1 LE 37mm projectile
  - 1 40mm M383 HE cartridge (DMM)
- Recovered MEC-like MD:
  - 24 81mm mortar projectiles

Recovered MEC and MEC-Like MD

Recovery Depths

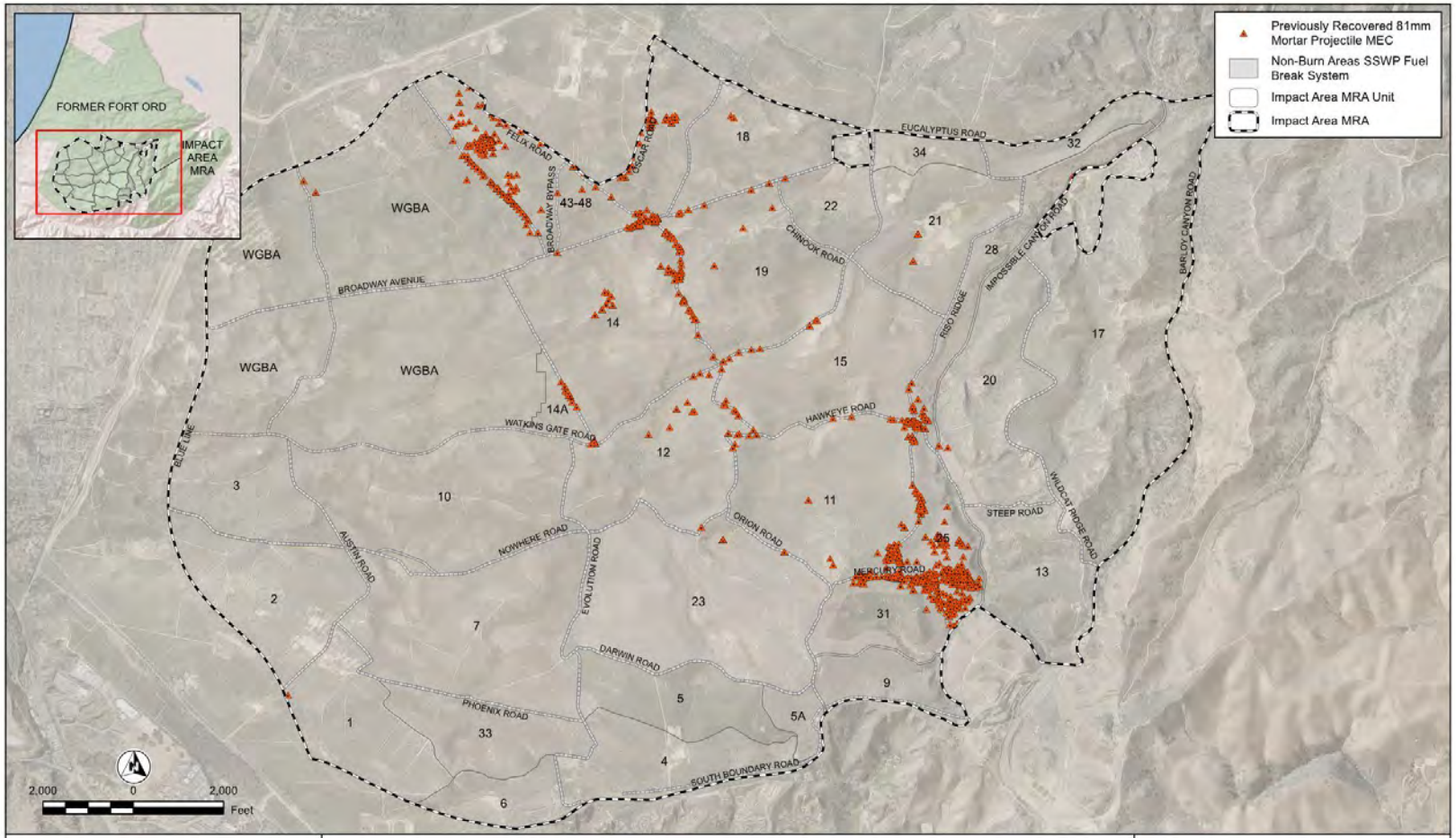
- 24 of the 36 MEC and MEC-like MD items were recovered 24 inches or more below ground surface



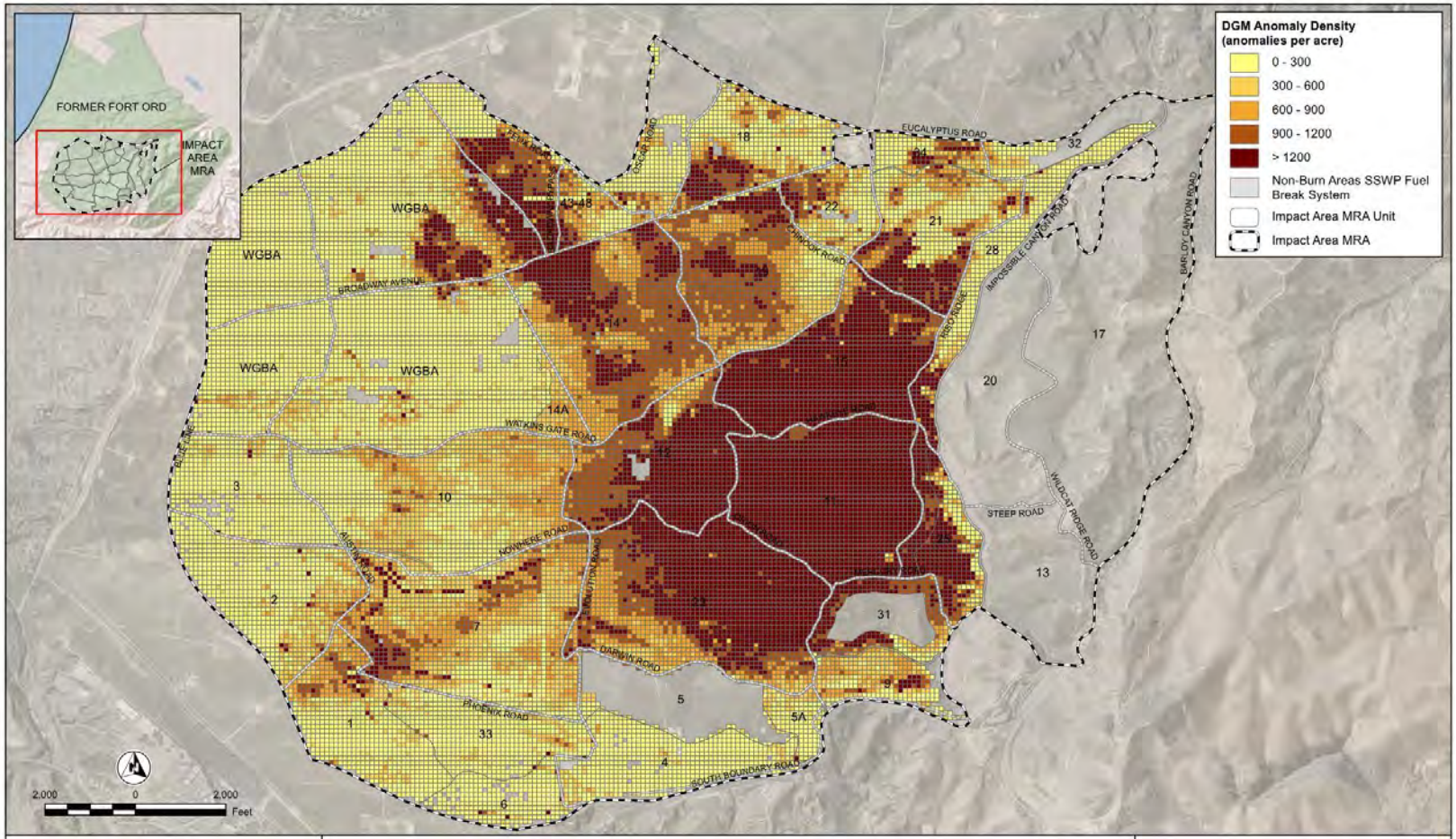
Distribution of Recovery Locations

- Recovered MEC and MEC-like MD items in the supplemental QC investigation were located in parts of the Impact Area MRA where 81mm mortar projectiles have been recovered

Impact Area MRA 81mm Mortar MEC



Subsurface Anomaly Density



Analysis of Recovered Items

- Recovered item locations have three things in common:
  - Analog subsurface removal performed prior to the Track 3 ROD
  - High anomaly density prior to analog removal
  - Previously recovered 81mm mortar projectiles
- 25.5 acres of fuel breaks meet these criteria

Recommendation

- Additional subsurface MEC removal in 25.5 acres of Impact Area MRA fuel breaks
- Advanced geophysical classification utilizing the Geometrics MetalMapper 2x2
- Analog removal in two grids with anomaly density greater than 2000 anomalies/acre

Recommended Fieldwork

Next Steps

- Phase 1 – analog subsurface removal in two fuel break grids
- Phase 2 – dynamic MetalMapper 2x2 detection survey
- Phase 3 – static MetalMapper 2x2 classification survey and subsurface removal within a subset of the AGC fuel break grids
- Phase 4 – static MetalMapper 2x2 classification survey and subsurface removal in the remainder of the recommended AGC fuel break grids

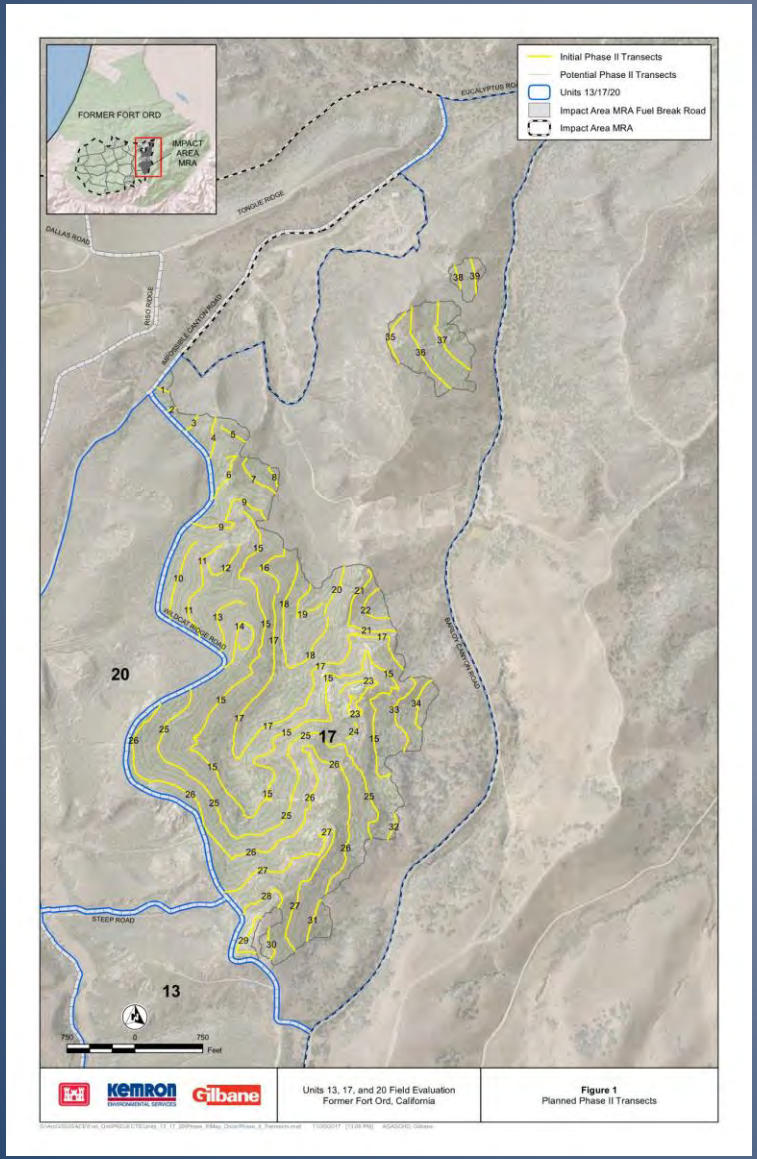
Units 13, 17, and 20 Field Evaluation Update

Field Evaluation Objective

Acquire sufficient information regarding site conditions and previous munitions use in Units 13, 17, and 20 to guide the implementation of the Track 3 ROD remedy through:

- Analysis of previous investigation results
- Review of historical aerial photography
- Review of historical training maps
- A two-phase field evaluation consisting of:
  I. Additional visual reconnaissance surveys
  II. Focused transect-based evaluation

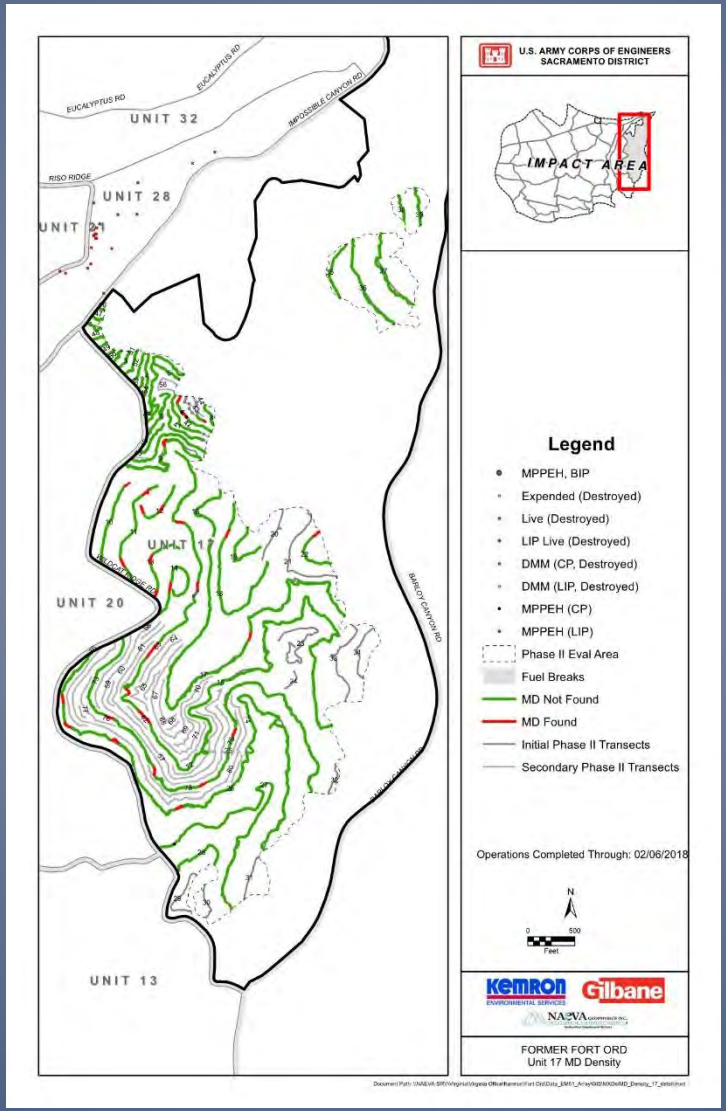
Phase II – Focused Field Evaluation



Focused field evaluation along regularly-spaced transects throughout Unit 17

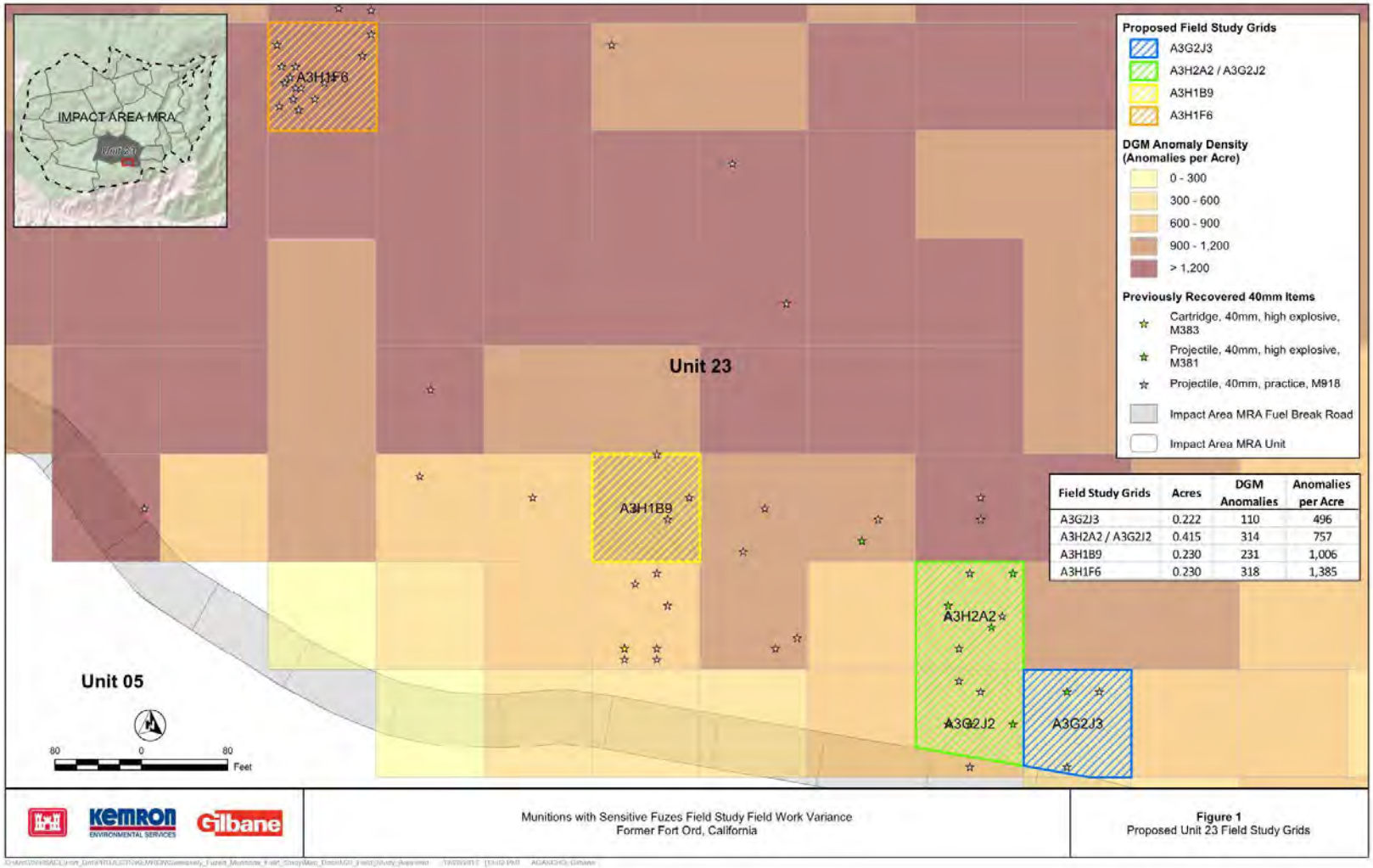
- Transect spacing designed using Visual Sample Plan
- Transect placement designed using ArcGIS to fit paths to terrain to provide the most efficient and safe routes for Phase II evaluation

Unit 17 Phase II Findings



Munitions with Sensitive Fuzes Field Study Update

Unit 23 Field Study Area



Field Study Grids	Acres	DGM Anomalies	Anomalies per Acre
A3G2J3	0.222	110	496
A3H2A2 / A3G2J2	0.415	314	757
A3H1B9	0.230	231	1,006
A3H1F6	0.230	318	1,385

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Munitions with Sensitive Fuzes Field Study Field Work Variance
Former Fort Ord, California

Figure 1
Proposed Unit 23 Field Study Grids

Field Study Targets