



Unexploded Ordnances on the Idaho National Laboratory (INL) Site

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safety ❖ performance ❖ cleanup ❖ closure

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What We'll Cover

- Background and INL Site History
- Operable Units and Remedy
- Current Response Processes
- Future Actions

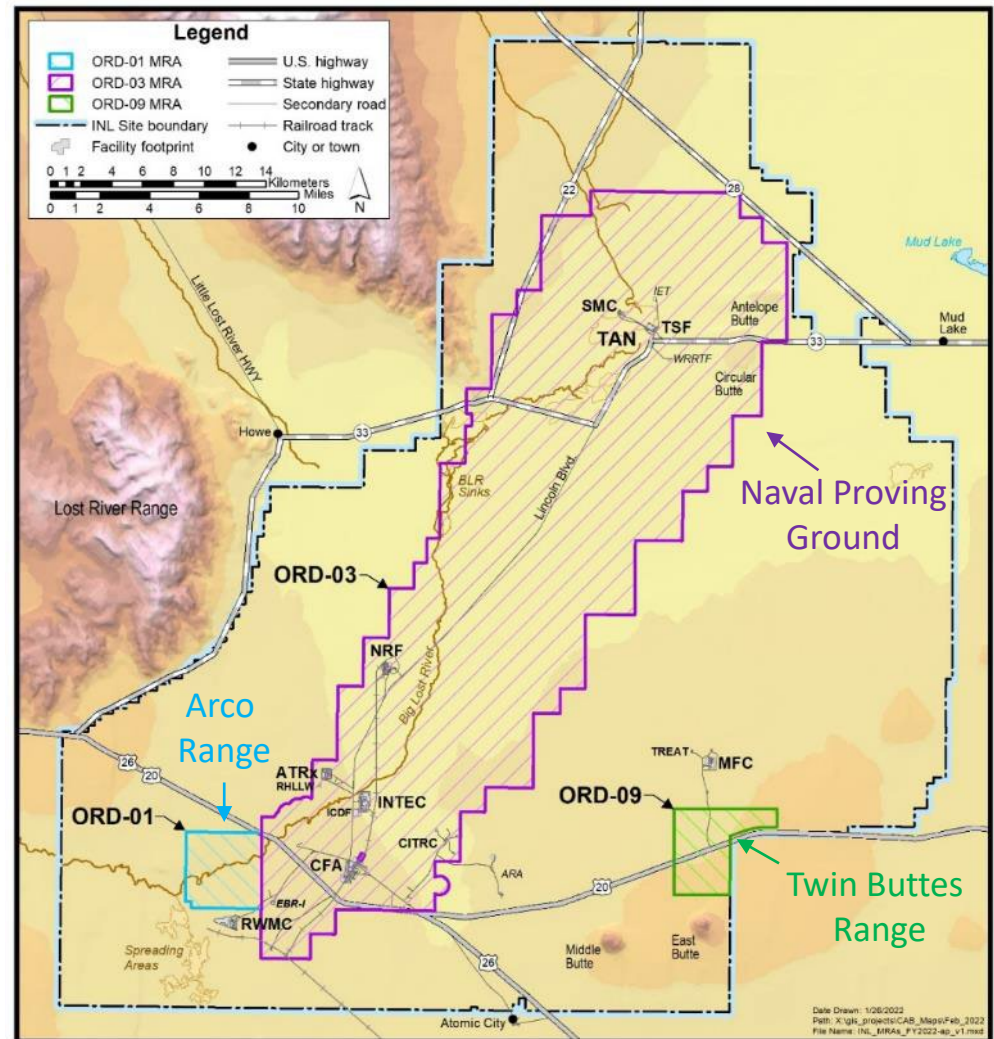


Explosives transport vehicle recovery operations



Site History of INL Ordnance Areas

- World War II: portions of the site used as bombing ranges and ordnance proving grounds
 - Naval Proving Ground
 - Arco High Altitude Bombing Range
 - Twin Buttes Bombing Range



Site History of INL Ordnance Areas

3-in inert
proofing
projectiles



Sand-filled
practice
bomb



16-in
proofing
projectile



100-lb
practice
bomb



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Unexploded Ordnance Operable Units

- Operable Units 6-05 and 10-04
- Record of Decision - 2002
- Remedial Action Objective
 - “UXO detection, removal, and institutional controls...to mitigate potential human health risk from inadvertent contact to UXO”
- Selected Remedy
 - Detect, remove, and dispose
 - Institutional controls



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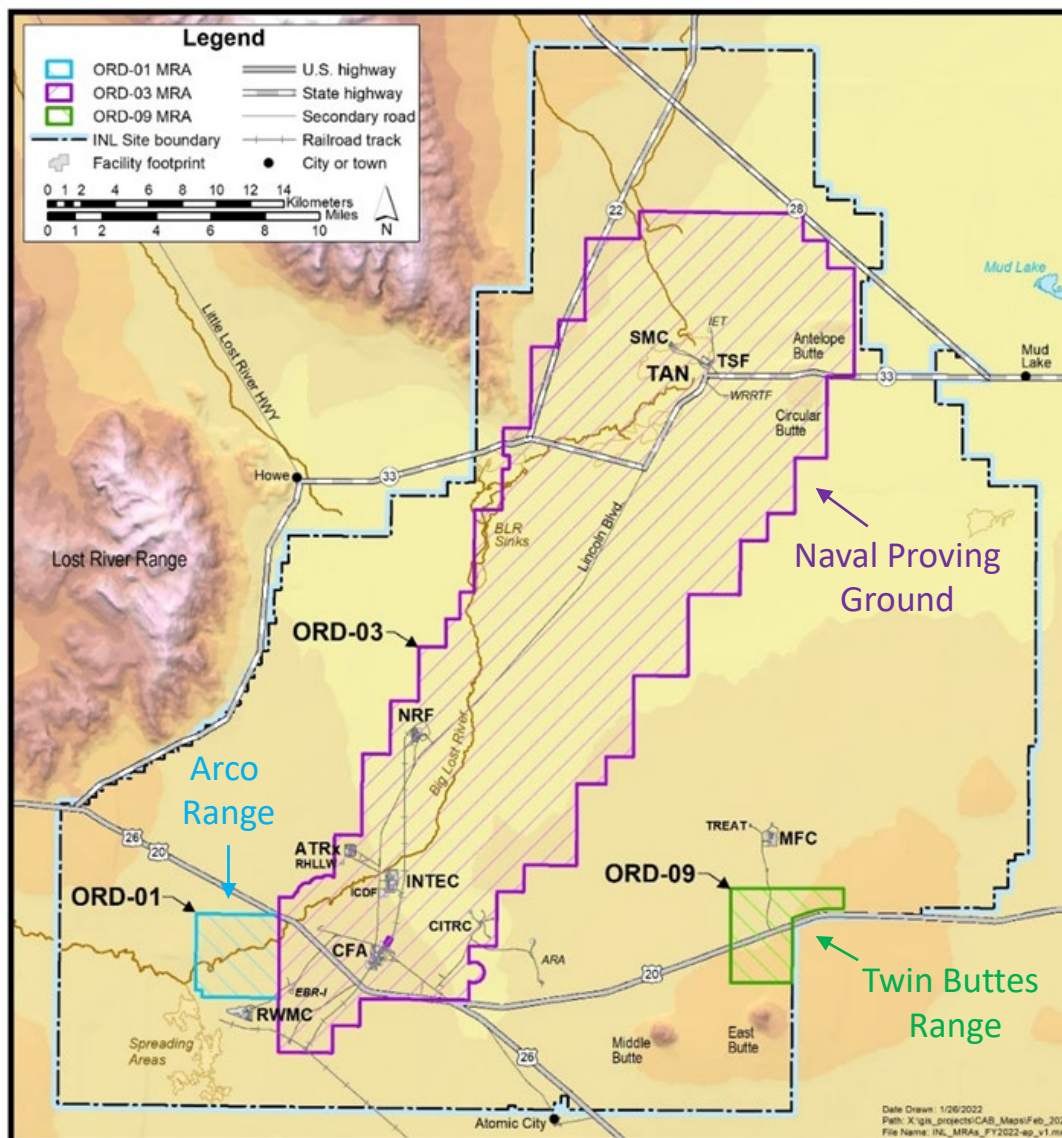
Acronym key

UXO: unexploded ordnance

Remedial Action Remedy

- Four major steps:
 - Step 1: Determine land use
 - Step 2: Assess the area
 - Step 3: Characterize and conduct hazard assessment
 - Step 4: Implement the appropriate ordinance response





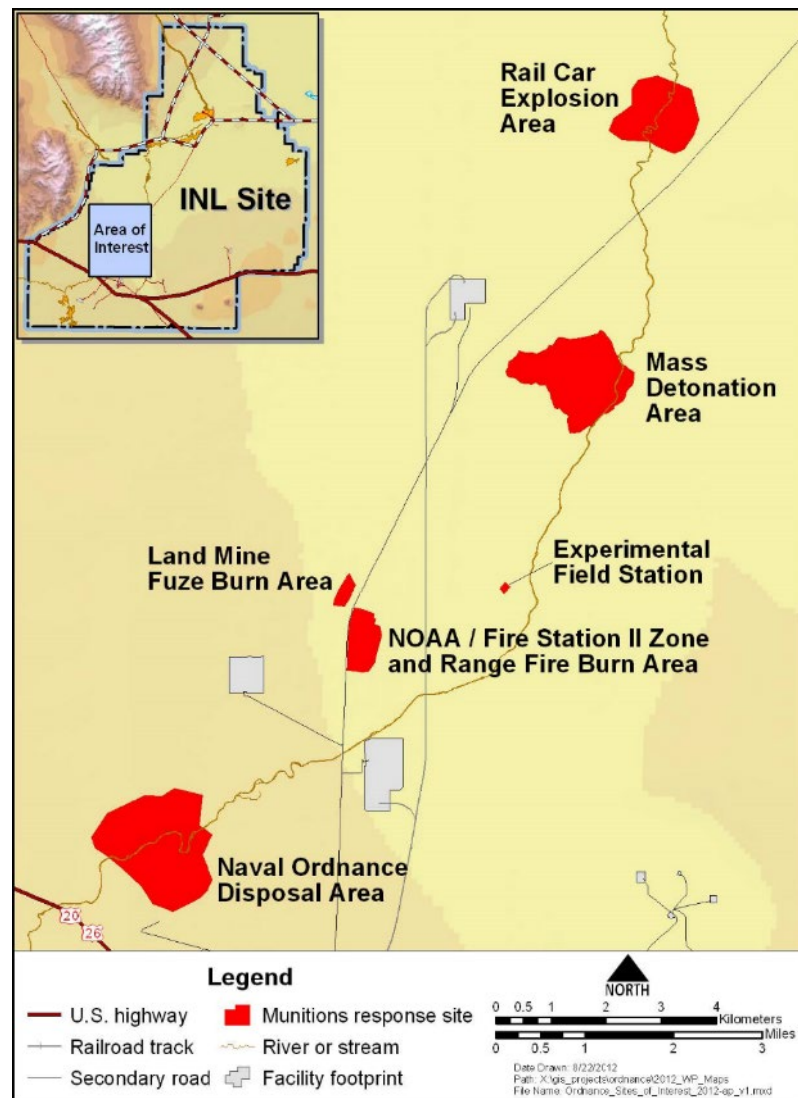
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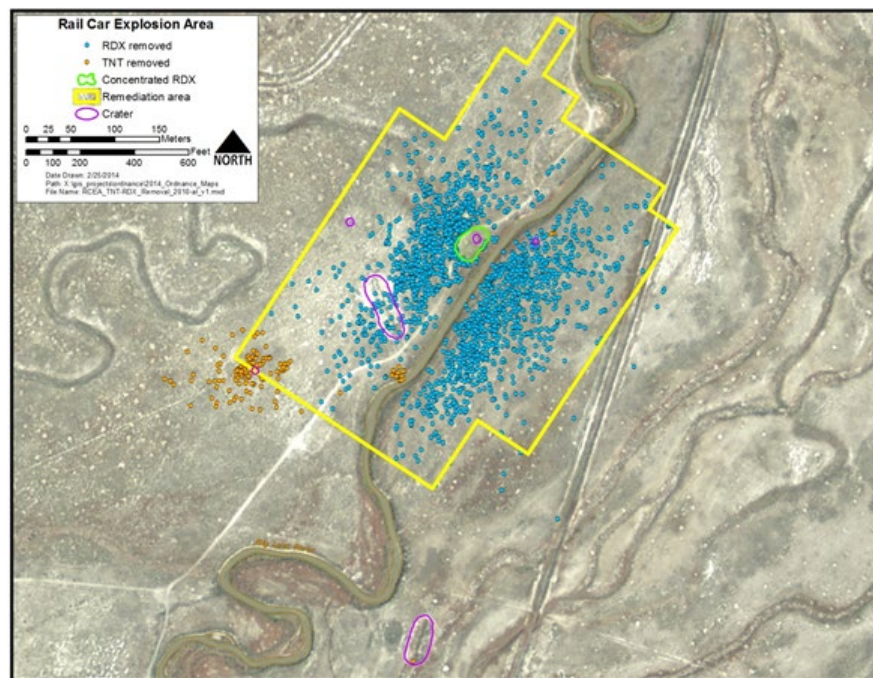
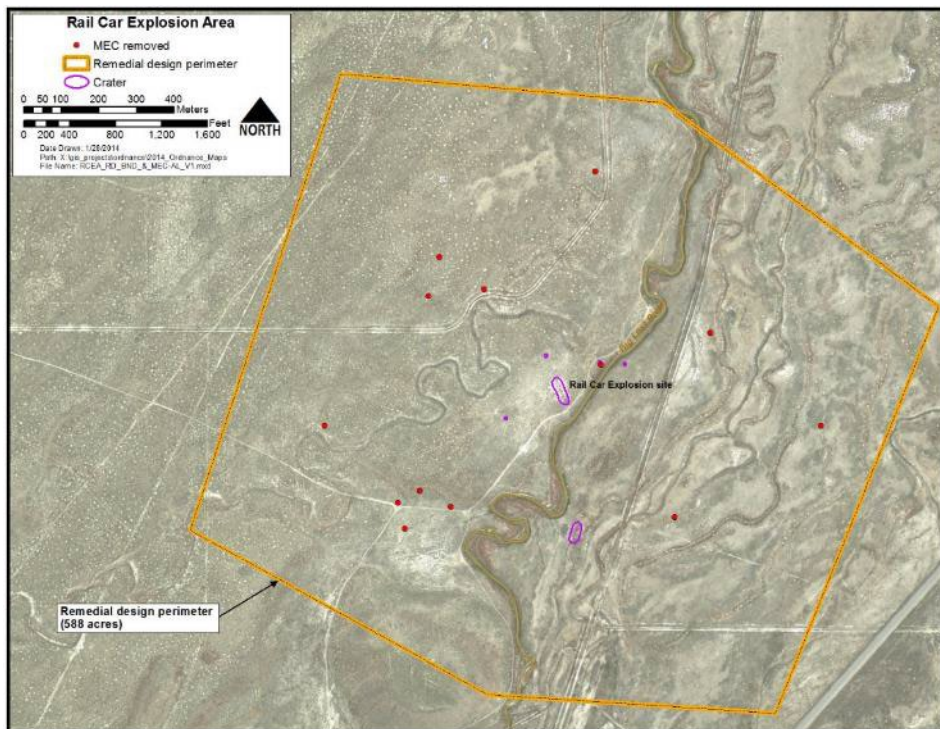
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Naval Proving Ground

- Completed geophysical and visual pedestrian surveys
- Five confirmed unexploded ordnance sites
 - Naval Ordnance Disposal Area
 - Land Mine Fuze Burn Area
 - Experimental Field Station
 - Rail Car Explosion Area
 - Mass Detonation Area



Naval Proving Ground – Rail Car Explosion Area



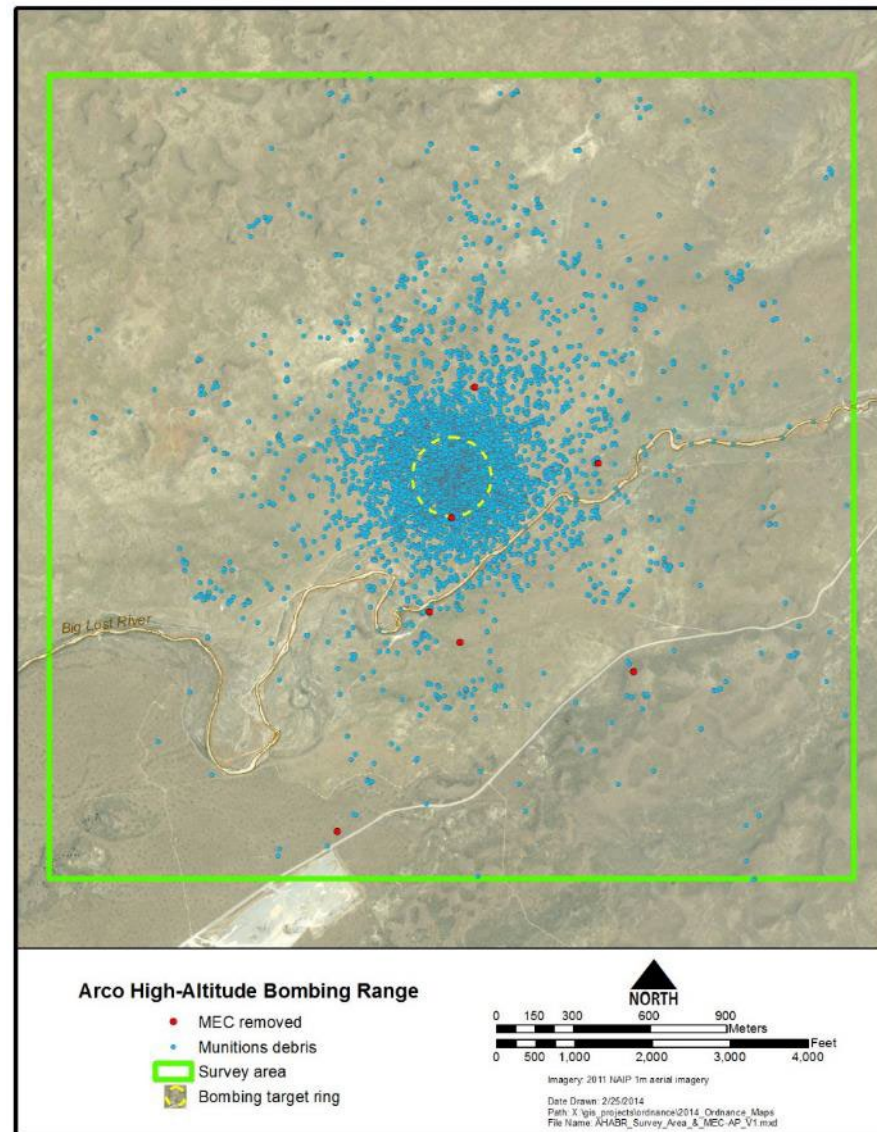
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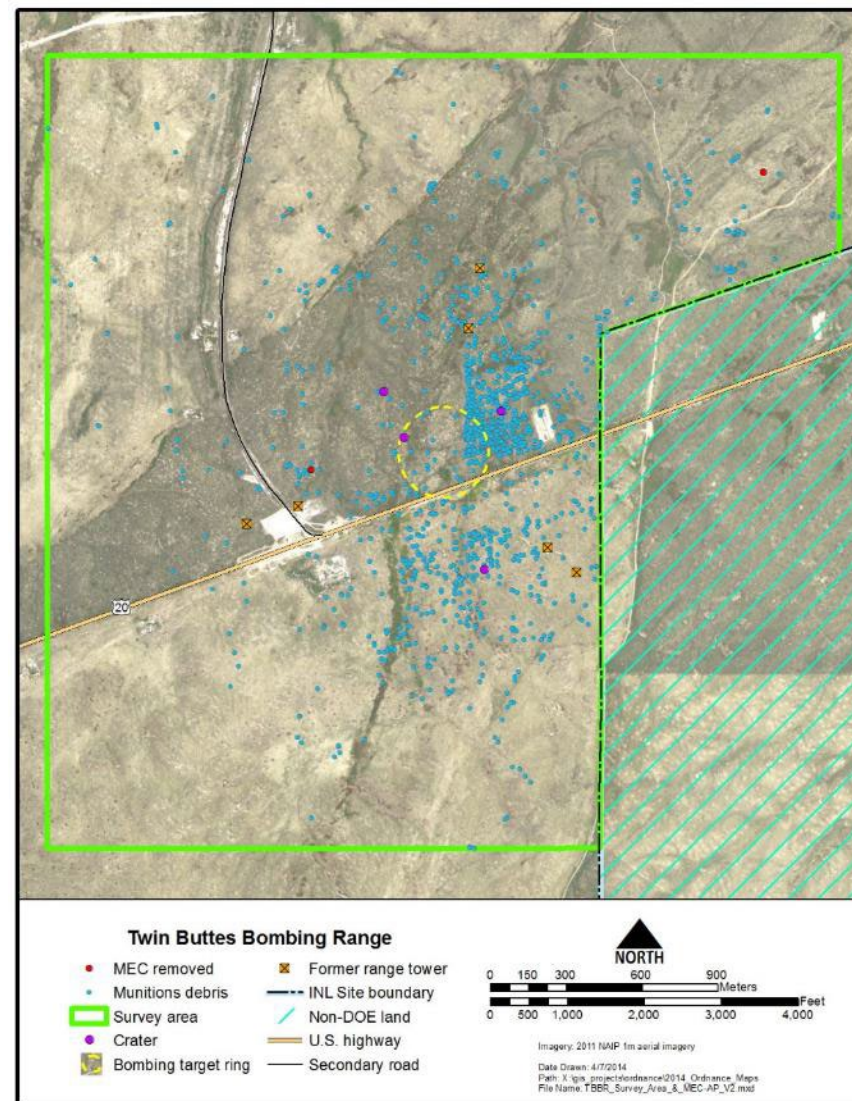
Arco High Altitude Bombing Range

- Completed visual pedestrian survey
- Miles walked: 601
- Ordnance debris: 6,350
- Items destroyed: 7



Twin Buttes Bombing Range

- Completed visual pedestrian survey
- Miles walked: 492
- Ordnance debris: 1,423
- Items destroyed: 2



On-Site Ordnance Disposal

September 25, 2010 (left) and September 23, 2011 (right)



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On-Site Ordnance Disposal, March 24, 2012

Video of Ordnance Disposal

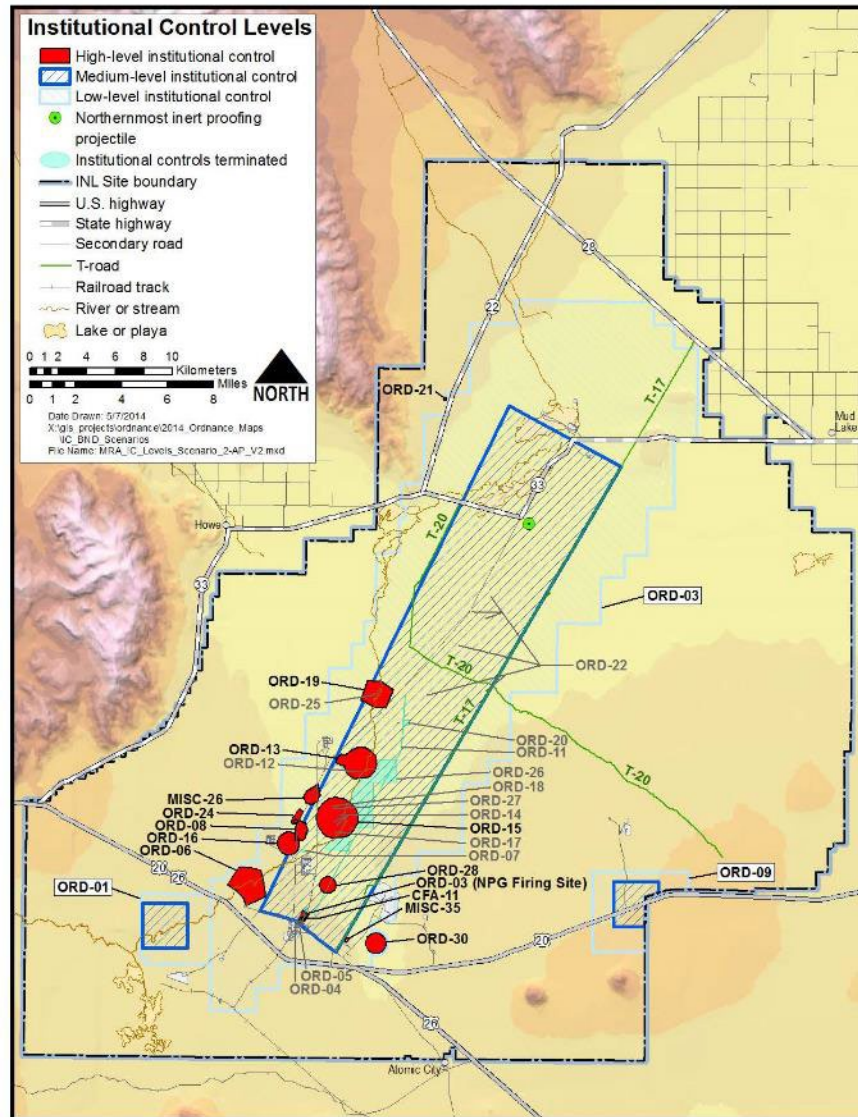
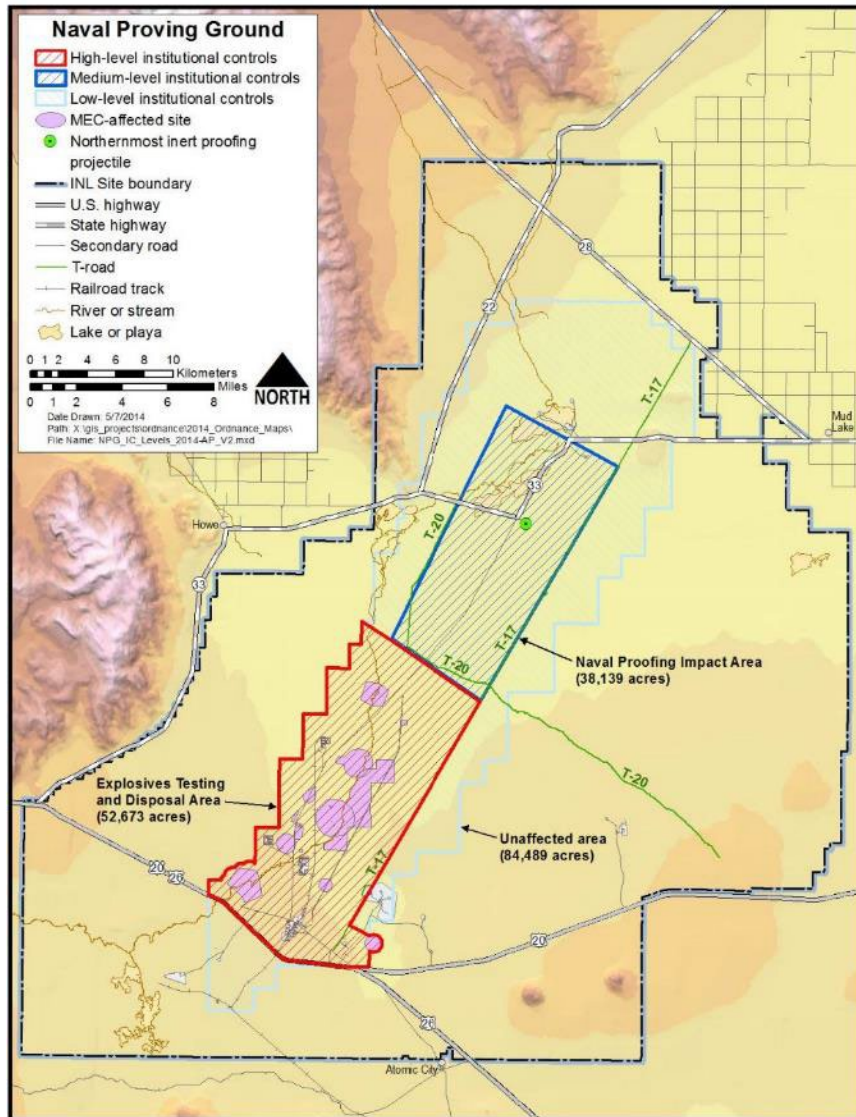


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Institutional Control Boundary Changes



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Current Response Processes

- Record of Decision requires institutional controls to restrict access
- Two processes are needed for ordnance responses:
 - Munitions Response Area Activity Notice process
 - Discovery of Munitions and Explosives of Concern process



Field personnel locating projectile



16-in projectile



Process for Disturbance Activities

- Issue Munitions Response Area Activity Notice (MRAAN)
 - Complete before disturbance activity
- UXO qualified personnel conduct:
 - Assessment of location
 - Characterization and hazard assessment
 - Implement responses
 - Report



Process for Discoveries



UXO
personnel
investigating
sand-filled
practice bomb



- Report discovery
- Discovery process initiated
- Remediation personnel perform field verification and recommendation
- UXO qualified personnel conduct:
 - Assessment of location
 - Characterization
 - Implement response
 - Report
- If no safety hazard, close discovery
- If safety hazard, recover and destroy



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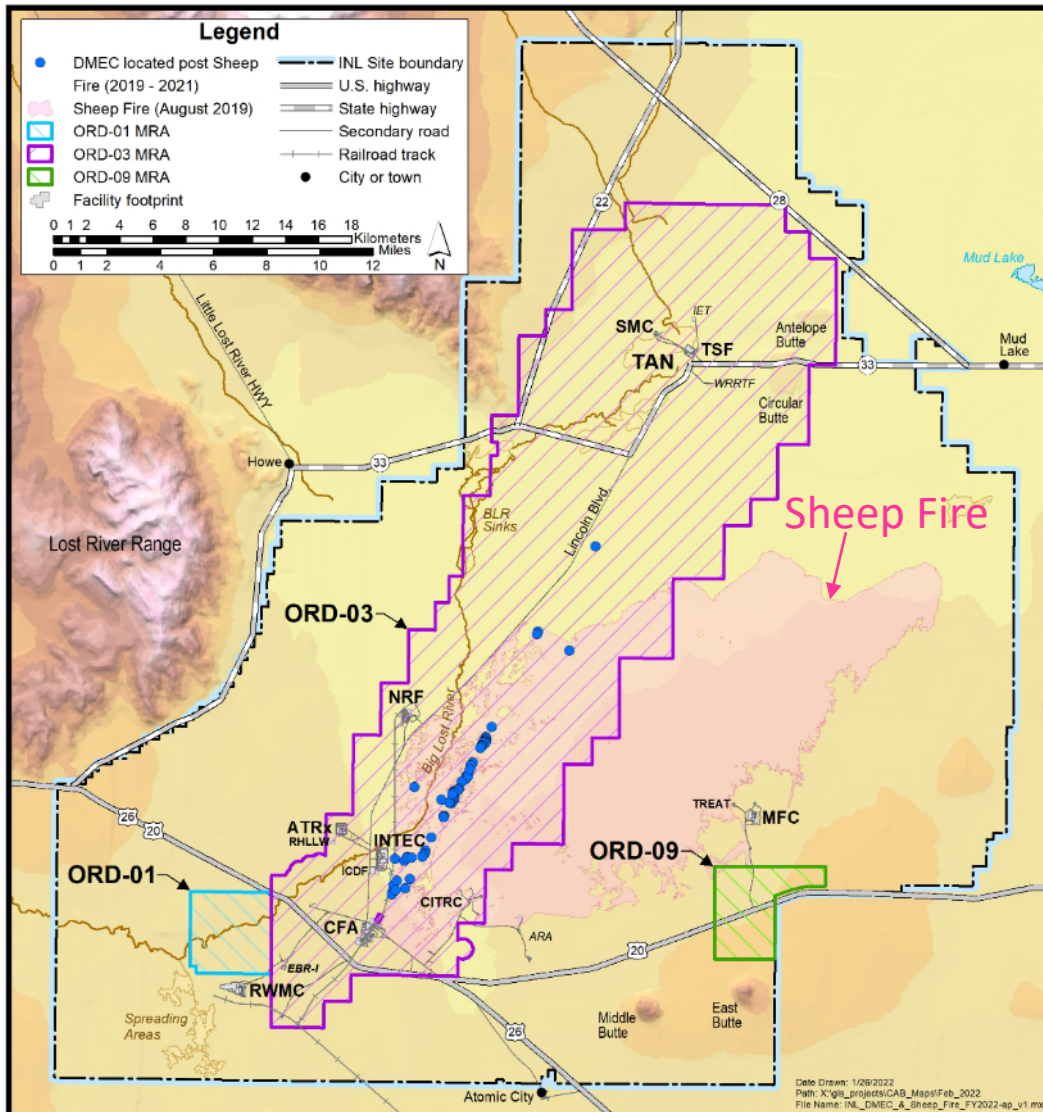
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Acronym key

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Future Actions



Sheep Fire, July 2019



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Questions?



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