



**REMEDIAL ACTIONS
PROPOSED FOR**

**GROUP 3
MUNITIONS
RESPONSE AREAS**

**Former Fort Ord,
Monterey County,
California**

PUBLIC MEETING – WEDNESDAY, JANUARY 30, 2013

Agenda

- 6:00 – 6:15 Open House
- 6:15 – 7:00 Presentation
- 7:00 – 7:15 Question and Answer
- 7:15 – 7:25 Break
- 7:25 – 8:00 Public Comment Period

Meeting Guidelines

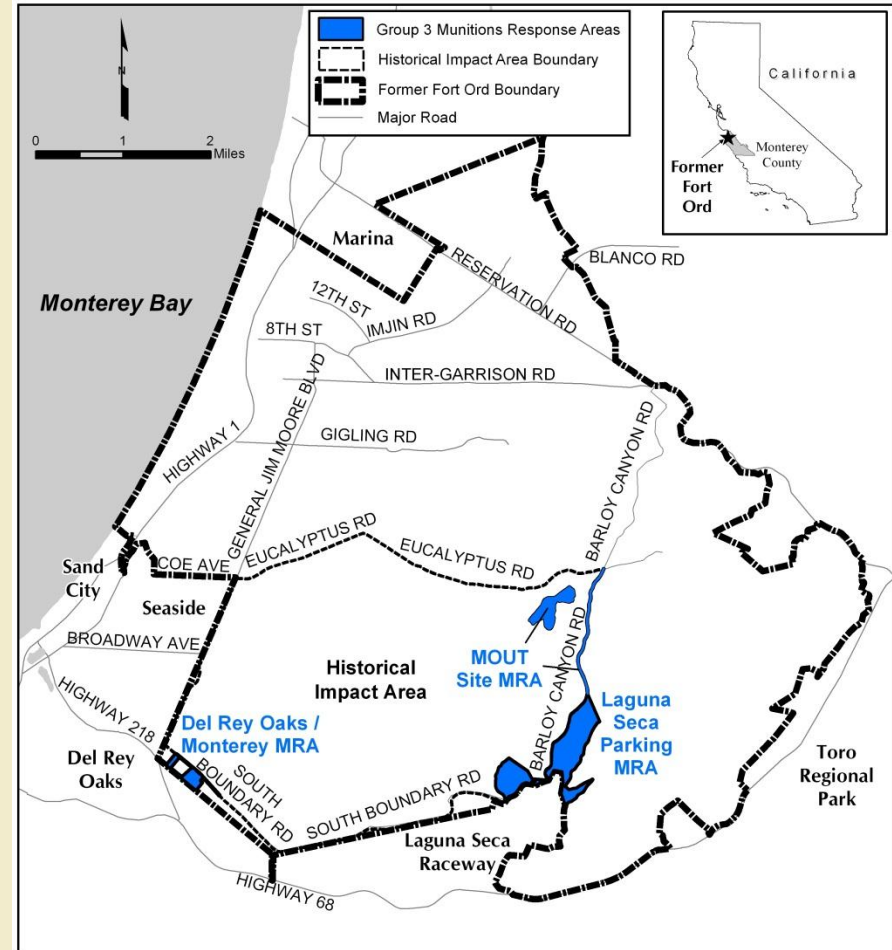
- Please hold questions and comments until after the presentation
- To provide written comments fill out a comment sheet and hand it in tonight or mail in by the close of the comment period
- To provide verbal comments tonight, please fill out a speaker card
- Please respect established time limits
- Listen to and respect all participants
- Silence cell phones and pagers

Meeting Purpose

- Present information on the Remedial Actions Proposed for the Group 3 Munitions Response Areas (MRAs)
 - Group 3 MRAs consist of the
 - Del Rey Oaks (DRO)/Monterey MRA
 - Laguna Seca Parking MRA
 - Military Operations in Urban Terrain (MOUT) Site MRA
- Accepting public comments on the Group 3 Proposed Plan

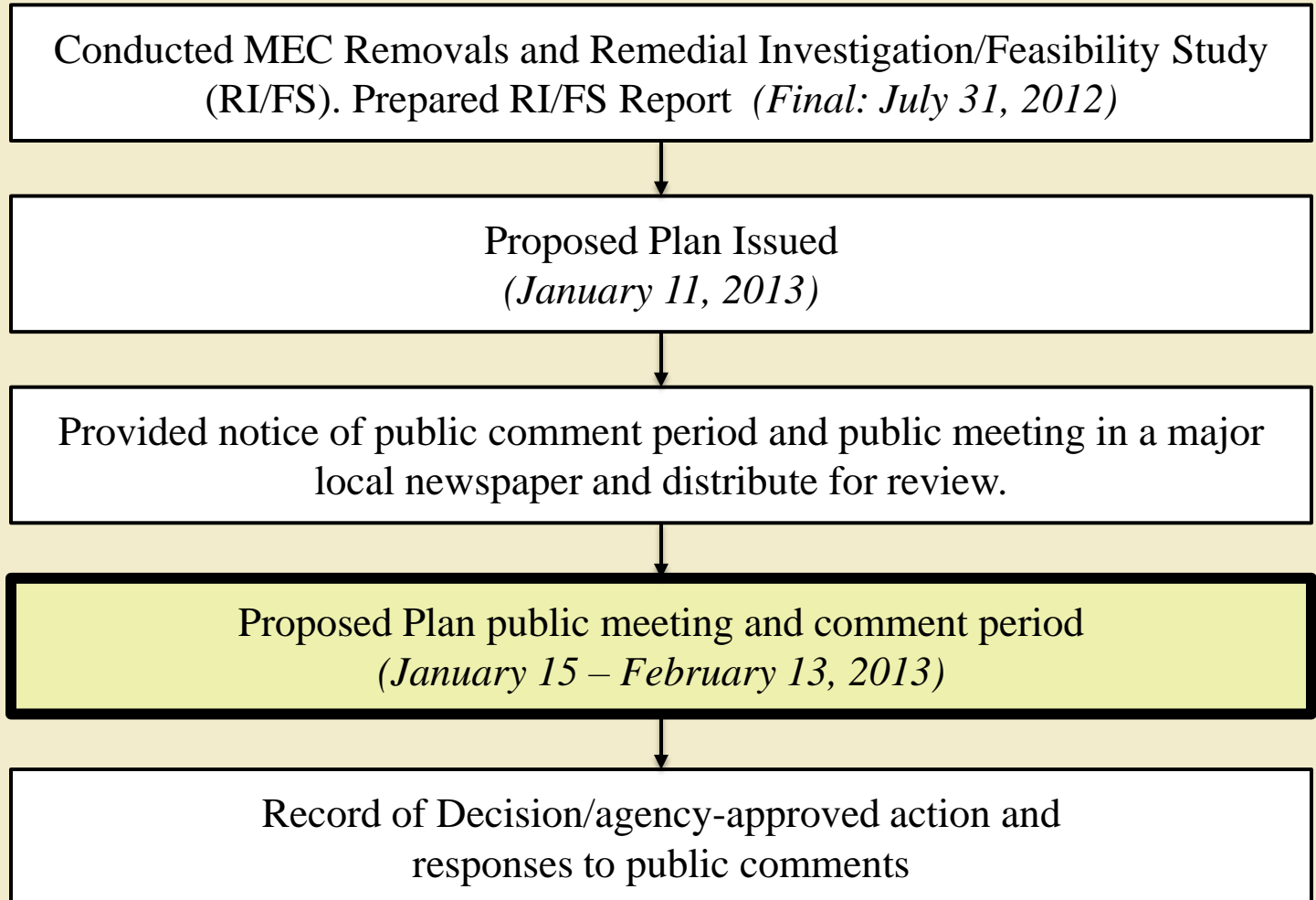
Group 3 Munitions Response Areas

- Group 3 MRAs
 - Del Rey Oaks (DRO) / Monterey MRA
 - Laguna Seca Parking MRA
 - Military Operations in Urban Terrain (MOUT) Site MRA



Group 3 MRAs

Record of Decision Process



Presentation Topics

- Fort Ord Reuse Authority (FORA) Environmental Services Cooperative Agreement (ESCA) Remediation Program
- Group 3 Munitions Response Areas (MRAs)
- Group 3 MRAs Remedial Investigation / Feasibility Study (Group 3 RI/FS)
- Proposed Plan with Army's Preferred Remedial Alternative
- How to Provide Comments

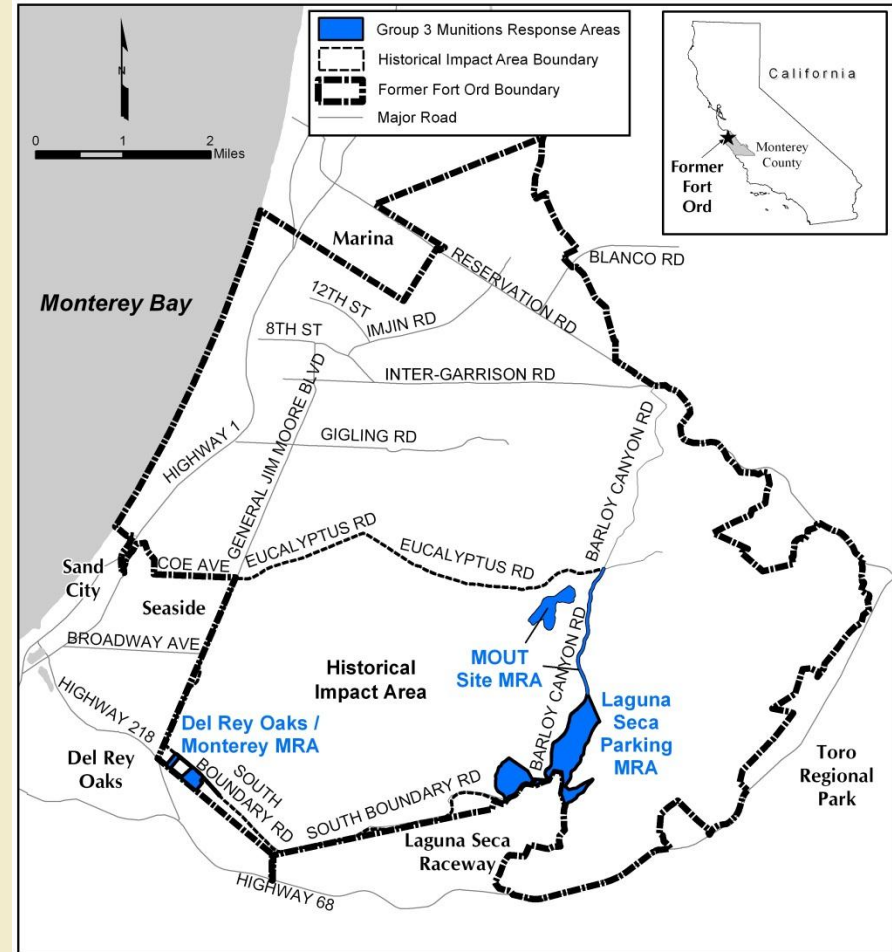
FORA ESCA Remediation Program

- Army and FORA entered into ESCA in 2007 allowing:
 - Expedited transfer of parcels to FORA
 - Parallel paths for munitions remediation
 - Upfront funding, alleviating budget uncertainty
- Army, EPA and DTSC sign CERCLA decision documents
- ESCA Remediation Program Responsibilities
 - Munitions remediation as required by EPA Administrative Order on Consent (AOC)
 - Field activities consistent with Army program
 - Community Involvement and Outreach Program
 - Reporting to EPA, DTSC and Army

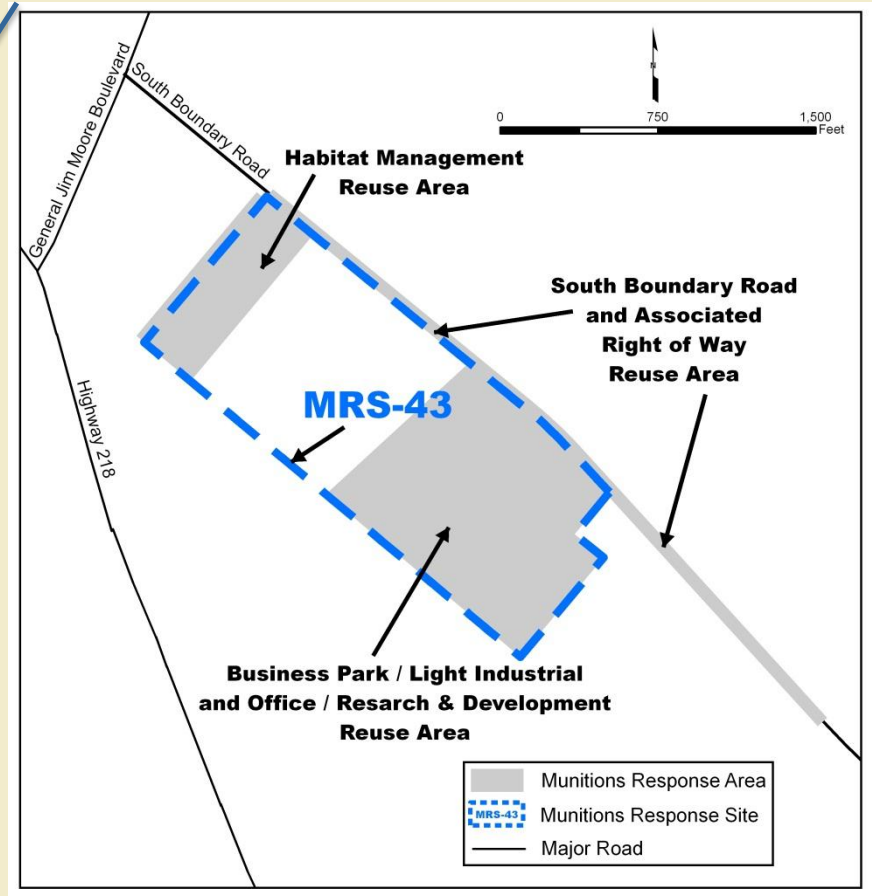
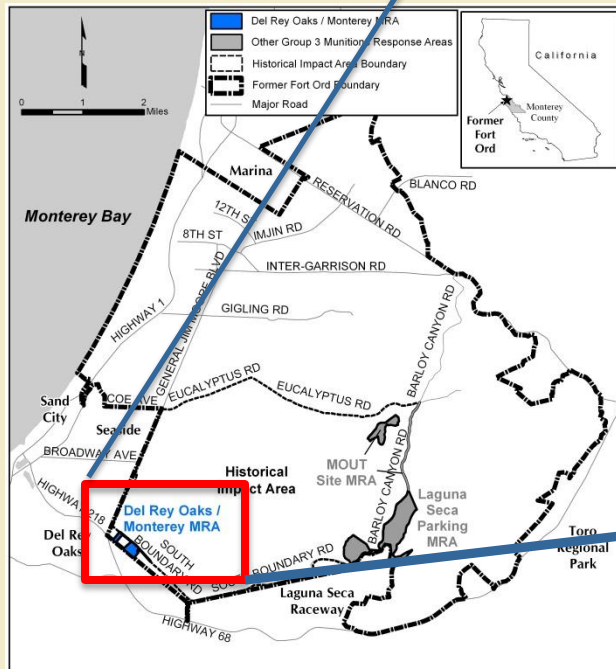


Group 3 Munitions Response Areas

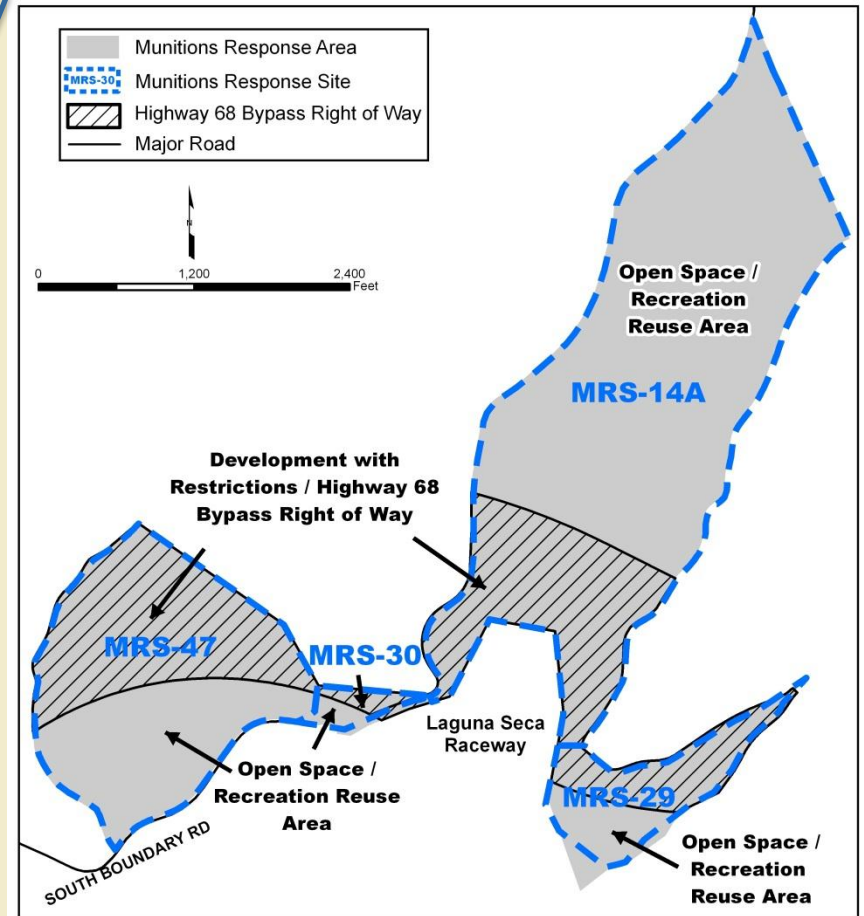
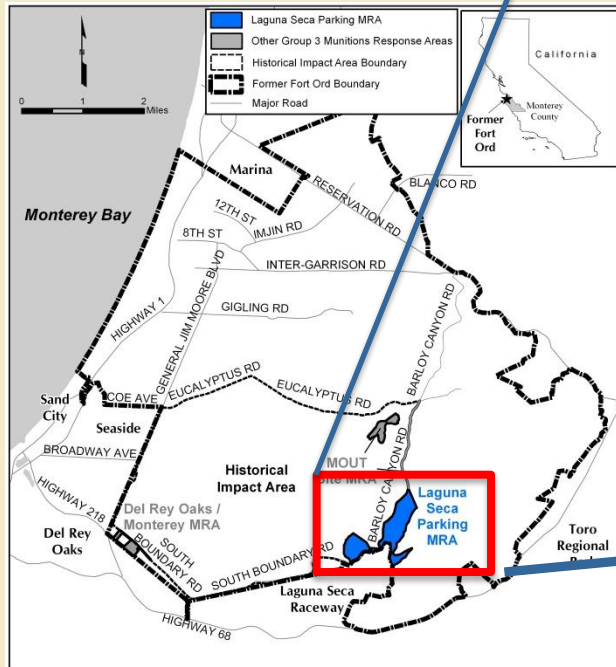
- Group 3 MRAs
 - Del Rey Oaks (DRO) / Monterey MRA
 - Laguna Seca Parking MRA
 - Military Operations in Urban Terrain (MOUT) Site MRA



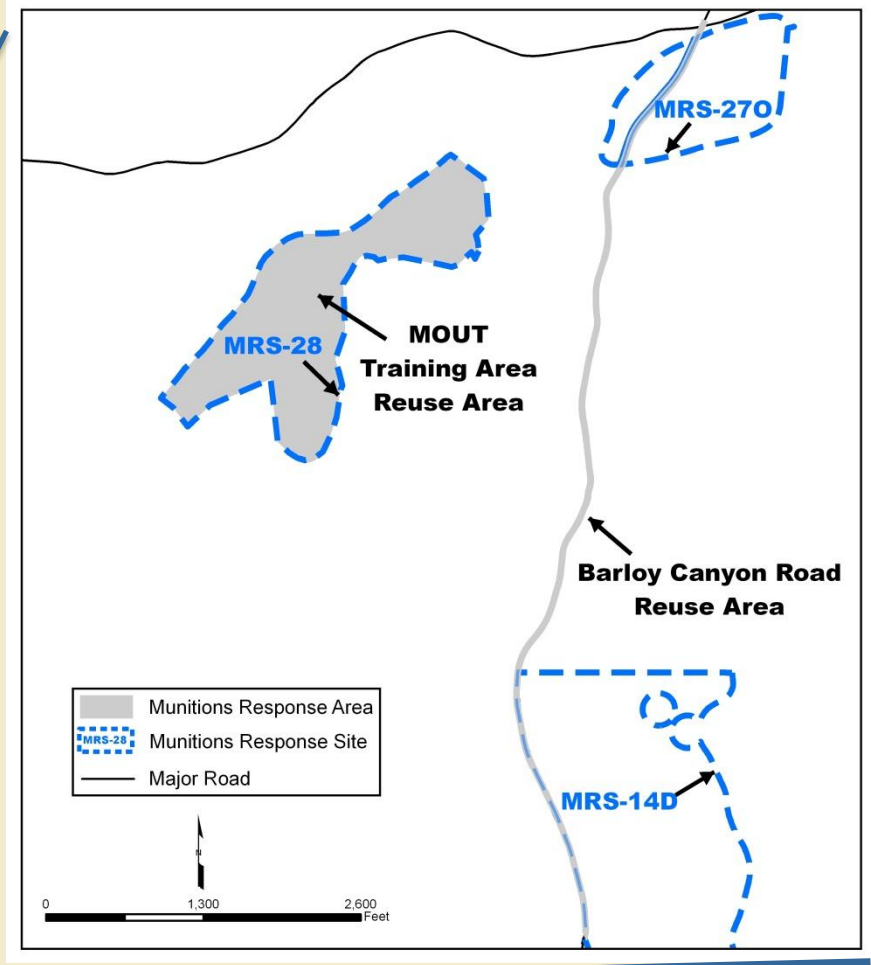
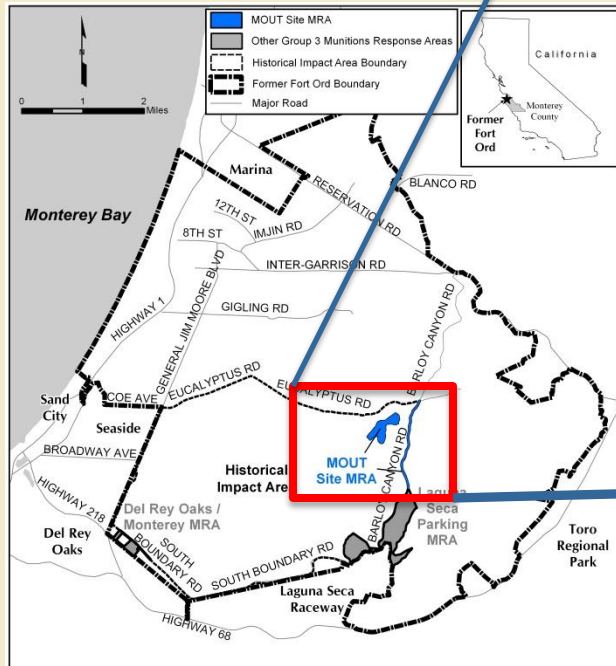
DRO/Monterey MRA



Laguna Seca Parking MRA

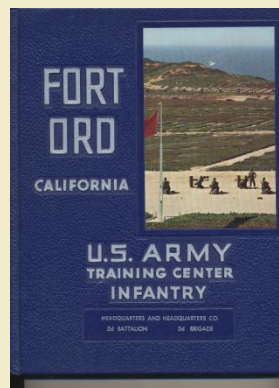
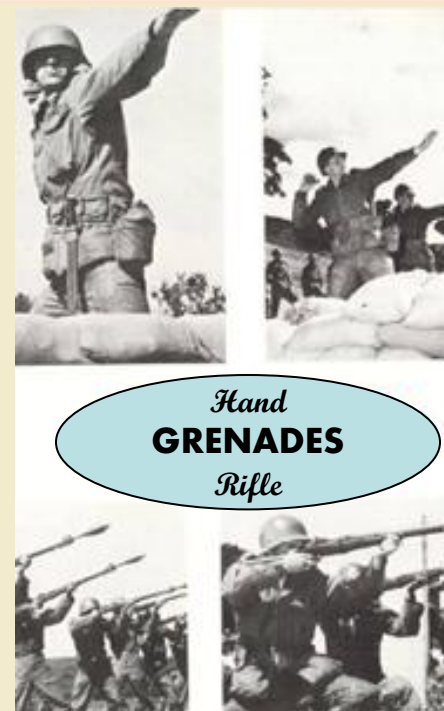


MOUT Site MRA



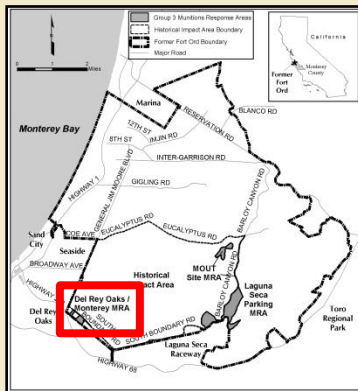
Remedial Investigation

- Background Information
- Conceptual Site Model
- Nature and Extent of Military Munitions
- Evaluation of Previous Work



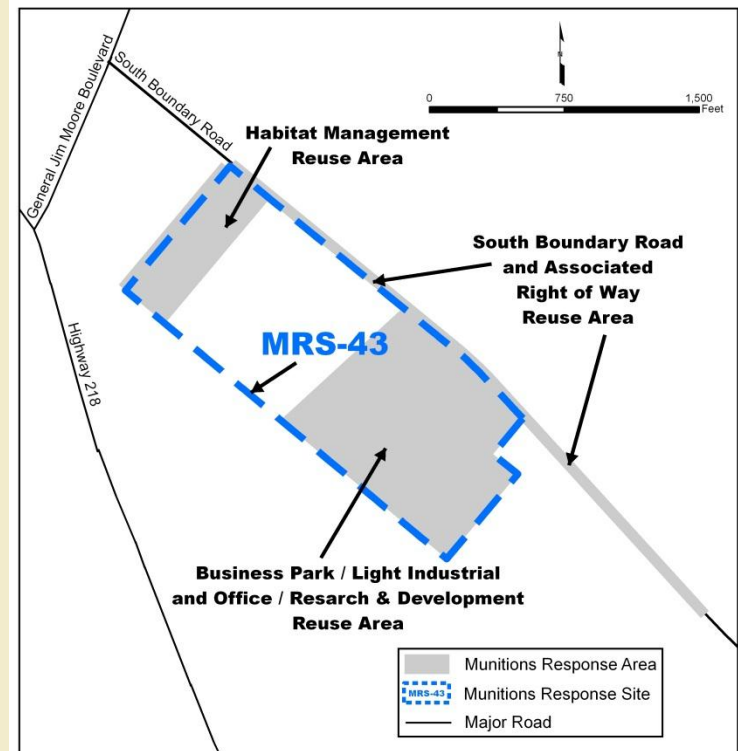
DRO/Monterey MRA

- Located in southwestern portion of Fort Ord
- MRA comprised of three parcels
 - 29 acres of undeveloped land in two non-contiguous parcels
 - 5 acre portion of South Boundary Road



DRO/Monterey MRA Site Characteristics

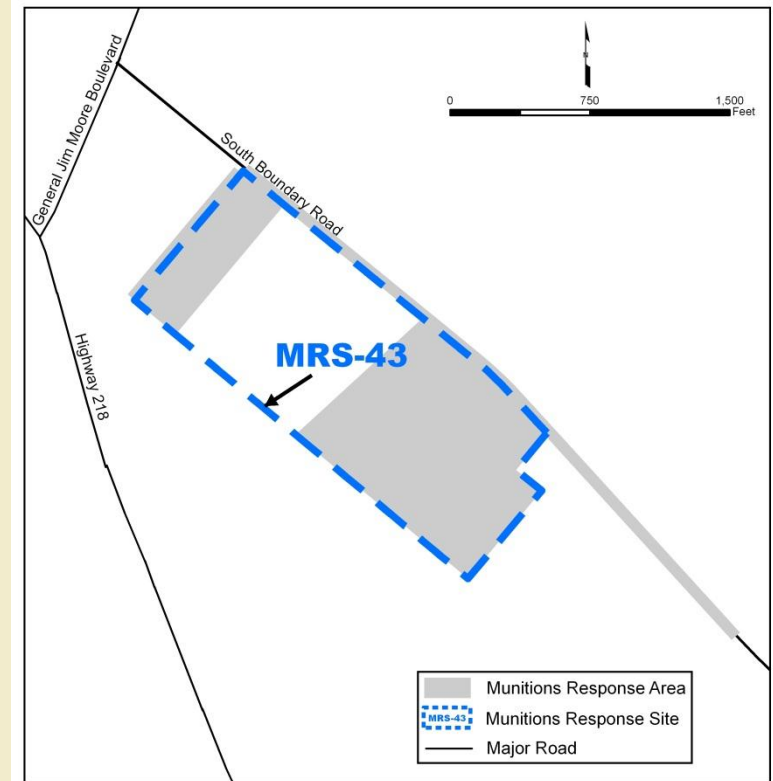
- Previous military use
 - Artillery training using 37mm projectiles
 - Backstop for rifle grenades and shoulder-launched projectiles
- Planned Reuses
 - Habitat management
 - Business park / light industrial and office / research and development
 - South Boundary Road



DRO/Monterey MRA

Munitions Response Sites

- MRS-43
 - 28.5 acres in two non-contiguous areas
- Non-MRS areas
 - 5-acre portion of South Boundary Road not located within the MRS
 - 0.5-acre strip along northern boundary that is not located with the MRS



DRO/Monterey MRA

Previous Work

- MEC investigation and removal actions completed over majority of MRA with the exception of the two narrow areas outside the MRS-43 boundary
 - Initial removal action conducted using analog instruments up to 4 feet below ground surface (bgs)
 - Subsequent removal action phase conducted using digital geophysical equipment to the depth-of-detection
 - All detected anomalies were investigated and removed
- Munitions removed from MRS-43
 - Smoke rifle grenades and smoke hand grenades
 - 37mm projectiles
 - A smoke pot, a flare and a hand grenade fuze



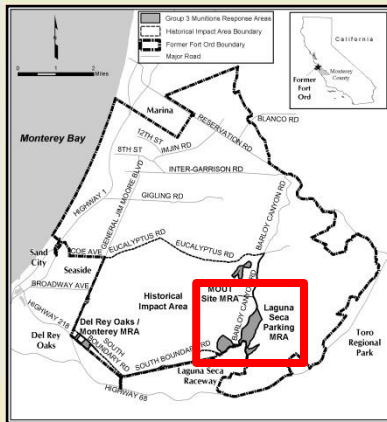
DRO/Monterey MRA

Nature and Extent of Contamination

- MEC and MD encountered were consistent with historical use of the area for weapons and troop training
 - Majority of the MEC items (37mm projectiles, smoke rifle grenades) were located and removed from the higher portions of the hillsides in the northwest portion of MRS-43 and along northeast side of South Boundary Road
- MEC were located within 6 in. bgs



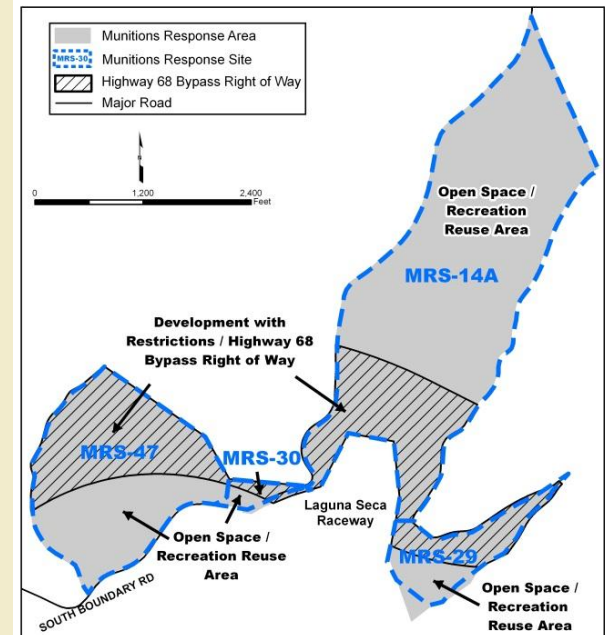
Laguna Seca Parking MRA



- 276 acres in the south-central portion of Fort Ord adjacent to Laguna Seca Raceway

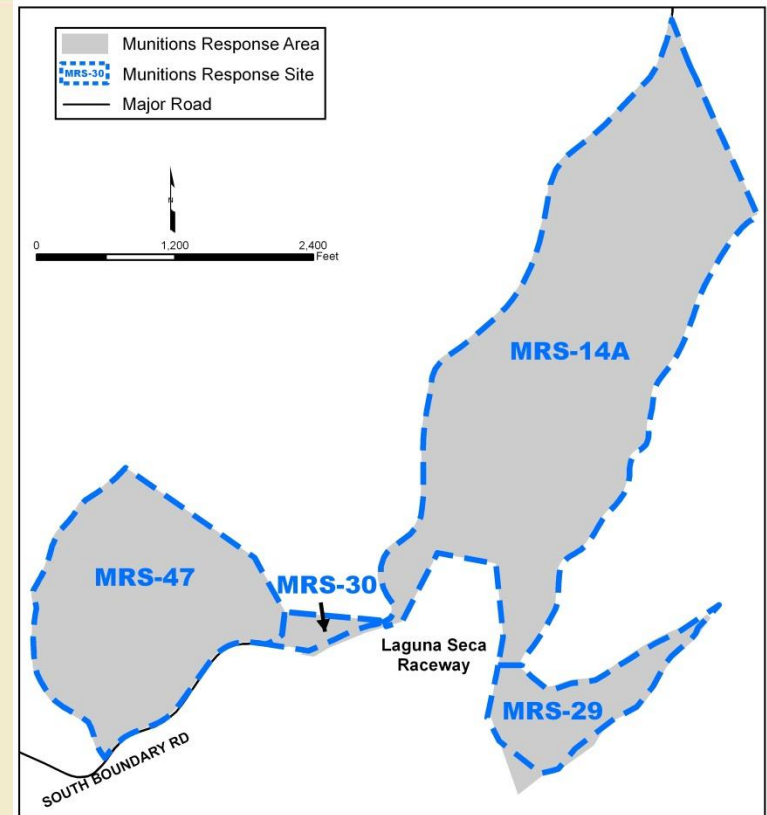
Laguna Seca Parking MRA Site Characteristics

- Previous military use
 - Artillery training
 - Mortar training
 - Troop training and basic maneuvers
- Planned Reuses
 - Open space/recreation, as continued use of area for overflow parking at Laguna Seca Raceway
 - Development (with reserve areas/restrictions) subject to the proposed roadway easement for a bypass of Highway 68



Laguna Seca Parking MRA Munitions Response Sites

- MRS-14A
 - Artillery training
 - Mortar training
 - Troop training and basic maneuvers
- MRS-29 and MRS-30
 - Troop training and basic maneuvers
- MRS-47
 - Artillery training
 - Mortar training



Laguna Seca Parking MRA

Previous Work

- MEC removal actions conducted to 4 ft. bgs across entire MRA with exception of three small areas
 - Western and eastern slopes of MRA-14A, where the removal action was conducted to a depth of 1 ft. bgs
 - Less than 1 acre portion of MRA-14A, where removal action could not be completed due to terrain-related inaccessibility
 - A paved ditch along Lookout Ridge Road
- Munitions removed include
 - Troop Training and Basic Maneuver:
 - smoke hand grenades, smoke rifle grenades, smoke pots, simulators, flares, signals and blasting caps
 - Artillery Training:
 - 37mm, 57mm and 75mm projectiles
 - Mortar Training:
 - 3-in., 60mm, 81mm and 4.2-in. mortars



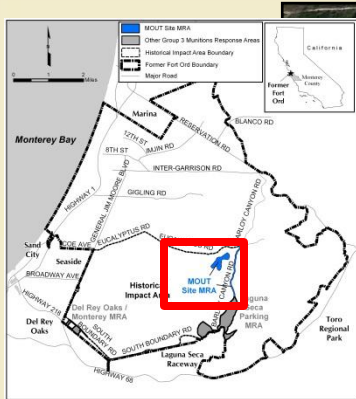
Laguna Seca Parking MRA

Nature and Extent of Contamination

- The majority of MEC and MD encountered are consistent with documented historical use of the area for weapons and troop training
 - Majority of MEC were found in the northwestern most portion of MRS-47, which was likely an impact area beginning prior to WW-II and into the 1970s
 - Remainder of MRA appears to have been used for basic maneuvers with occasional impact by various projectiles
 - Some items were likely the result of the area being at the edge of the Inland Range Complex
- Majority of MEC were located within 24 in. bgs



MOUT Site MRA



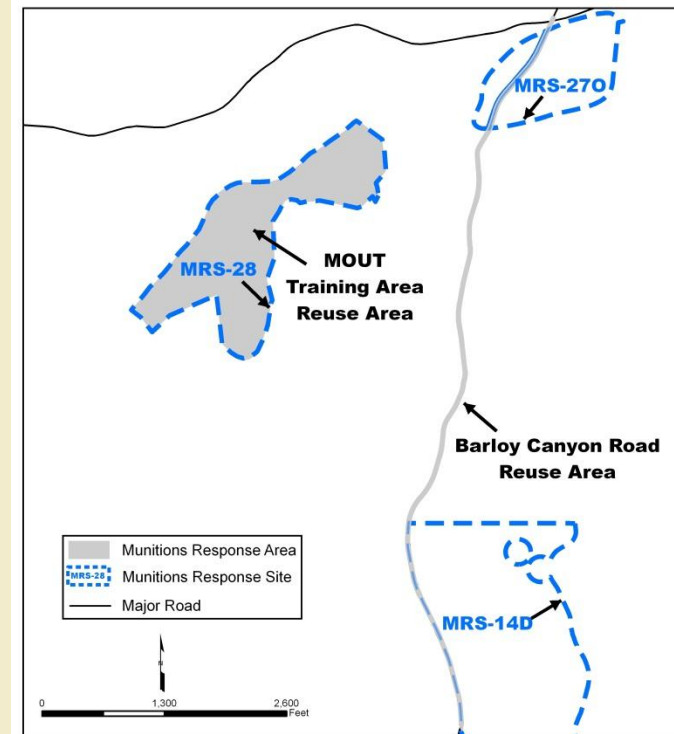
- 61 acres in central portion of former Fort Ord within the northeastern portion of the historical impact area



MOUT Site MRA

Site Characteristics

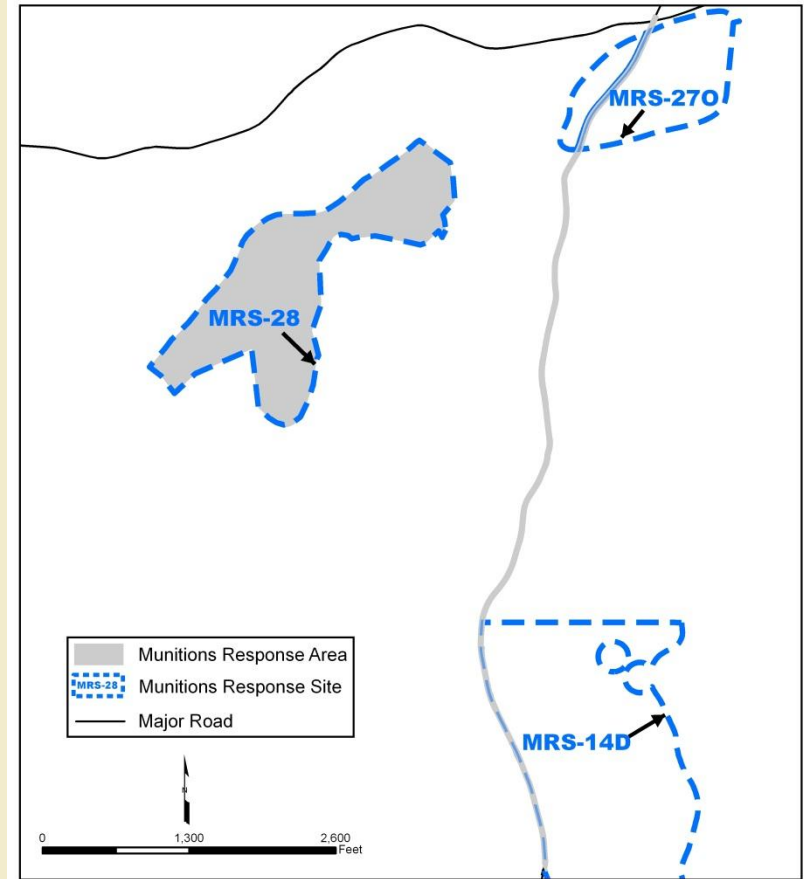
- Previous military use
 - Infantry training in an urban setting since 1950s
 - Barloy Canyon Road maintained as a road since at least the 1930s
- Planned Reuses
 - MOUT Training Area
 - Barloy Canyon Road and associated right of way
 - Planned uses are consistent with the current site usage



MOUT Site MRA

Munitions Response Sites

- MRS-28
 - MOUT Training Area
 - Mock city training area currently used for tactical training
- Barloy Canyon Road
 - Northern segment of road passes through MRS-270 training site
 - Southern segment borders MRS-14D
 - Remainder of road outside of an MRS boundary



MOUT Site MRA

Previous Work

- MEC investigation and surface removal actions completed over majority of MRA with exception of 600 ft. of the southern third of Barloy Canyon Road
 - Grid sampling investigations
 - Visual surface removal action following accidental fire in area
 - Instrument-aided surface verification of area along southwest border of MRS-28 boundary not included in visual surface removal
 - Removal action in MRS-14D adjacent to the east side of Barloy Canyon Road
- Munitions Removed include
 - Simulators, signals and flares related to basic maneuvers
 - Practice rockets (2.36-in. and 3.5-in.) related to weapons training
 - Hand grenades (practice, smoke, fragmentation) and hand grenade fuzes related to hand grenade training
 - Subcaliber practice projectiles



MOUT Site MRA

Nature and Extent of Contamination

- Greatest concentration of MEC and MD were encountered in the southern portion of MRS-28
 - The majority of MEC in MRS-28 were consistent with troop maneuvers and close combat training
- MEC consistent with troop maneuver area were encountered east of Barloy Canyon Road
 - High concentration of subcaliber artillery simulators were encountered southeast of Barloy Canyon Road, as expected
- Majority of MEC were located within 24 in. bgs



Group 3 MRAs

Remedial Investigation Summary

- MEC and MD encountered were consistent with historical use of the areas for weapons and troop training
- Results of the RI indicate that removal actions successfully detected, excavated and recovered MEC to address the imminent safety hazards
- It is possible for residual MEC to remain in the MRAs, therefore a risk assessment and feasibility study were prepared



Group 3 Risk Assessment

- Assesses risk to future land users from any potentially remaining MEC
 - Utilizes the Fort Ord Risk Assessment Protocol
 - Evaluates each reuse area
 - Considers multiple receptors for each reuse area
- Overall risk score expressed in letters A through E

Overall MEC Risk Score	A	B	C	D	E
	Lowest	Low	Medium	High	Highest

DRO/Monterey MRA

Risk Assessment Results

- Summary of Overall MEC Risk Scores

Reuse Area	Receptor	Overall MEC Risk Score				
		A Lowest	B Low	C Medium	D High	E Highest
Habitat Management Reuse Area	Trespasser	✓				
	Habitat Monitor	✓				
	Recreational User	✓				
	Maintenance Worker	✓				
Business Park/Light Industrial, Office/Research & Development, and Road Reuse Areas	Trespasser	✓				
	Office Worker	✓				
	Maintenance Worker	✓				
	Construction Worker	✓				

Laguna Seca Parking MRA Risk Assessment Results

- Summary of Overall MEC Risk Scores

Reuse Area	Receptor	Overall MEC Risk Score				
		A Lowest	B Low	C Medium	D High	E Highest
Open Space/ Recreation and Development with Restrictions Reuse Areas	Trespasser	✓	✓			
	Recreational User	✓	✓			
	Maintenance Worker		✓	✓	✓	✓
	Construction Worker		✓	✓	✓	✓

MOUT Site MRA

Risk Assessment Results

- Summary of Overall MEC Risk Scores

Reuse Area	Receptor	Overall MEC Risk Score				
		A Lowest	B Low	C Medium	D High	E Highest
MOUT Training Area Reuse Area	Trespasser		✓	✓		
	Trainee		✓	✓		
	Maintenance Worker		✓	✓	✓	
	Construction Worker		✓	✓	✓	
Barloy Canyon Road Reuse Area	Recreational User		✓			
	Maintenance Worker				✓	
	Construction Worker				✓	

Group 3 Feasibility Study

- Defines Remedial Action Objectives
 - Protection of Human Health and the Environment
 - Compliance with Applicable Federal and State Laws and Regulations
- Develops remedial alternatives
- Evaluates and compares alternatives
- Identifies preferred remedial alternative



Remedial Alternatives Evaluated



Alternative 1	No Further Action
Alternative 2	Land Use Controls
Alternative 3	Additional Subsurface MEC Remediation
Alternative 4	Additional Subsurface MEC Remediation in Selected Areas and Land Use Controls

Notes:

- Alternatives 1,2,3 apply to all Group 3 MRAs
- Alternative 4 applies only to DRO/Monterey and MOUT Site MRAs
- Long-Term Management Measures will also be instituted under each of the four remedial alternatives

CERCLA Nine Evaluation Criteria

Threshold Criteria

1. Overall Protection of Human Health & the Environment
2. Compliance with Applicable or Relevant and Appropriate Requirements (ARARs)

Primary Balancing Criteria

3. Long Term Effectiveness and Permanence
4. Reduction of Toxicity, Mobility, or Volume through Treatment
5. Short Term Effectiveness
6. Implementability
7. Cost

Modifying Criteria

8. State Acceptance
9. Community Acceptance

Alternative 1 - No Further Action

- Assumes no further action would be taken to address potential MEC risks for the receptors identified in the risk assessment
- Required to be evaluated as a baseline for comparison to the other remedial alternatives
- This alternative was evaluated for all Group 3 MRAs



Alternative 2 - Land Use Controls

- Land Use Controls alternative consists of
 - MEC Recognition and Safety Training
 - Construction Support by UXO-qualified personnel
 - Restrictions prohibiting residential reuse
- Land Use Controls, without additional MEC remediation, would be implemented to address potential MEC risks for intrusive reuse
- This alternative was evaluated for all Group 3 MRAs



Alternative 3 - Additional Subsurface MEC Remediation

- Additional Subsurface MEC Remediation alternative consists of
 - Vegetation Clearance
 - MEC Remedial Action
- Assumes additional subsurface MEC remediation would be conducted throughout the entire footprint of the Group 3 MRAs
- This alternative was evaluated for all Group 3 MRAs



Alternative 4 - Additional Subsurface MEC Removal and Land Use Controls

- Additional Subsurface MEC Remediation and Land Use Controls alternative consists of
 - Additional Subsurface MEC Remediation
 - Vegetation Clearance in selected areas
 - Additional MEC Remedial Action in selected areas
 - Land Use Controls
 - MEC Recognition and Safety Training
 - Construction Support by UXO-qualified personnel
 - Restrictions prohibiting residential reuse
- This alternative was evaluated only for DRO/Monterey and MOUT Site MRAs




Long Term Management Measures

(Applicable to all four remedial alternatives evaluated)

- Deed Notice
- Annual Monitoring and Reporting
- Five-Year Review Reporting



Group 3 Remedial Action Alternatives



	DRO / Monterey MRA	Laguna Seca Parking MRA	MOUT Site MRA
Alternative 1: No Further Action	✓	✓	✓
Alternative 2: Land Use Controls	✓	✓	✓
Alternative 3: Additional Subsurface MEC Remediation	✓	✓	✓
Alternative 4: Additional Subsurface MEC Removal in Selected Areas and Land Use Controls	✓		✓
Long Term Management Measures	✓	✓	✓

Group 3 Preferred CERCLA Remedial Action Alternative

Alternative 2

Land Use Controls

- MEC Recognition and Safety Training
- Construction Support by UXO-qualified personnel
- Restrictions prohibiting residential reuse



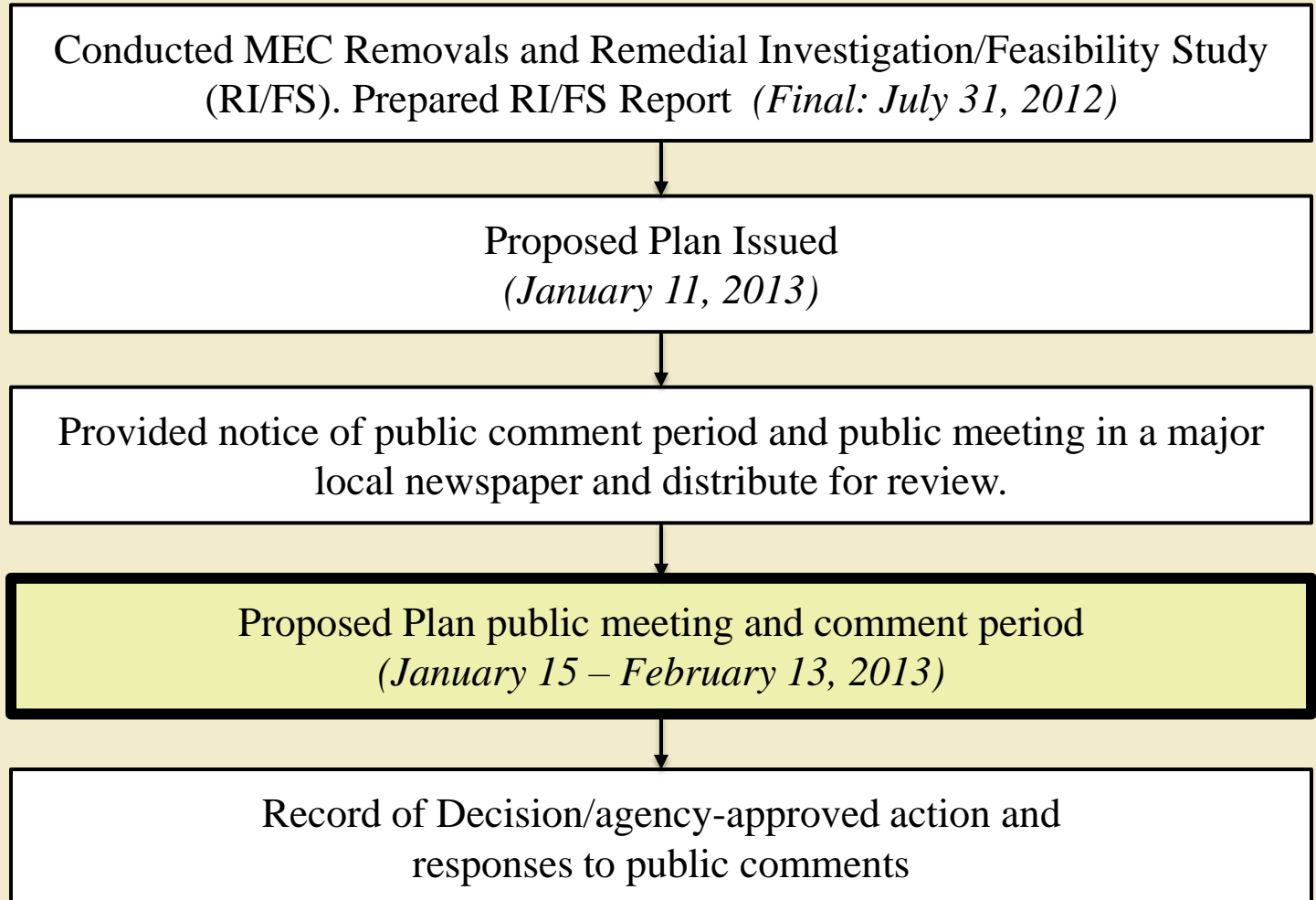
Summary

The Army is proposing Alternative 2, Land Use Controls, for the Group 3 MRAs

- Removal Action has been completed
- Extensive RI/FS has been completed
- Supports the planned reuse
- Best meets the CERCLA Nine Evaluation Criteria
- Long Term Management Measures will also be implemented

Group 3 MRAs

Record of Decision Process



For Additional Information

Visit the Army's website at:
www.fortordcleanup.com

Fort Ord Administrative Record

Building 4463 Gigling Road, Room 101
Ord Military Community, CA 93944-5008



How To Provide Comments

Verbal Comments Tonight
Submit Written Comments During the Comment Period

Please send your comments to:

Department of the Army
Fort Ord Base Realignment and Closure (BRAC) Office
Attn: Gail Youngblood
BRAC Environmental Coordinator
P.O. Box 5008, Monterey, CA 93944-5008

(Please reference the Group 3 Proposed Plan in your correspondence)

Comments Must be Postmarked
by February 13, 2013

Questions

Guidelines

- Clarifying questions only
- One question at a time
- Be respectful of others
- Stay within the allotted time period



Break

- 6:00 – 6:15 Open House
- 6:15 – 7:00 Presentation
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Break

7:25 PM Reconvene for Public
Comments



Comments

Guidelines

- Submit a speaker card
- State your name and comment clearly
- Be respectful of others
- Stay within the allotted time period