

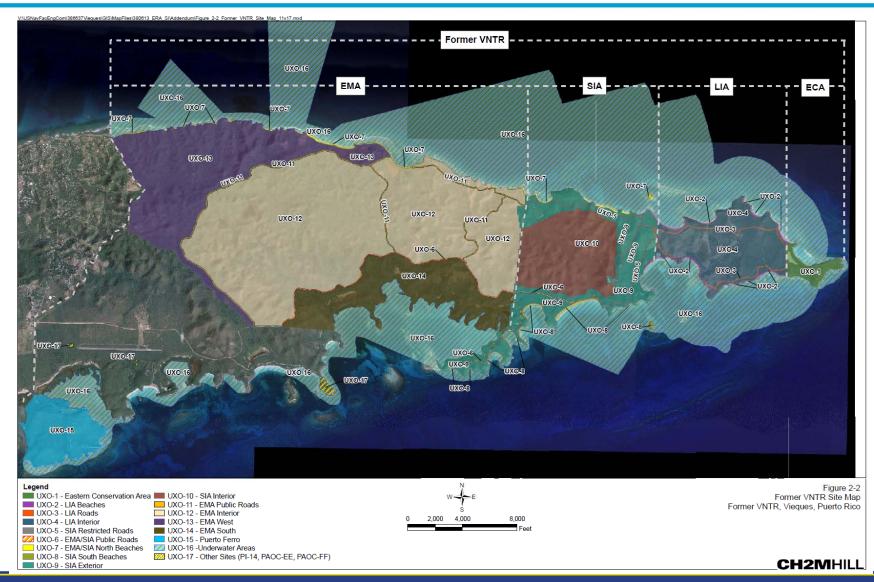
Engineering Evaluation and Cost Analysis for East Vieques Site 13 (UXO-13)

**RAB** Meeting

November 15, 2011

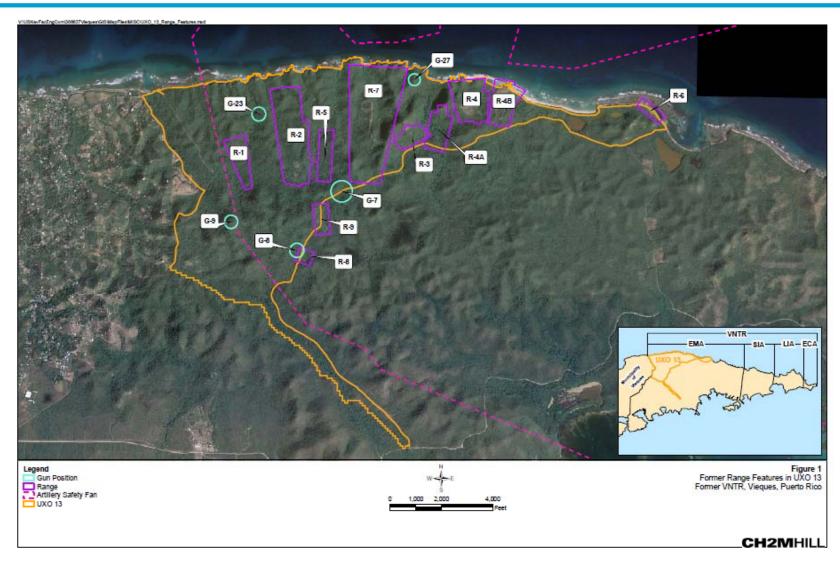
### Former Vieques Naval Training Range UXO Sites





# Ranges and Gun Positions Identified at UXO-13





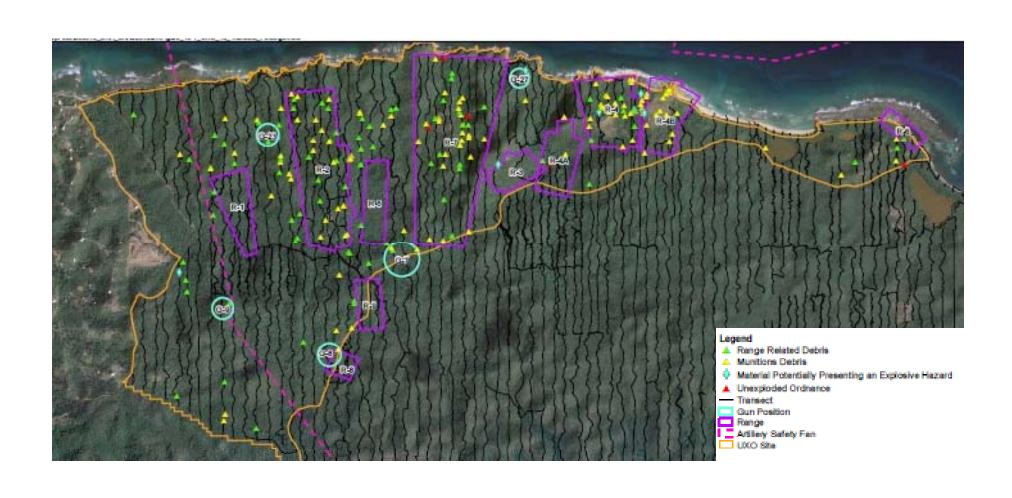
#### **UXO-13 Ranges and Gun Positions**



- Range 1 Aerial photo- Identified Range
- •Range 2 Combat Rifle Range
- Range 3 Hand Grenade Range
- •Range 4 M-79 Grenade Launcher/Rifle Grenade Range
- •Range 4A Flame Range
- •Range 4B 3.5-inch Rocket Launcher Range
- •Range 5 Pistol Range
- Range 6 Open Detonation Training Range
- •Range 7 M-60 Caliber Machine Gun Range
- Range 8 Aerial photo identified range
- Range 9 Aerial photo identified range
- •Gun Positions 7, 8, 9, 23 and 27 (From Aerial Photo analysis)

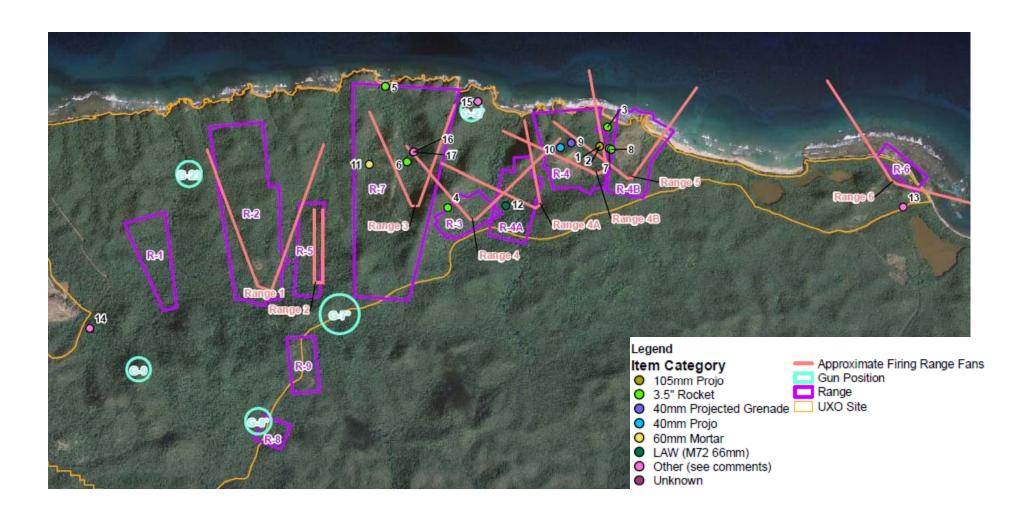
## **Previous Site Investigation Findings at UXO-13**





# Materials Potentially Presenting An Explosive Hazard (MPPEH)





#### **USFWS CCP Proposed Land Use at UXO-13**





- Vehicle Public Use Road Open
  - Vehicle Public Use Road Proposed
- Management Access Trails
- ----- Proposed Hiking/Biking Interpretive Trail
- Refuge Entrance

- Beach Use
- Bermuda Triangle Interpretive Site
- 💑 Biking Trail
- Fishermen's Launch Facilities
- Fishing Access

- Hiking Trail
- Historic Site
- Interpretive Trail
- 🔀 Kayaking
- Faro Berdiales Lighthouse

- Lookout Area, Binoculars
- Observation Tower
- Parking Area
- Reforestation Area
- Rest Area

- Scenic View
- Seasonal Beach Use
- Beach Use
- Visitor Contact Center

## **Summary of Previous Data**



- •48 munitions items and 363 munitions related scrap metal items were identified in UXO 13
- Approximately 5% (116 acres) of UXO-13 was investigated using transects
- Only one MPPEH item (a flare) was identified west of Range 7 (relatively low hazard)
- •The remainder of MPPEH was found either within or east of Range 7 (620 acres)
- •UXO 13 was identified as one of the highest priority sites based on the Department of Defense (DoD) Prioritization Protocol

# **Engineering Evaluation/ Cost Analysis Summary**



- Objective: To evaluate interim remedial action alternatives to reduce explosive safety risks associated with the explosive safety hazards of munitions
  - -Munitions items containing Material Potentially Presenting an Explosive Hazard (MPPEH) were identified in the eastern (620 acre) portion of site UXO-13
  - Investigations of the western portion of UXO-13 will be conducted as a separate project to further asses if any hazardous munitions are in this area

## **Engineering Evaluation/ Cost Analysis Summary**

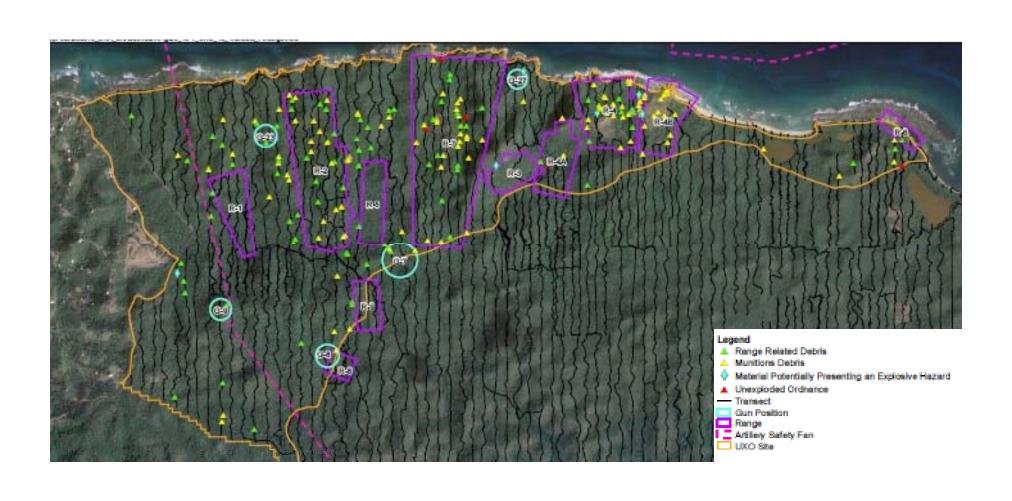


#### Three Alternatives were considered

- 1. No Action: leave the site as it is
- 2. Engineering controls for a select area within UXO -13, where explosive safety hazards were identified
- 3. Removal of surface MEC from a select area within UXO-13, where explosive safety hazards were identified

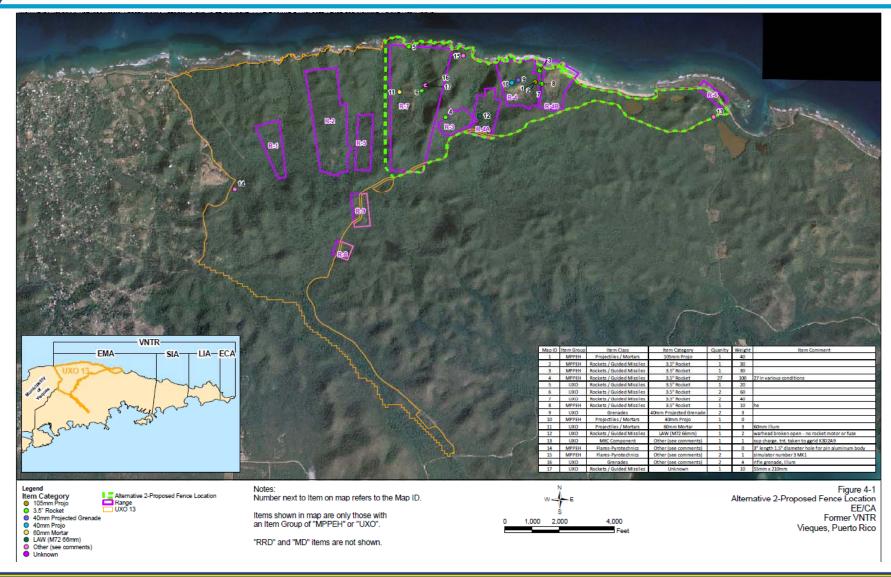
### **EE/CA Alternative 1: No Action**





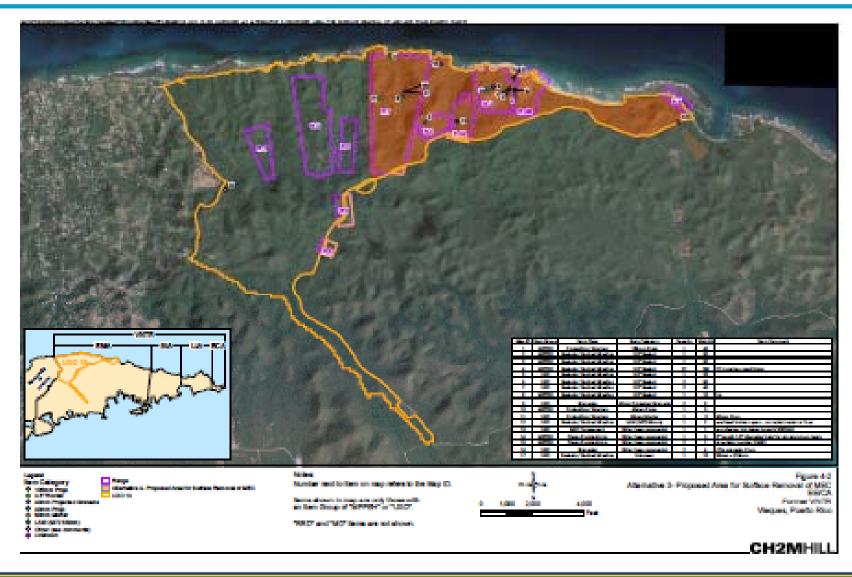
# **EE/CA Alternative 2: Engineering Controls**





## **EE/CA Alternative 3: Surface Clearance of MEC**





# **Engineering Evaluation/ Cost Analysis Summary**



- Alternative 3 was selected as the recommended removal action alternative
  - -Has a high level of efficiency in meeting the remedial action objectives
  - -Has a relative moderate ease of implementation
  - -Has a relatively higher cost than Alternative 2
  - -Allows FWS to implement several of their recommended land use goals

#### Path Forward for UXO-13 EE/CA



- EE/CA released for public review
  - -Public Notice in El Vocero Newspaper
    - Published on October 17,2011
    - 45 Day public review /comment period provided
    - Public review period ends November 30,2011
  - -Action Memorandum will address significant public comments
- Draft Final Work Plan for implementing EE/CA will be submitted for RAB Review
  - -Anticipated submittal date is mid December, 2011