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MEETING AGENDA FOR RESTORATION ADVISORY BOARD (RAB) MEETING NUMBER 47
HELD ON 17 NOVEMBER 2015 AT PUNTA MULAS LIGHTHOUSE (ENGLISH VERSION)
VIEQUES ISLAND PUERTO RICO
11/17/2015
CH2M HILL

Vieques Investigation and Cleanup
Navy Facilities Engineering Command (NAVFAC) Atlantic

RESTORATION ADVISORY BOARD

Meeting Number 47

6:00 p.m. - 8:30 p.m., November 17, 2015 – Punta Mulas Lighthouse, Vieques

AGENDA

6:00- 6:15	Welcome and Introductions	Dan Waddill/Navy
6:15 – 7:15	Navy Project Status Update and Path Forward • SWMU 4 Non-Time Critical Removal Action Status • Underwater Work Update o Wide Area Assessment • Beach Dynamics Study Status • Status of Sites and Upcoming Activities • National Wildlife Refuge Week Environmental Fair Participation	Dan Waddill/Navy Kevin Cloe/Navy Daniel Hood/Navy Madeline Rivera/Navy
7:15 – 7:25	Break	
7:25 – 8:00	Regulatory Agencies Update • Marine Terrestrial Zone- PRDNER	USFWS PREQB EPA PRDNER
8:00 – 8:30	Other Questions and Comments from the Public	Members of the Public

Vieques Restoration Advisory Board Meeting #47

November 17, 2015

Reminders

- **Simultaneous translation is provided for this meeting. Headphones are available for your use.**
- **Additional information about the Vieques cleanup can be found at:**
  - **Vieques public website: www.navfac.navy.mil/vieques**
  - **Vieques Cleanup News flyers and newsletters**
  - **Vieques Restoration Program Facebook page (www.facebook.com/ViequesRestoration)**

Presentation Process

- **To enhance the effectiveness of meeting discussions, please remember:**

1. Speakers present information.
2. Audience hold questions/comments to end of each presentation.
3. Ensure everyone who has a question has opportunity to ask question or make comment
4. Agency representatives will also be available for additional questions or comments during the break or after the meeting.

Agenda for Tonight's Meeting

6:00- 6:15	Welcome and Introductions	Dan Waddill/Navy
6:15 – 7:15	Navy Project Status Update and Path Forward • SWMU 4 Non-Time Critical Removal Action Status • Underwater Work Update ○ Wide Area Assessment • Beach Dynamics Study Status • Status of Sites and Upcoming Activities • National Wildlife Refuge Week Environmental Fair Participation	Dan Waddill/Navy Kevin Cloe/Navy Daniel Hood/Navy Madeline Rivera/Navy
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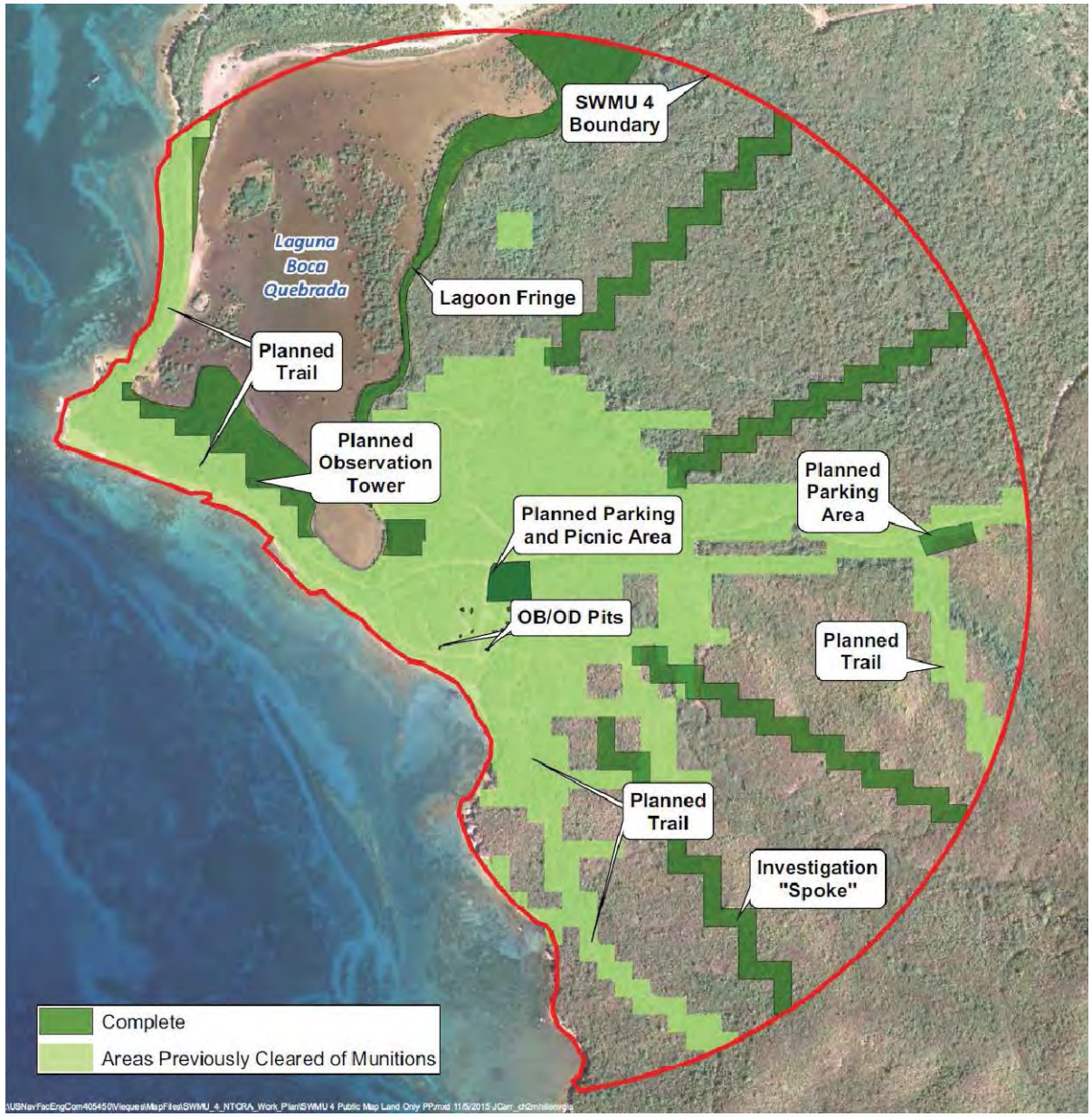
Navy Project Update

SWMU 4 NON-TIME CRITICAL INTERIM REMOVAL ACTION

Status of NTCRA



SWMU 4 NTCRA Status Update

- "Mag & Dig" procedure was used to initially reduce the anomaly density at the OB/OD Pits
- DGM performed following "Mag and Dig" to identify remaining anomalies, which were then excavated

SWMU 4 NTCRA Status Update

- **EM-61 geophysical instrument being used to verify the location of subsurface anomalies for teams to excavate**

SWMU 4 NTCRA Status Update

- **Highest quantity of munitions and debris found at OB/OD pits**
- **Soils sifted through a screen to remove small munitions and debris**

SWMU 4 NTCRA Status Update

- **Weather conditions can affect the pace of removal**

Summary of NTCRA and Path Forward

- **All areas planned included in the interim removal action have been completed**
- **Key observations:**
  - Over 6,000 MEC were removed during the current NTCRA
    - 94% were 20 mm projectiles
  - Nearly 30,000 pounds of MEC and munitions debris were removed from the site
  - No MEC identified at the eastern parking area
  - One MEC (20 mm projectile) identified at the observation tower
  - Highest densities of MEC at OB/OD pits
- **Prepare an After Action Report**
- **Prepare Feasibility Study Addendum**
- **Perform Remedial Investigation of UXO 16 adjacent to SWMU 4**

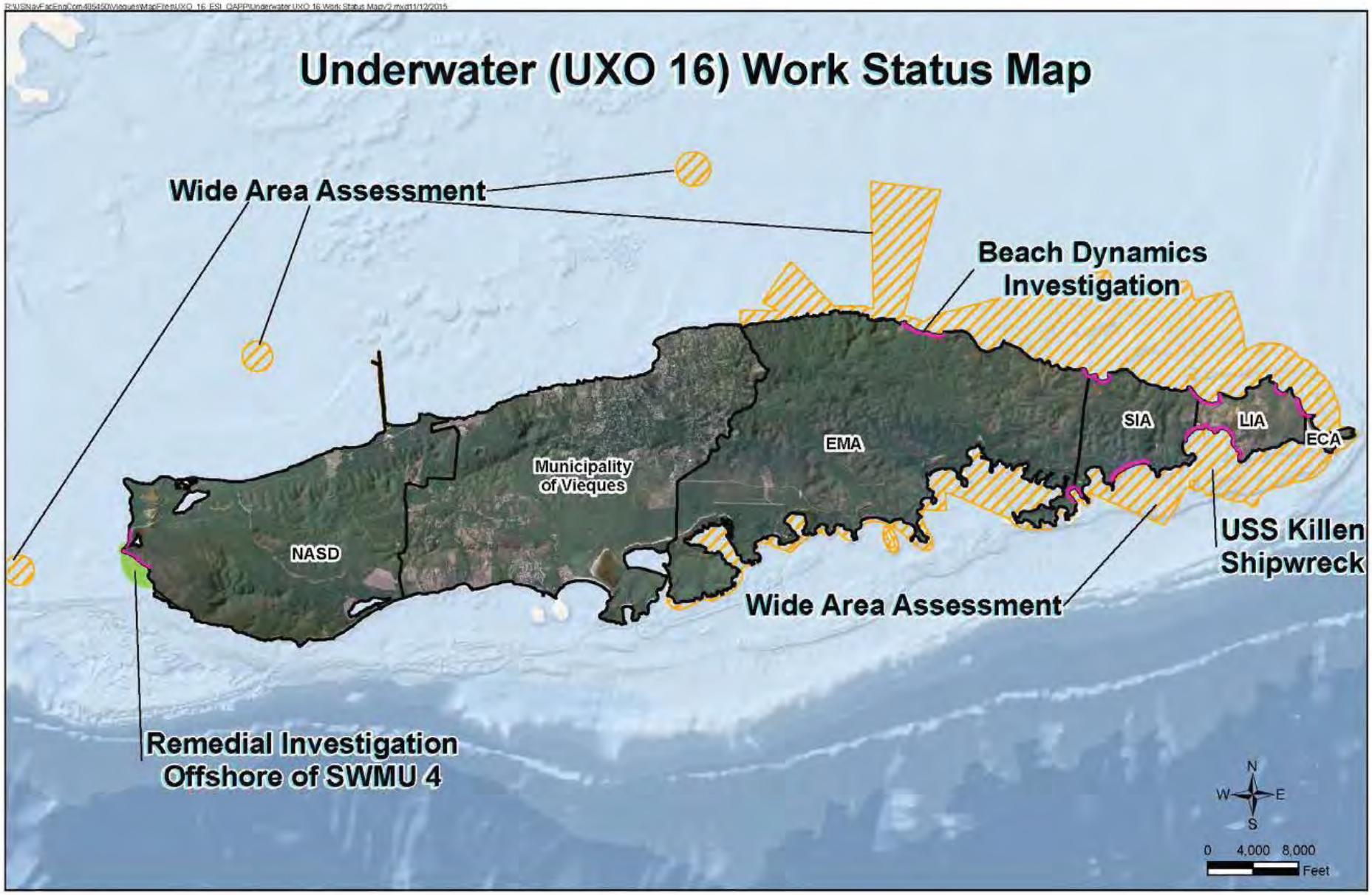
Path Forward

- Prepare an After Action Report
- Prepare Feasibility Study Addendum
- USFWS to finalize plan for public use of cleared areas
- Installation of signs and educational kiosks (pending USFWS plan to open area)

Navy Project Update

UNDERWATER (UXO 16) WORK STATUS UPDATE

Underwater (UXO 16) Work Status



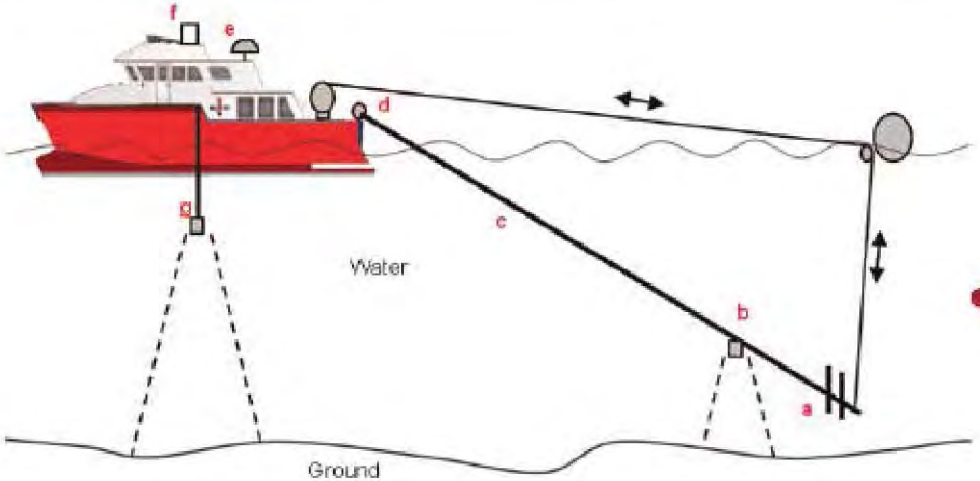
UXO 16 Wide Area Assessment

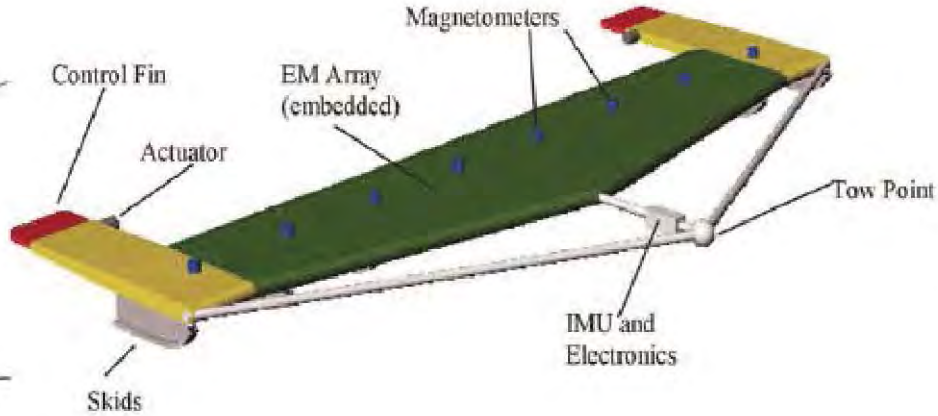
- **Wide Area Assessment (WAA) is the <u>first step</u> in the Remedial Investigation process**
  - **Identify where the largest densities of munitions may be located**
  - **Provide information to help prioritize areas for more focused, follow-up investigations**
  - **Provide information for biological assessments and/or procedures to ensure protection of key marine species and habitats**

UXO 16 WAA Overview

- **WAA field work anticipated to begin in early 2016**
- **WAA approach:**
  - Throughout UXO 16 (approximately 11,500 acres)
  - Uses digital geophysical mapping (magnetometer)
  - ~100 meter spacing of transects, resulting in approximately 6% coverage, which is similar to the process followed on land
  - Does not include several areas:
    - Offshore of SWMU 4 – Remedial Investigation planned for 2016
    - Mosquito Pier – Will require alternate approach due to the presence of the pier and significant underwater obstructions
    - Area around Cayo La Chiva – Has already been surveyed and removal action is planned for 2016

UXO 16 WAA Overview (cont.)



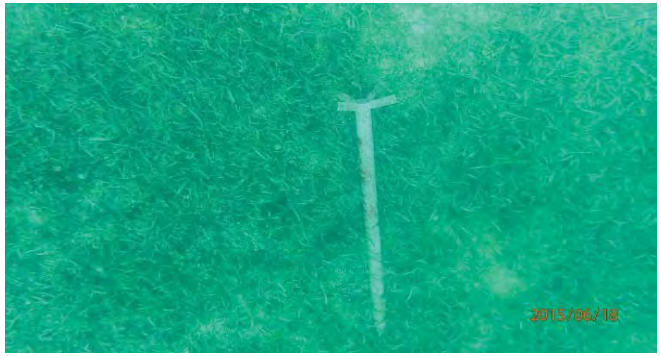


Navy Project Update

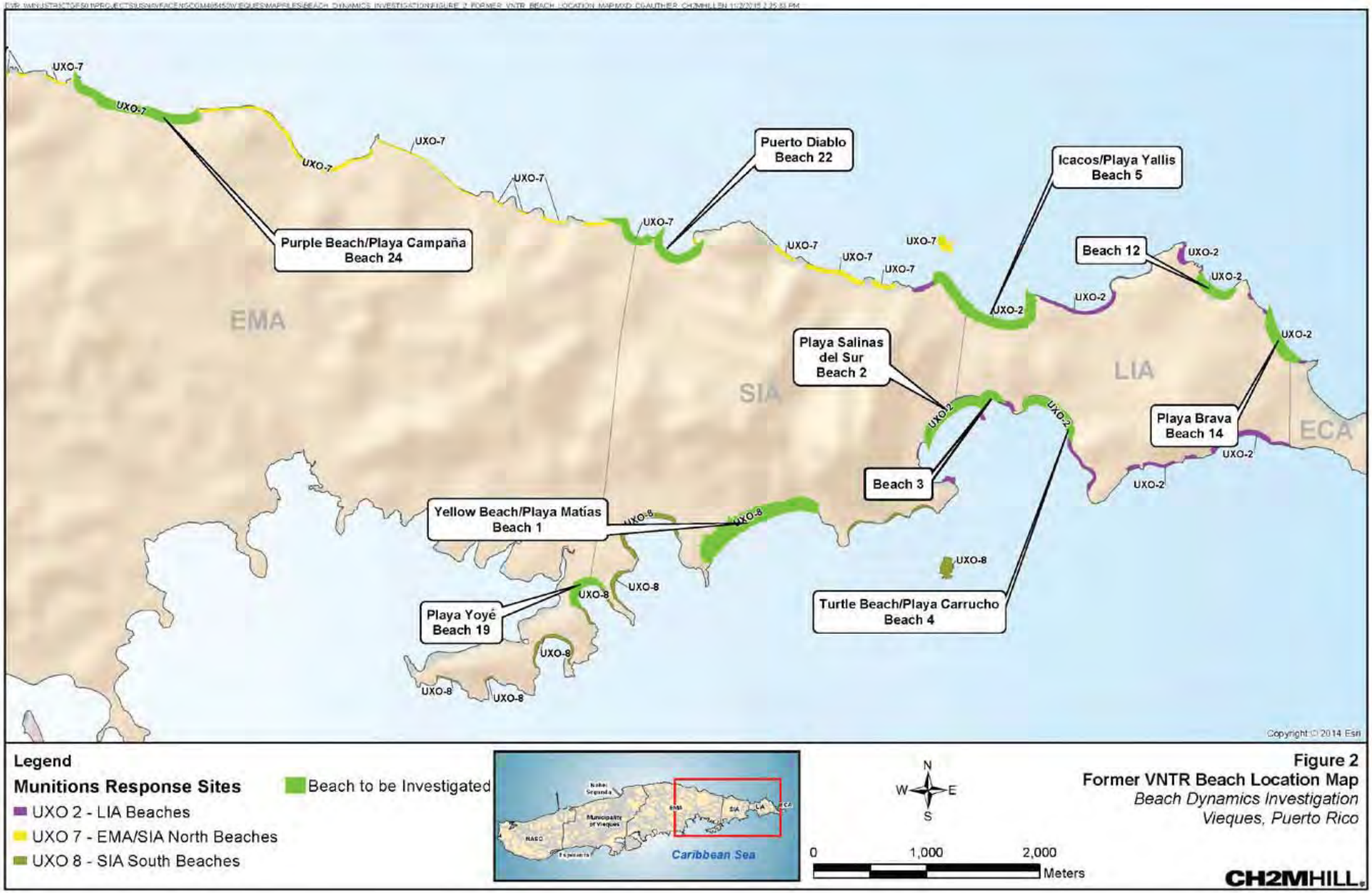
BEACH DYNAMICS STUDY STATUS

Beach Dynamics Investigation Overview

- **Objectives**
  - Augment current understanding of the dynamic nature of the beach environment and its impact on the mobility of munition items.
- **Achieved by:**
  - Monthly topographic surveys (elevation profiles) of 11 beaches and their nearshore environment
  - Munitions surrogate tracking
  - Acoustic Wave, Current and Water Level (AWAC) measurements
  - Quarterly sand/sediment sampling for grain size (used for numeric modeling for long term predictions and munition item transport)

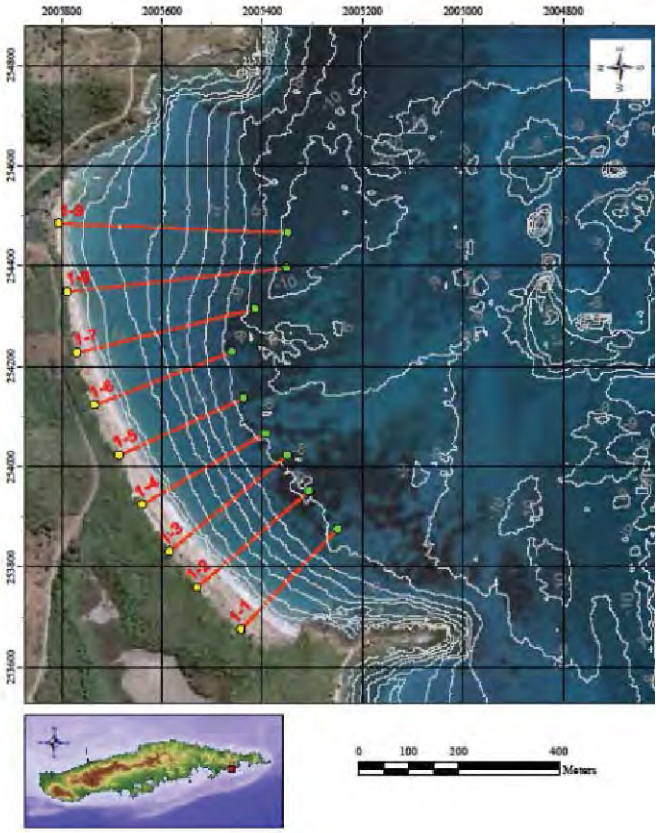


Beach Locations in the Former VNTR

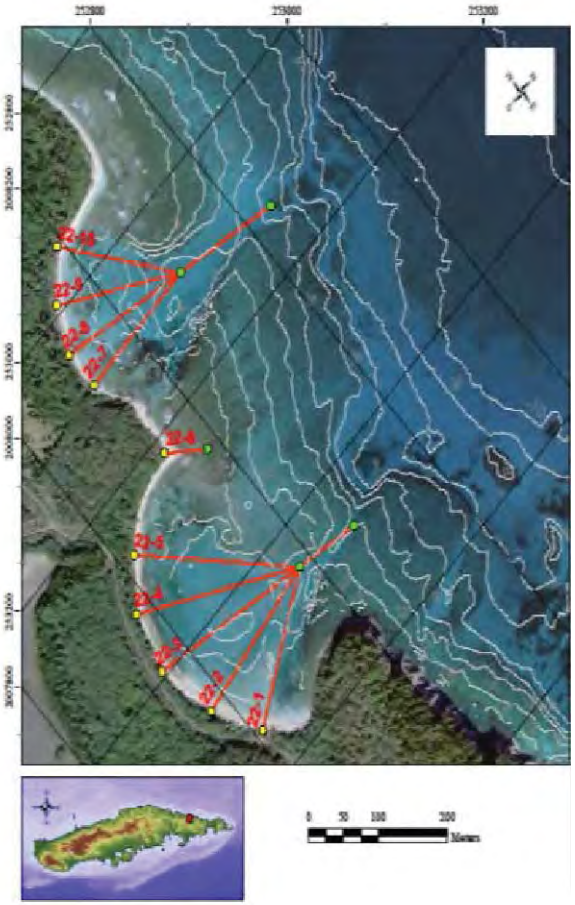


Beach Location in the Former NASD

Addressing Various Types of Beaches in the Study



Beach 1/Yellow Beach
(South facing beach)



Beach 22/Puerto Diablo
(North facing beach)

Transect lines displayed on two different types of beaches.

Land and Boat Survey Photos

Dynamic Nature of Beaches

Beach 14/Playa Brava – September

Beach 14/Playa Brava - October

Beach 24/Purple Beach/ Playa Campaña - September

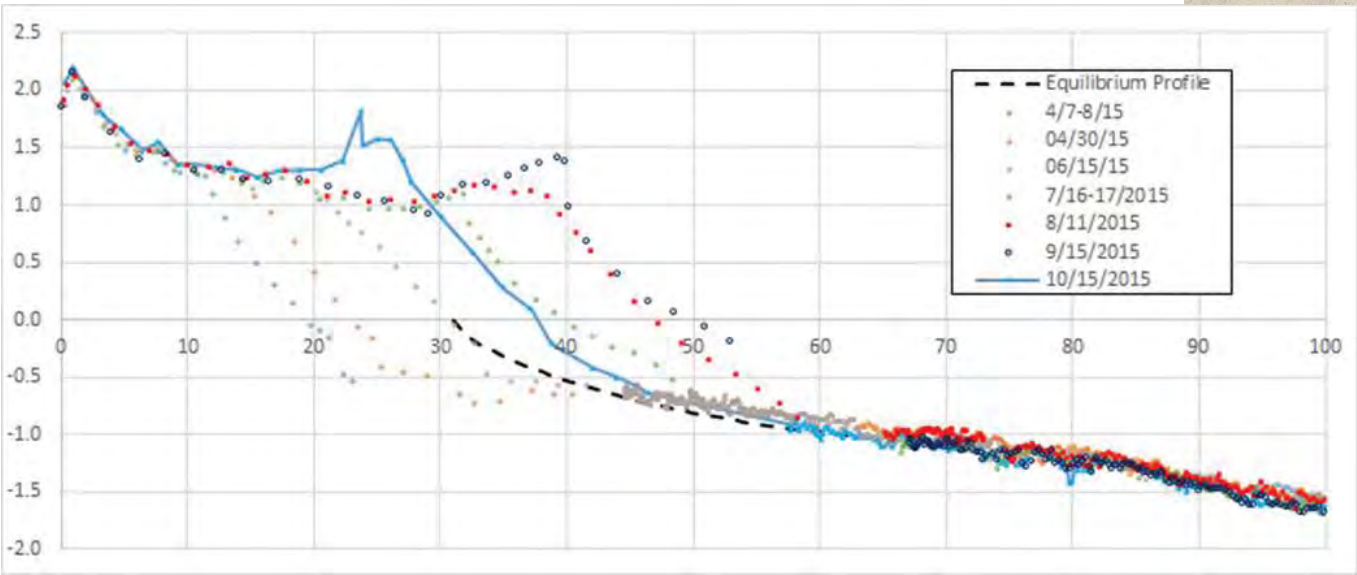
Beach 24/Purple Beach/Playa Campaña - October

Preliminary Survey Results to Date

- Stable Beaches
  - Beaches 2, 3, 4, 5, 19 and SWMU 4
- Moderately Dynamic Beaches
  - Beaches 1, 12, and 22
- Very Dynamic Beaches
  - Beaches 14 and 24

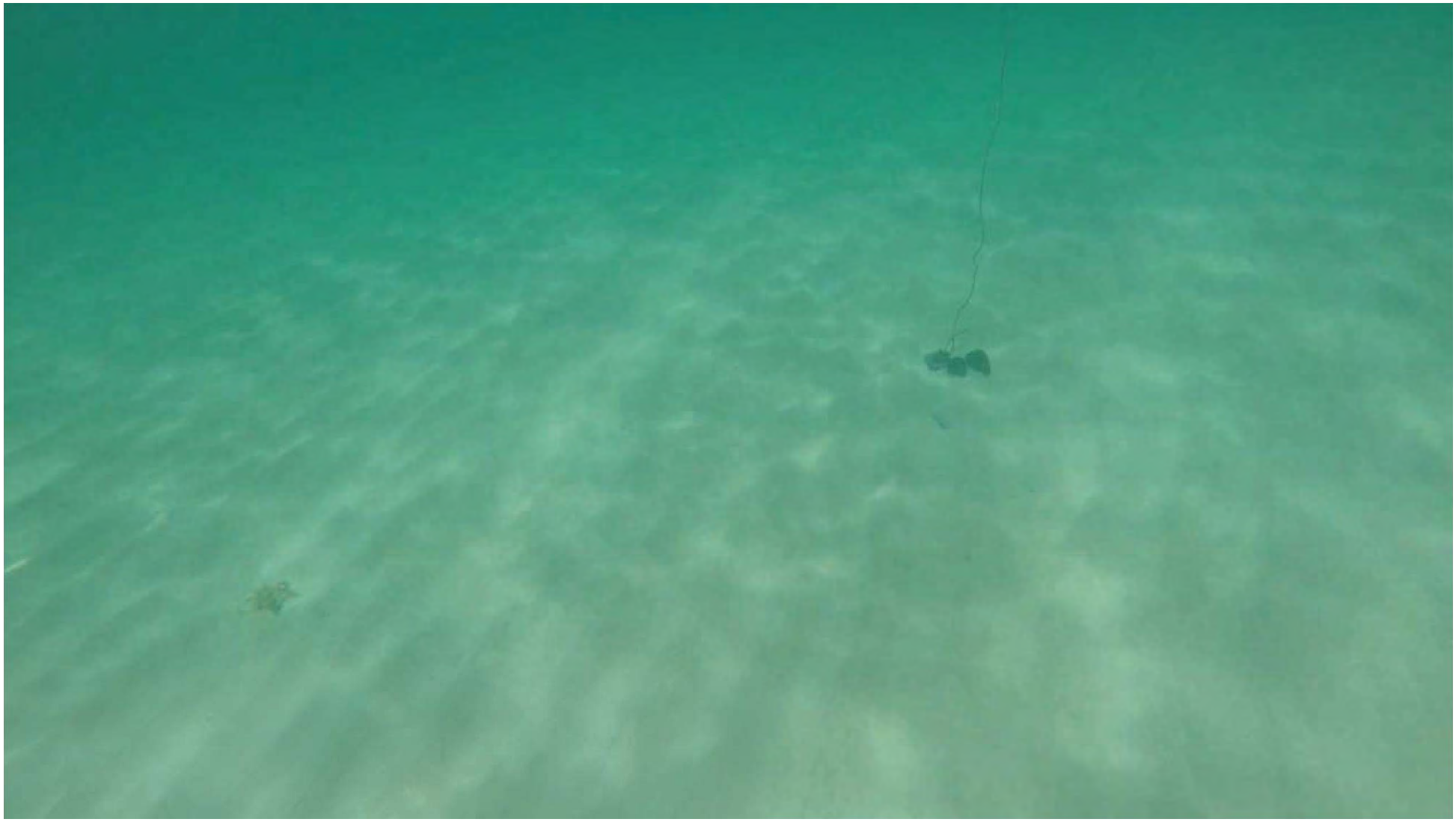
Sampling – Grain Size

Beach 24 Transect Profile – Elevations (m)



Sand Berm

Surrogate Tracking Video via Remotely Operated Vehicle (ROV)



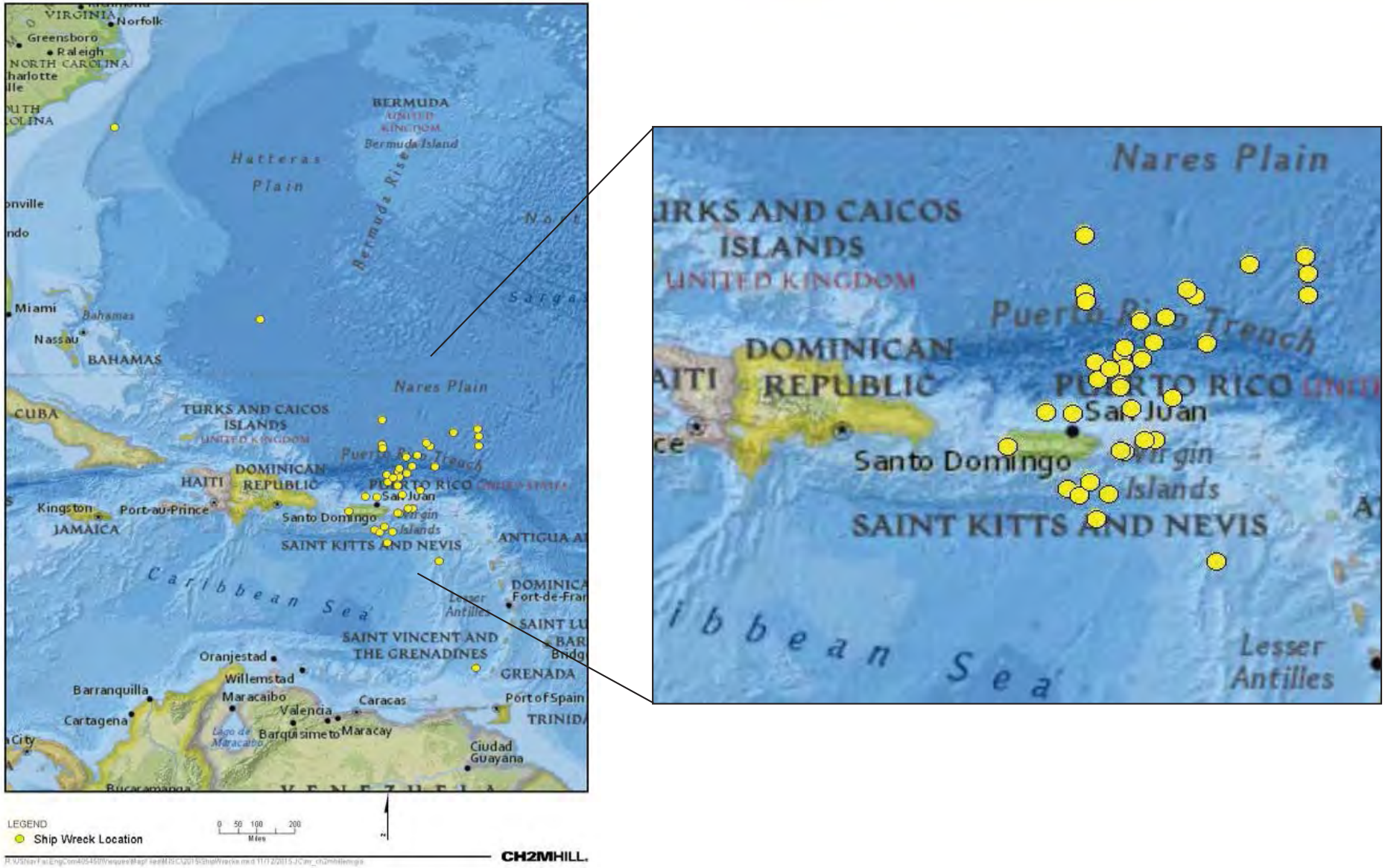
Navy Project Update

INFORMATION ON SUNKEN SHIPS

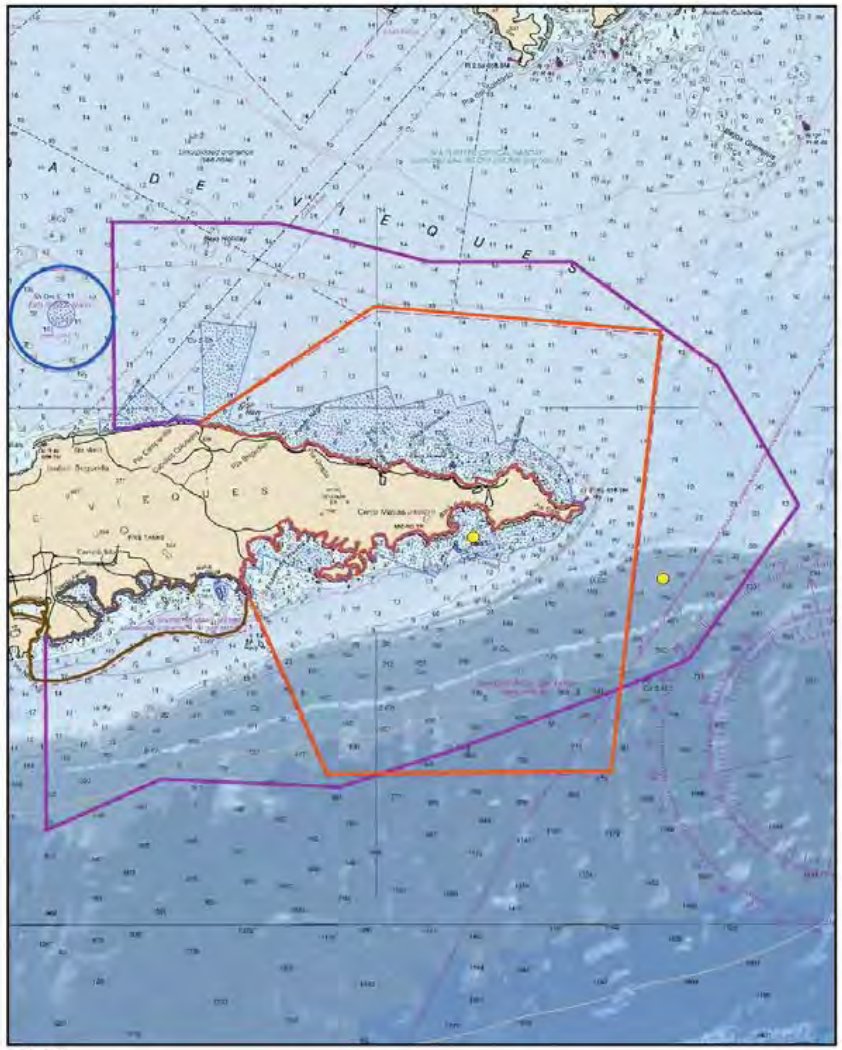
List of Sunken Ships

- USS Atakapa
- USS Barr
- USS De Long III
- USS Samuel B Roberts
- USS Stockham
- USS Vesole
- USS Ross
- USS William C Lawe
- USS Rowe
- USS Mackerel
- USS LCM-8
- USS Stribling
- USCGC Blackhaw
- USS Glennon
- USS Submarine Chaser No 340
- USS Robbinson
- USS YP-205
- USS YW-32
- USCGC Acacia
- USS Chilula
- USS Soley
- USS Cony
- USS Darby
- USCGS Em Dow
- USS Richmond K. Turner
- USS YA-61
- USS Caron
- USS Charles R. Ware
- USS Cable
- USS Otter
- USS Stanton
- USS Bray
- USS Gherardi
- USS Killen
- USS Ganadoga
- USS Gillespie
- USS Joseph E Connolly
- USS Frankford
- USS PC-457
- USS Kenneth M. Willett
- USS Robert L Wilson
- USS Pettit
- USS Roberts
- USS Otterstetter

Map of Sunken Ships



Map of Sunken Ships Near Vieques



LEGEND

- Ship Wreck Location
- UXO 16
- Explosives Anchorage Area (NOAA Chart)
- Offshore Danger Area (NOAA chart)
- Offshore Restricted Area (NOAA chart)
- Waters of the Inner Range

0 1 2 4
Miles

Units on the map are Fathoms
1 Fathom = 6 Feet

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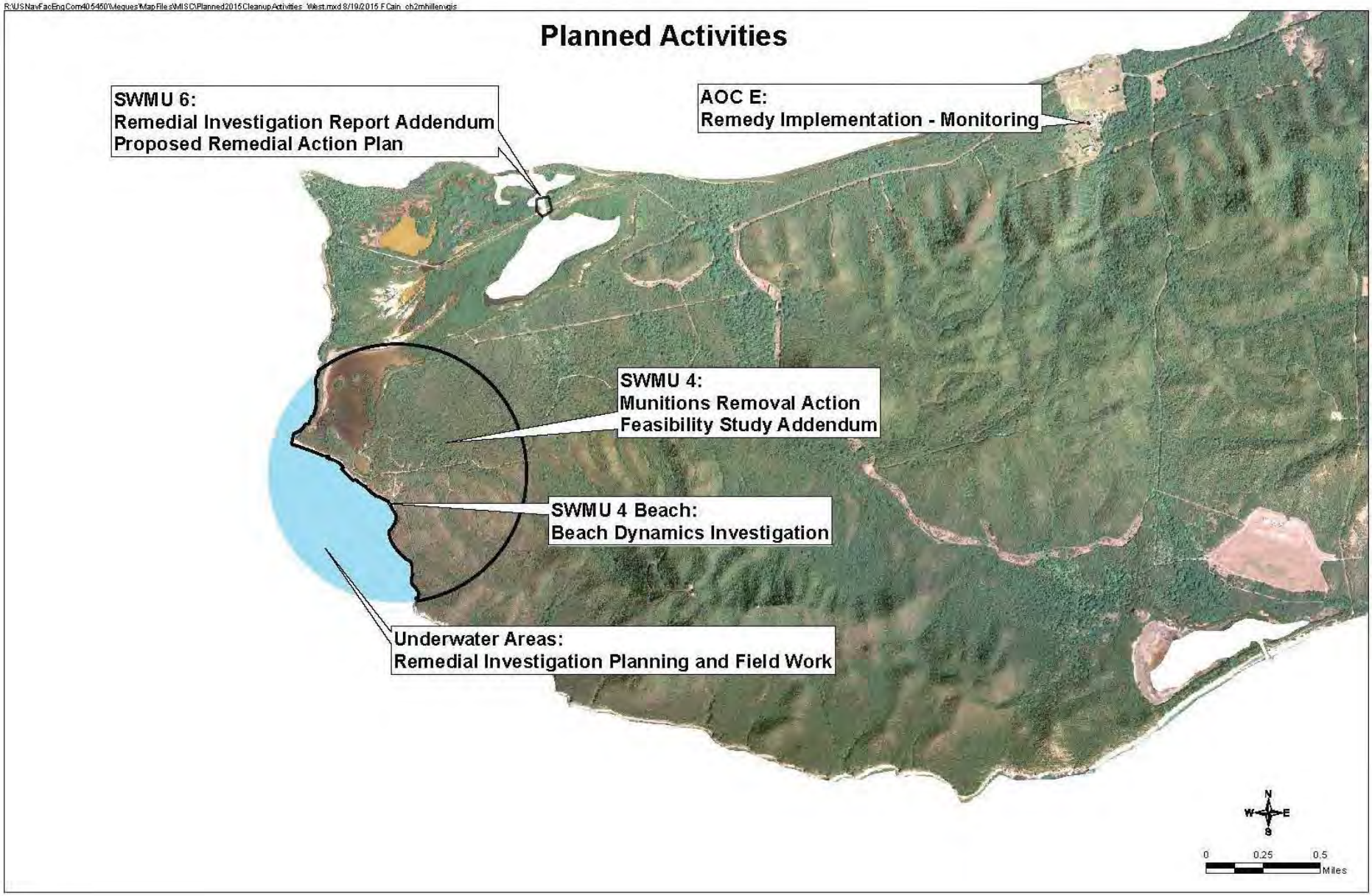
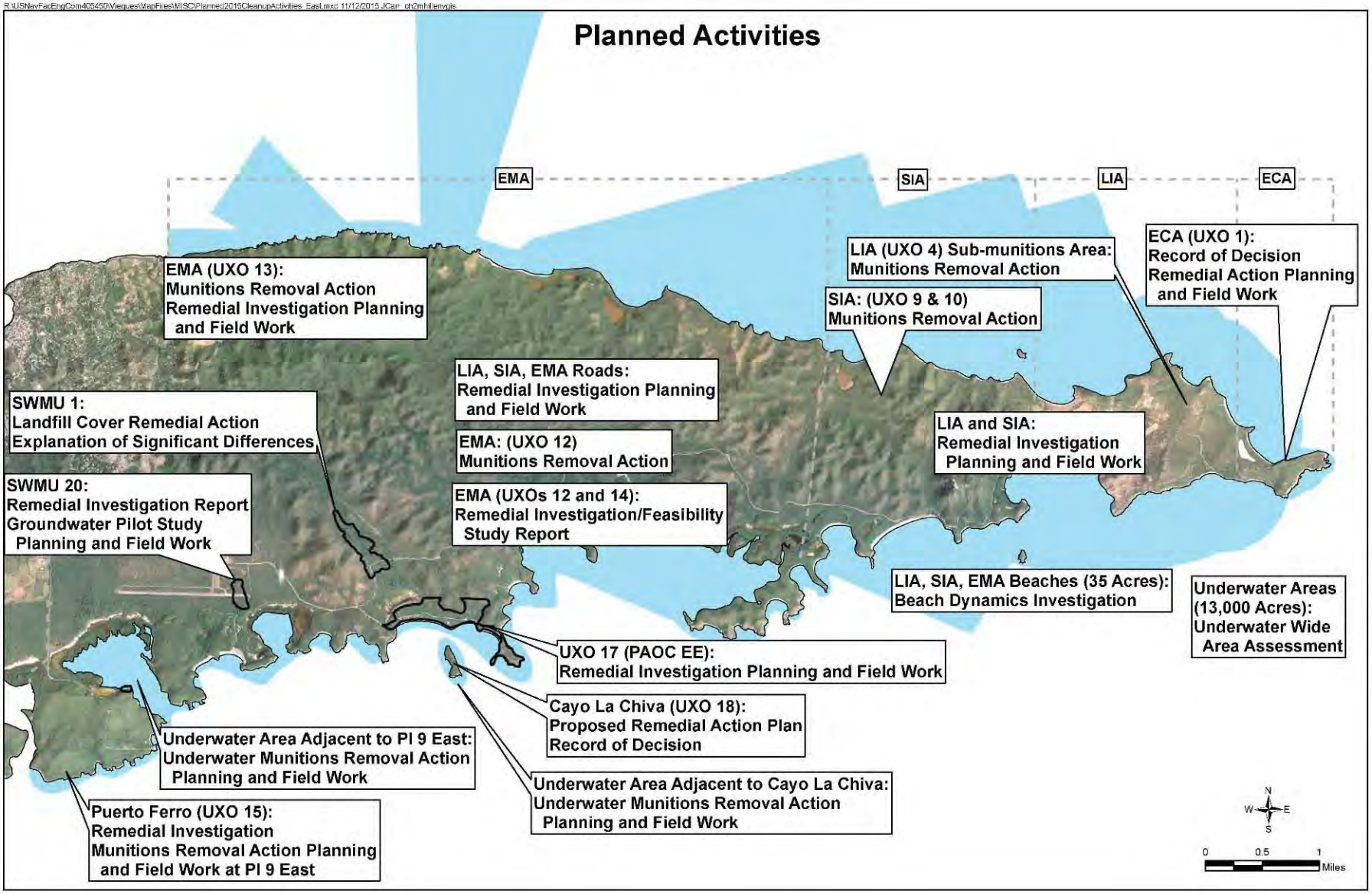
Navy Project Update

STATUS OF SITES AND UPCOMING ACTIVITIES

Status of Sites and Upcoming Activities at West Vieques



Status of Sites and Upcoming Activities at East Vieques



Navy Project Update

NATIONAL WILDLIFE REFUGE WEEK ENVIRONMENTAL FAIR PARTICIPATION

NWR Environmental Fair Participation

- The Navy participated in the FWS Environmental Fair at the NWR Visitors Center on Friday, October 16, 2015.
- Approximately 200 community members visited the fair.

NWR Environmental Fair Participation (Continued)

- Magnetometer use demonstration
- Interactive munitions safety activities
- Cleanup information

Regulatory Agency Updates

REGULATORY AGENCIES

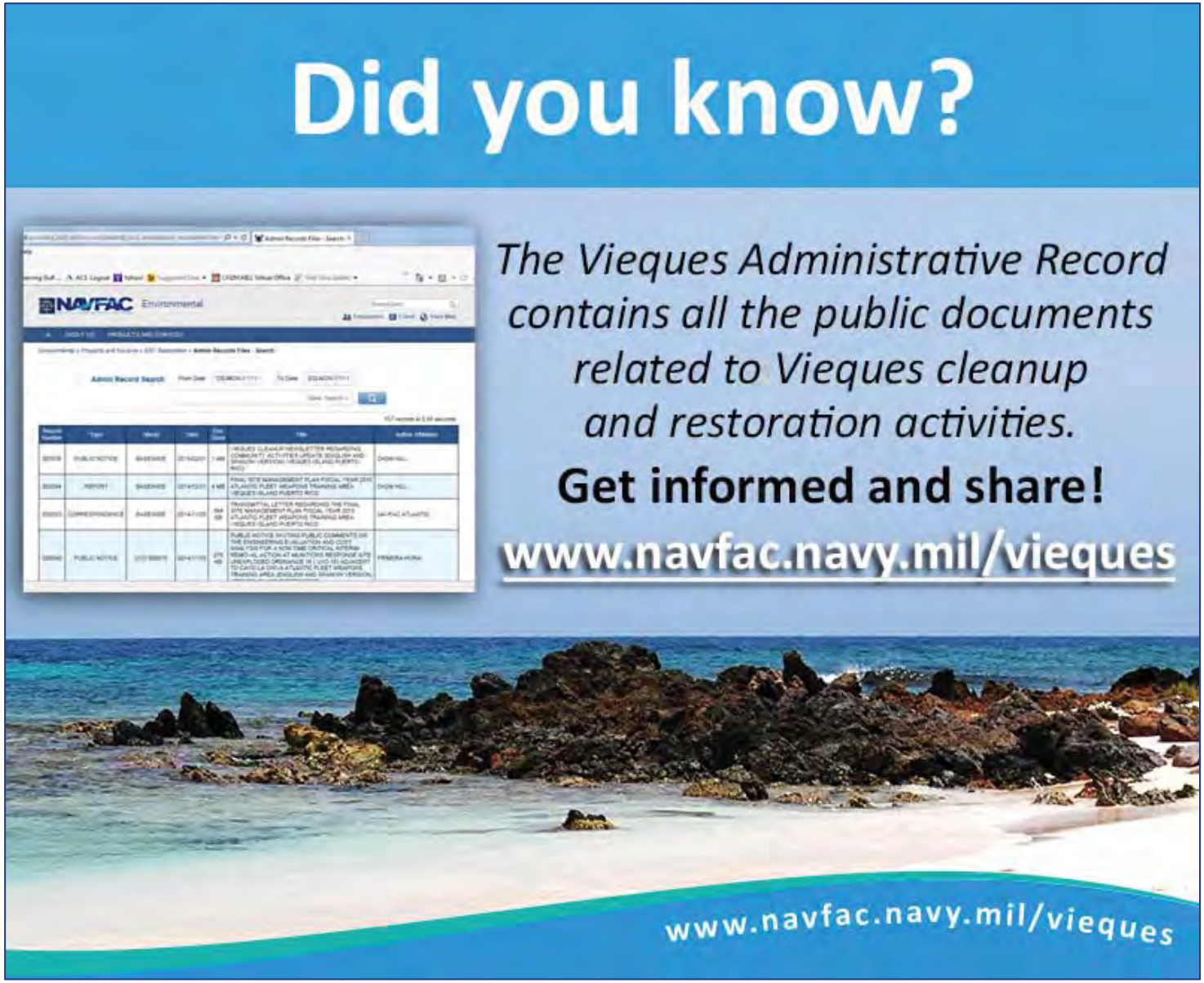
Regulatory Agency Updates

- **U.S. Fish and Wildlife Service**
- **Puerto Rico Environmental Quality Board**
- **Environmental Protection Agency**
- **Puerto Rico Department of Natural and Environmental Resources**

Vieques Restoration Program Facebook Page

www.facebook.com/ViequesRestoration

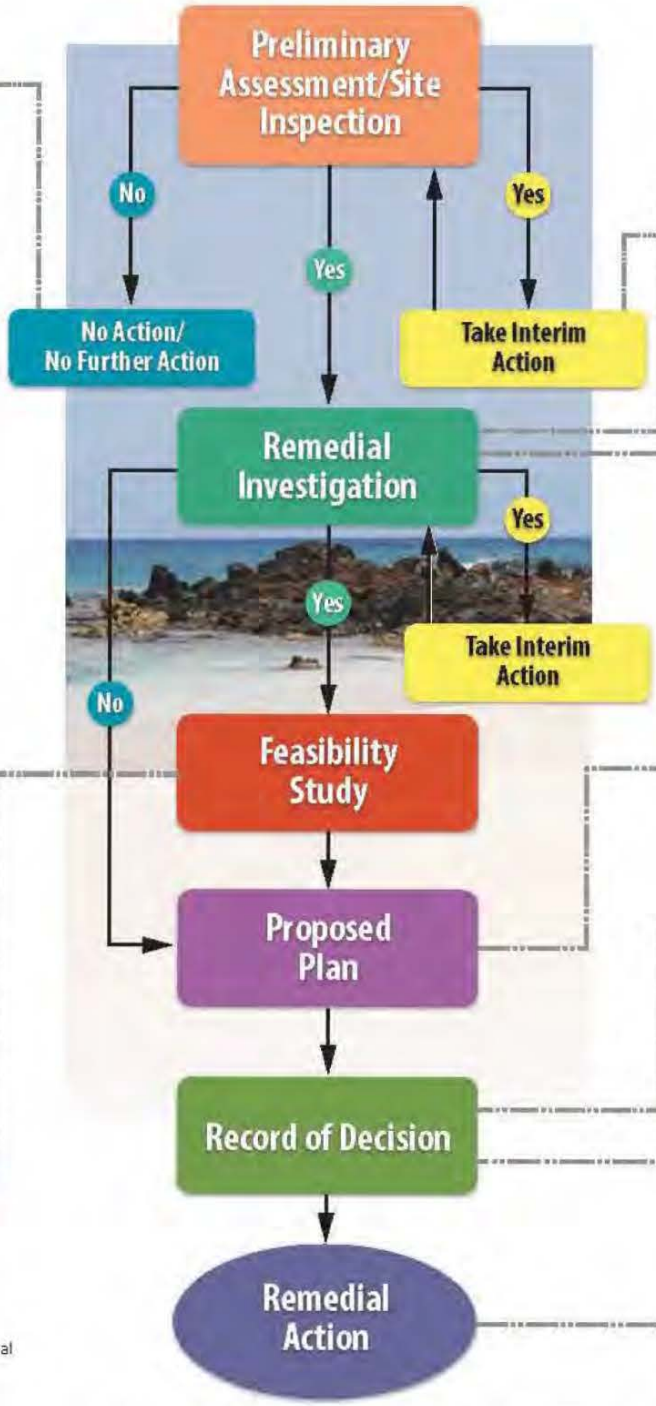
Vieques Administrative Record Documents Available



Closing

- **Comments or Questions?**
- **Next Meeting Date**
- **If interested in becoming a Vieques Restoration Advisory Board member, contact Madeline Rivera, Navy Vieques Site Manager**
  - Phone: 787-741-4792
  - Email: madeline.rivera@navy.mil

STATUS OF VIEQUES CLEANUP PROGRAM SITES UNDER CERCLA



No Action/No Further Action Decision Document

Location	Site Name
Former NASD	SWMU 5
Former NASD	SWMU 10
Former NASD	SWMU 14
Former NASD	SWMU 15
Former NASD	AOC B
Former NASD	AOC C
Former NASD	AOC F
Former NASD	AOC K
Former NASD	AOC L
Former VNTR	SWMU 2
Former VNTR	SWMU 4
Former VNTR	SWMU 5
Former VNTR	SWMU 6
Former VNTR	SWMU 7
Former VNTR	SWMU 8
Former VNTR	SWMU 10
Former VNTR	SWMU 12
Former VNTR	AOC A
Former VNTR	AOC F
Former VNTR	AOC G
Former VNTR	PI 5
Former VNTR	PI 6
Former VNTR	PI 7
Former VNTR	PI 8
Former VNTR	PI 10
Former VNTR	PI 11
Former VNTR	PI 14
Former VNTR	PI 20
Former VNTR	PI 21 (UXO 17)
Former VNTR	PAOC I
Former VNTR	PAOC J
Former VNTR	PAOC K
Former VNTR	PAOC L
Former VNTR	PAOC M
Former VNTR	PAOC N
Former VNTR	PAOC O
Former VNTR	PAOC P
Former VNTR	PAOC Q
Former VNTR	PAOC R
Former VNTR	PAOC S
Former VNTR	PAOC T
Former VNTR	PAOC U
Former VNTR	PAOC V
Former VNTR	PAOC W
Former VNTR	PAOC X
Former VNTR	PAOC FF

Feasibility Study

Location	Site Name
Former NASD	SWMU 4
Former NASD	SWMU 6

Remedial Investigation
Interim Action

Location	Site Name
Former VNTR	UXO 4
Former VNTR	UXO 9
Former VNTR	UXO 10
Former VNTR	UXO 13
Former VNTR	UXO 15
Former VNTR	UXO 16
Former VNTR	UXO 17

Remedial Investigation

Location	Site Name
Former VNTR	SWMU 20
Former VNTR	UXO 2
Former VNTR	UXO 3
Former VNTR	UXO 5
Former VNTR	UXO 6
Former VNTR	UXO 7
Former VNTR	UXO 8
Former VNTR	UXO 11
Former VNTR	UXO 12
Former VNTR	UXO 14

Proposed Plan

Location	Site Name
Former VNTR	UXO 18

No Action/No Further Action Record of Decision

Location	Site Name
Former NASD	SWMU 7
Former NASD	AOC H
Former NASD	AOC J
Former NASD	AOC R
Former NASD	AOC I

Action Record of Decision

Location	Site Name
Former NASD	AOC E
Former VNTR	SMWU 1
Former VNTR	UXO 1

Remedial Action

Location	Site Name
Former VNTR	SMWU 1
Former NASD	AOC E

Legend:

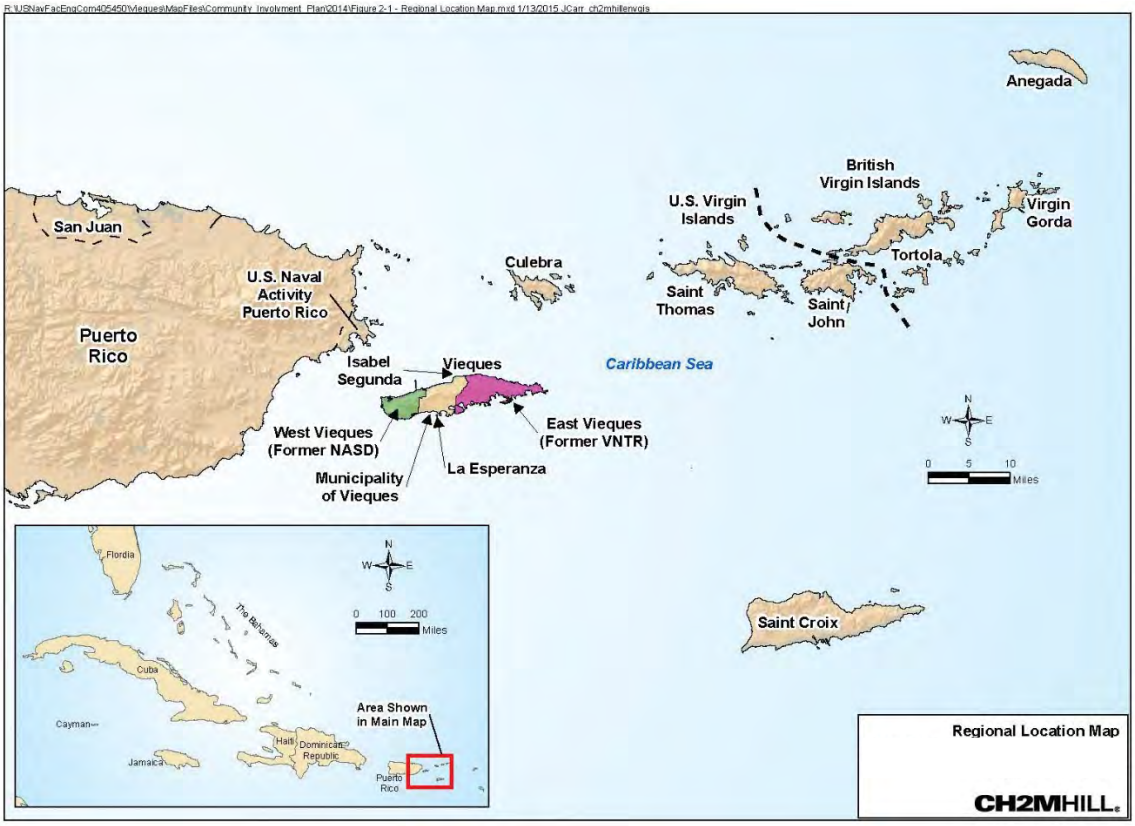
- **No** — No contamination warranting additional study or action identified.
- **Yes** — Contamination and/or risk warranting further investigation or action identified.
- **Yes** — Significant contamination and imminent/ substantial risk identified.

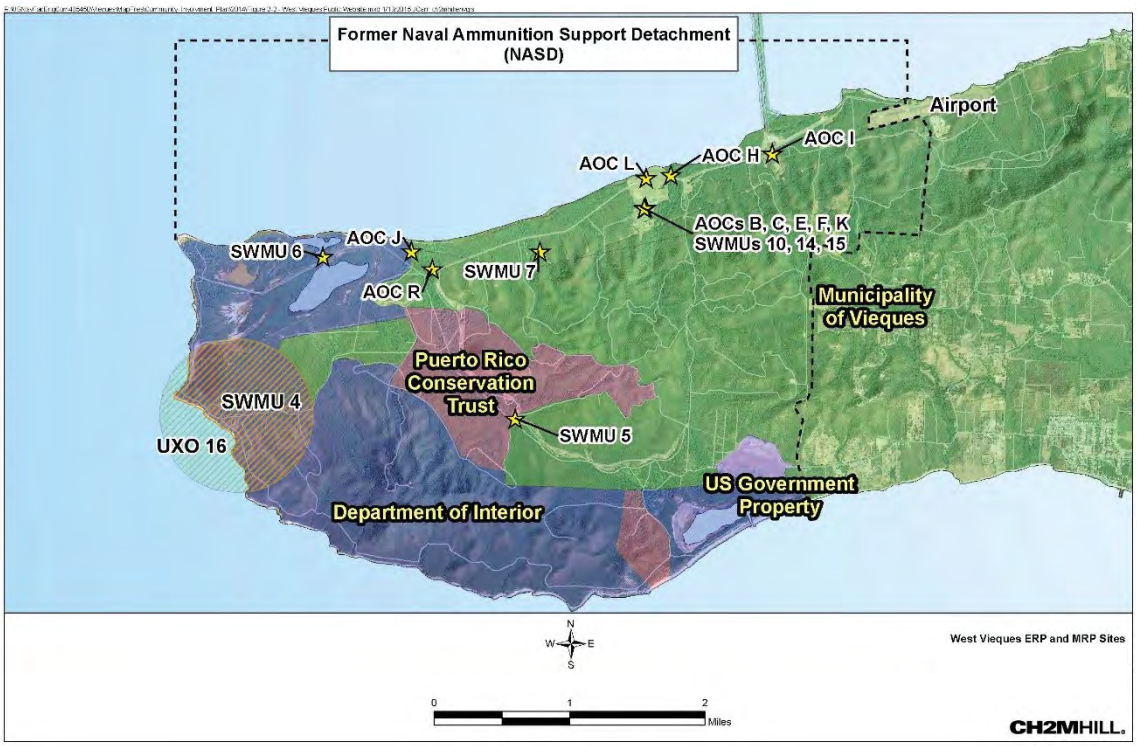
73 Total sites --- 51 completed sites (70% of sites completed) as of end of August 2015

Note: Formal public input solicited during **Proposed Plan** and **Interim Action** steps of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) process.

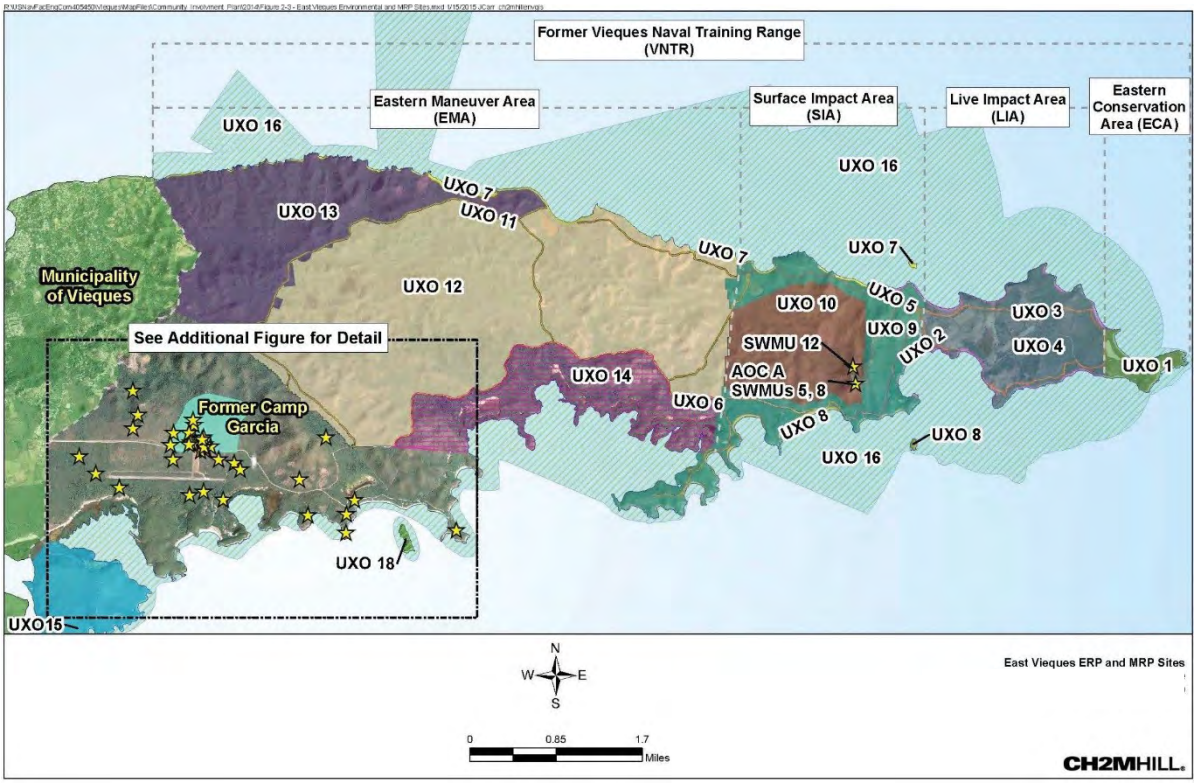
EM022015100 2GMV CERCLA-Process_FLOW-Chart

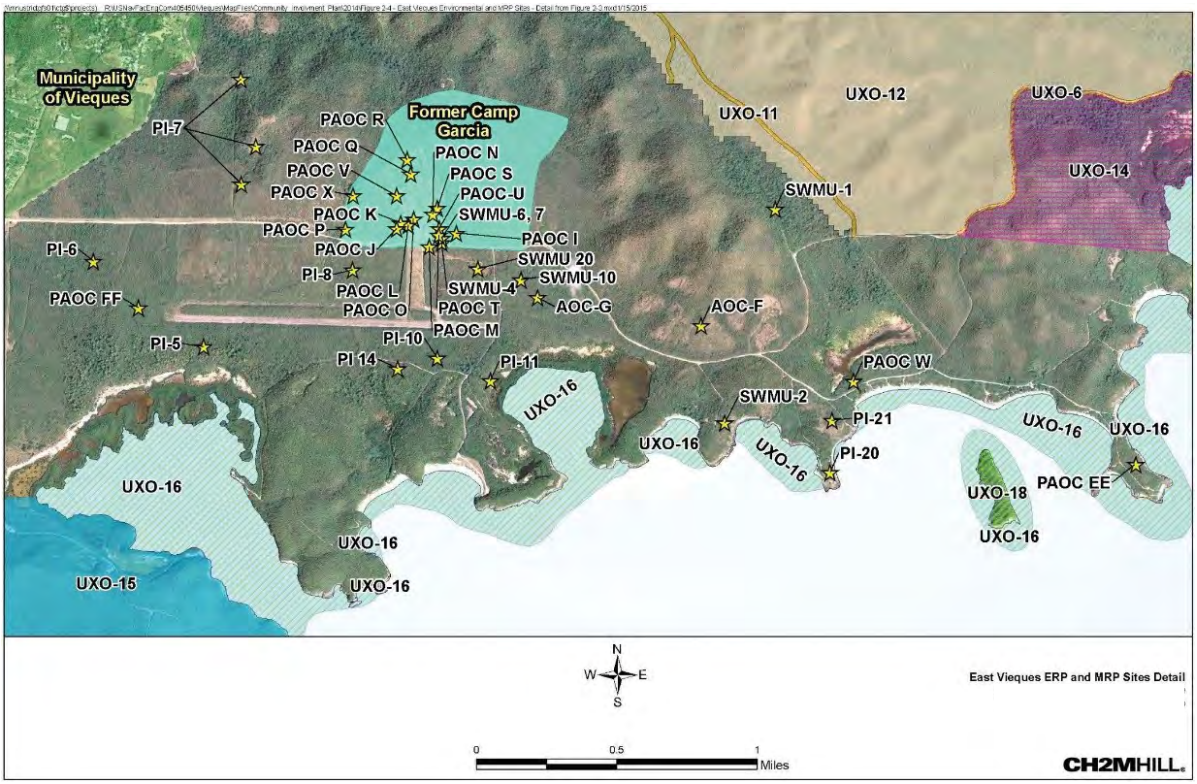
GENERAL LOCATION OF VIEQUES AND LOCATION OF WEST VIEQUES ENVIRONMENTAL RESTORATION PROGRAM AND MUNITIONS RESPONSE PROGRAM SITES





LOCATION OF EAST VIEQUES ENVIRONMENTAL RESTORATION PROGRAM AND MUNITIONS RESPONSE PROGRAM SITES





THE CERCLA PROCESS: A ROADMAP FOR SITE CLEANUP

CERCLA, commonly known as Superfund, is the Comprehensive Environmental Response, Compensation, and Liability Act of 1980. One of the key provisions of the Superfund law is a defined process to clean up contaminated sites. The Navy is performing the clean up on Vieques in accordance with CERCLA.

The CERCLA process is described below. The flow chart shows how Vieques environmental and munitions sites are progressing in the cleanup process. Below is a description of each of the CERCLA steps applicable to Vieques clean up.

Preliminary Assessment/Site Inspection (PA/SI)- A preliminary evaluation/investigation (PA/SI) determines if there has been a release of hazardous waste or materials causing contamination that warrants further study or cleanup.

Remedial Investigation/Feasibility Study (RI/FS)- A Remedial Investigation (RI) determines the nature and extent of contamination and associated human health and ecological risks. If cleanup is determined to be warranted, the Feasibility Study (FS) evaluates cleanup approaches that may be selected.

Proposed Plan- The preferred cleanup approach, based on the evaluation of various alternatives identified in the Feasibility Study, is documented in the Proposed Remedial Action Plan (PRAP). It describes all remedial alternatives that were evaluated and explains the nine criteria used to conduct the evaluation and comparison of the alternatives. It is provided to the public for formal comment prior to selecting the remedy.

Record of Decision (ROD)- The Record of Decision (ROD) documents the selection of the remedy following consideration of public comments received on the PRAP. It also serves as legal certification that the remedy was selected in accordance with the requirements of CERCLA and the National Contingency Plan (NCP).

Remedy Implementation- Preparation and implementation of the remedy documented in the Record of Decision.