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NASD VIEQUES  
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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 <ul style="list-style-type: none"><li>• SWMU 4 Non-Time Critical Removal Action Status</li><li>• Underwater Work Update<ul style="list-style-type: none"><li>○ Wide Area Assessment</li></ul></li><li>• Beach Dynamics Study Status</li><li>• Status of Sites and Upcoming Activities</li><li>• National Wildlife Refuge Week</li><li>• Environmental Fair Participation</li></ul>	Dan Waddill/Navy Kevin Cloe/Navy Daniel Hood/Navy Madeline Rivera/Navy
7:15 - 7:25	Break	
7:25 - 8:00	Regulatory Agencies Update <ul style="list-style-type: none"><li>• Marine Terrestrial Zone- PRDNER</li></ul>	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](http://www.navfac.navy.mil/vieques)**
  - **Vieques Cleanup News flyers and newsletters**
  - **Vieques Restoration Program Facebook page  
([www.facebook.com/ViequesRestoration](http://www.facebook.com/ViequesRestoration))**

- **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



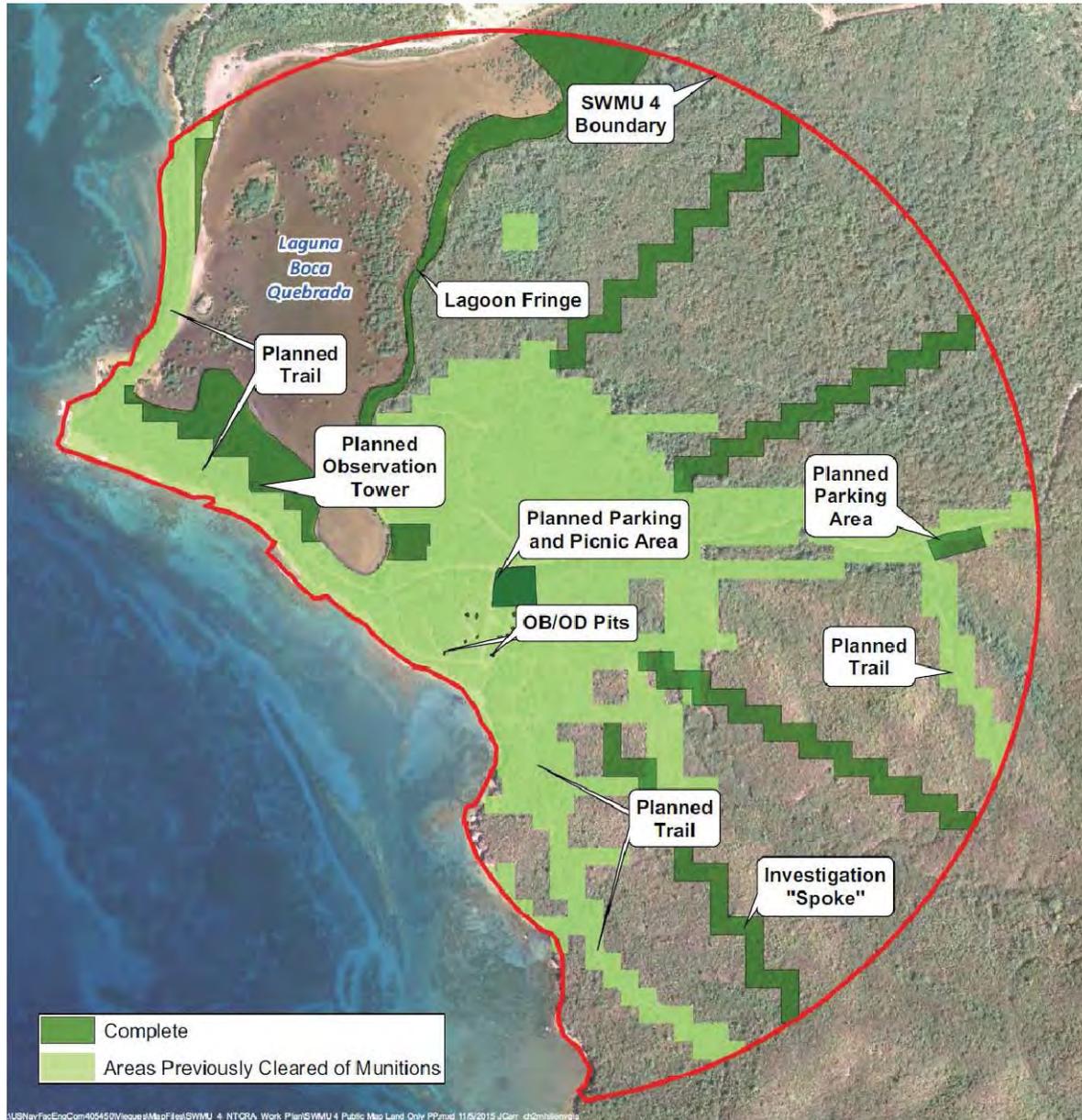
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**Navy Project Update**

# **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**

- 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)**



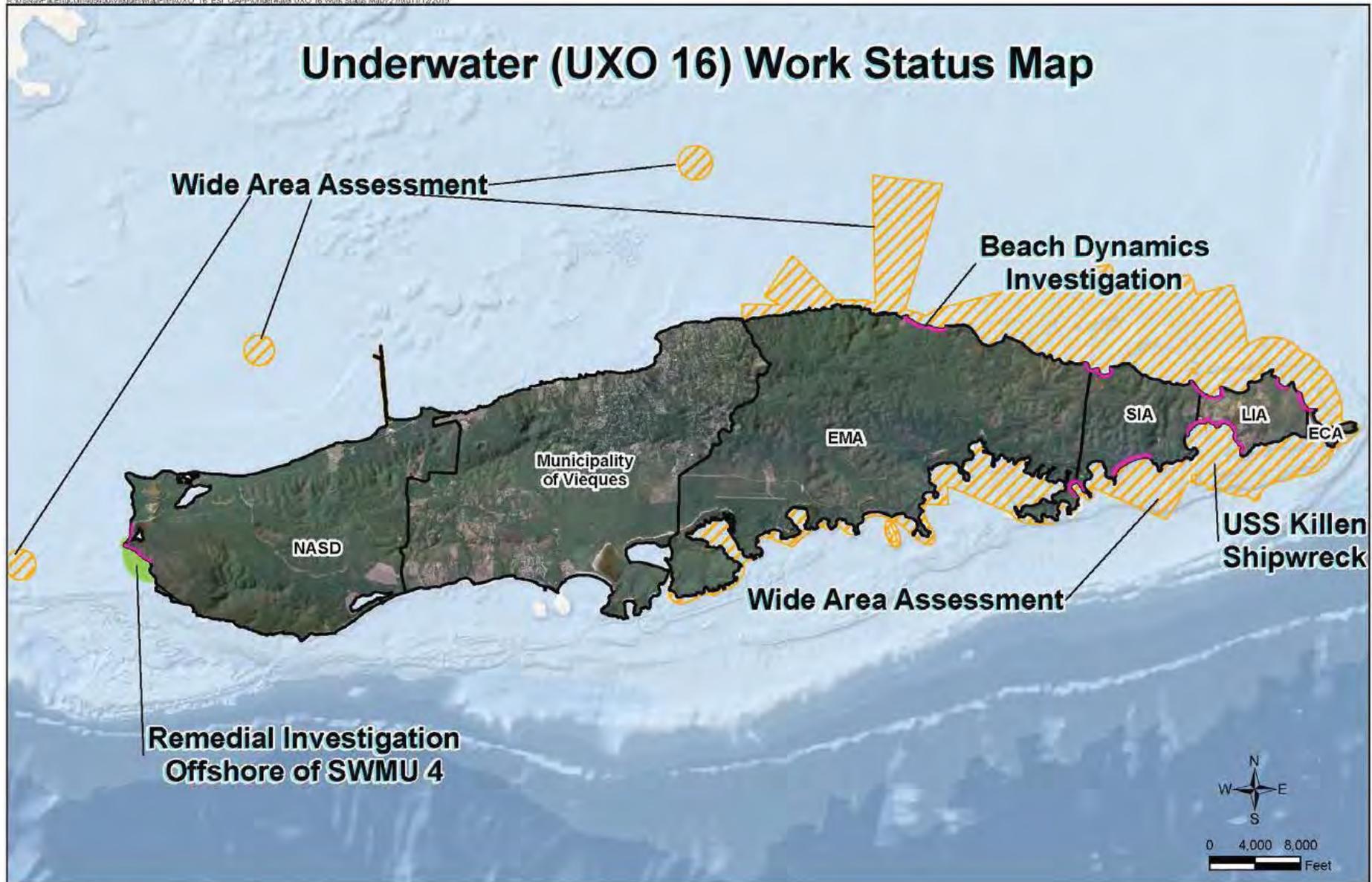
**Navy Project Update**

# **UNDERWATER (UXO 16) WORK STATUS UPDATE**

# Underwater (UXO 16) Work Status



D:\USNavFacEngCom\6154501\status\MapFiles\UXO\_16\_ESI\_QAPP\Underwater UXO 16 Work Status Map2.mxd/11/12/2015

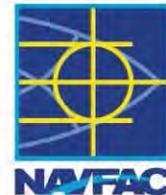


# UXO 16 Wide Area Assessment



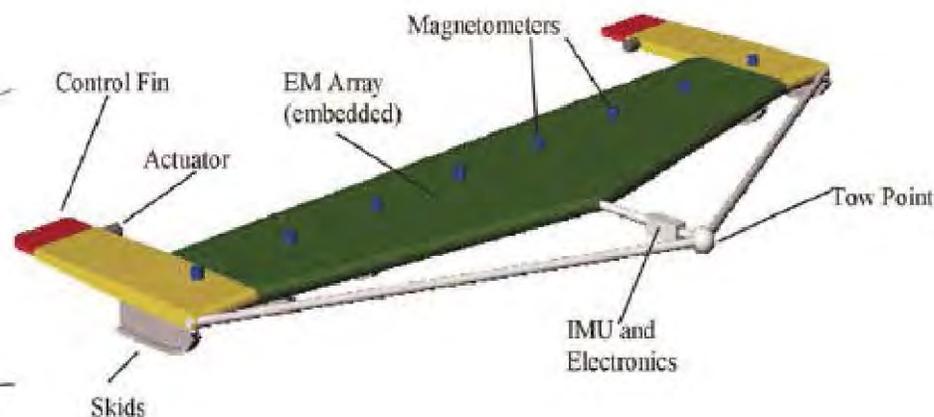
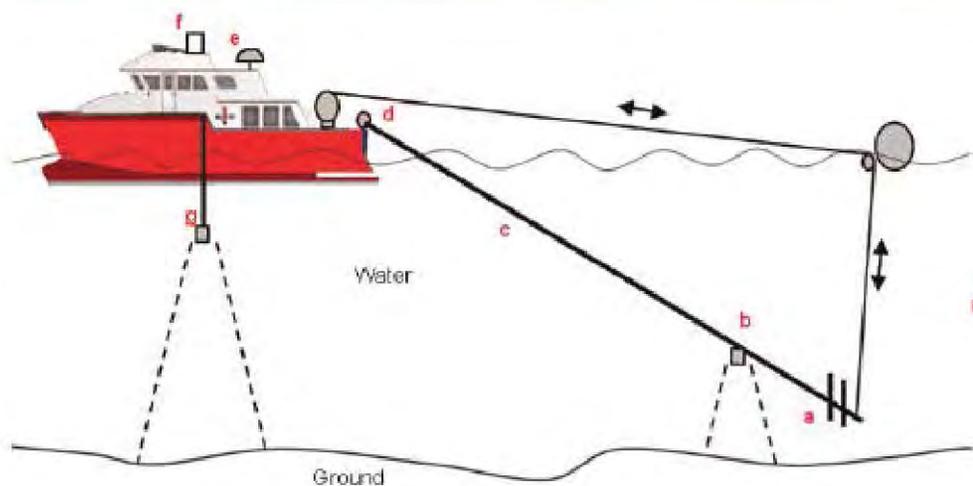
- **Wide Area Assessment (WAA) is the first step in the Remedial Investigation process**
  - Identify where the largest densities of munitions may be located
  - Provide information to help prioritize areas for more focused, follow-up investigations
  - Provide information for biological assessments 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

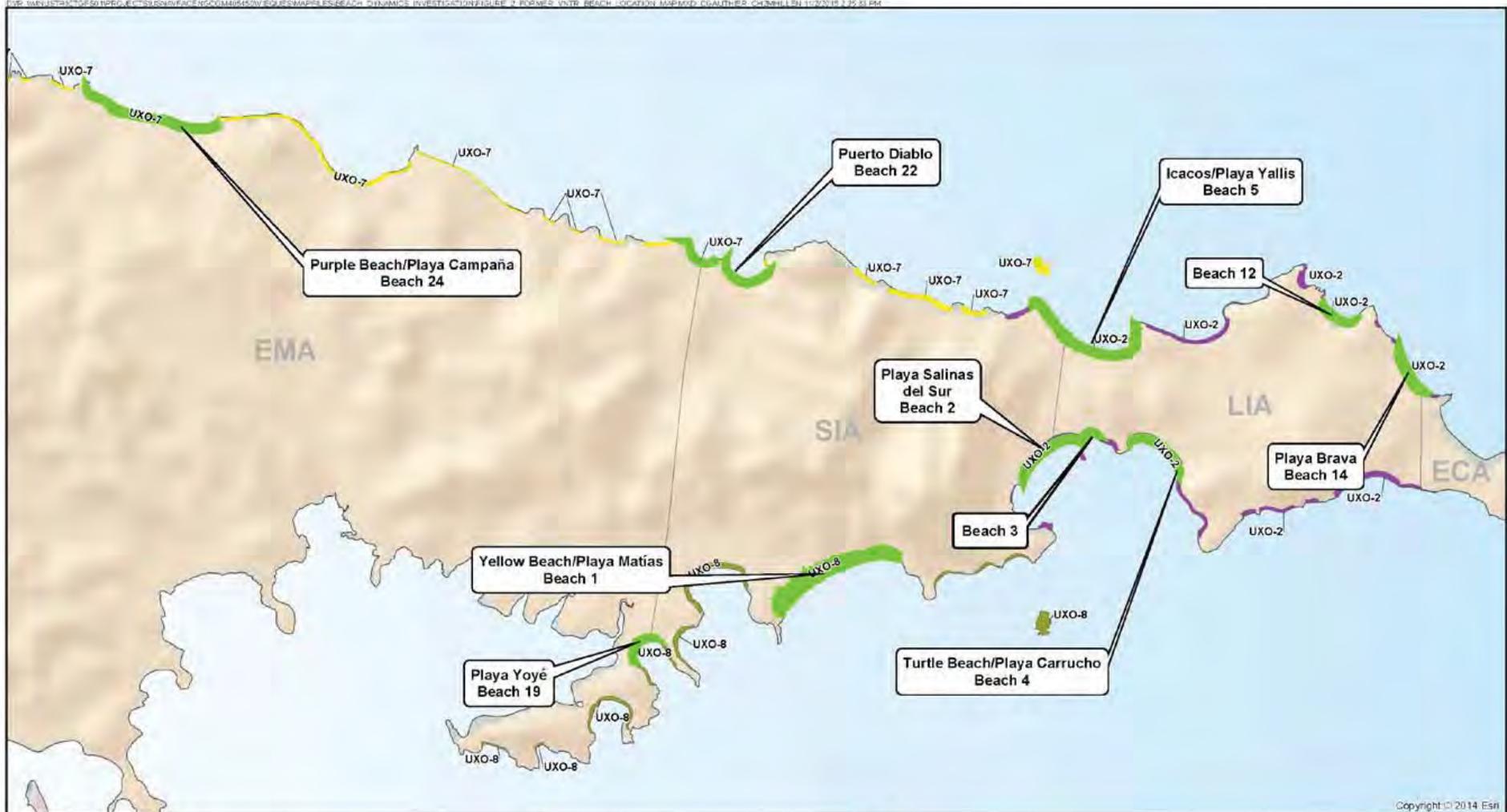
- Augment current understanding of the dynamic nature of the beach environment and its impact on the mobility of munition items.

## •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)



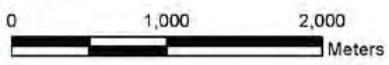
# Beach Locations in the Former VNTR



Copyright © 2014 Esri

**Legend**

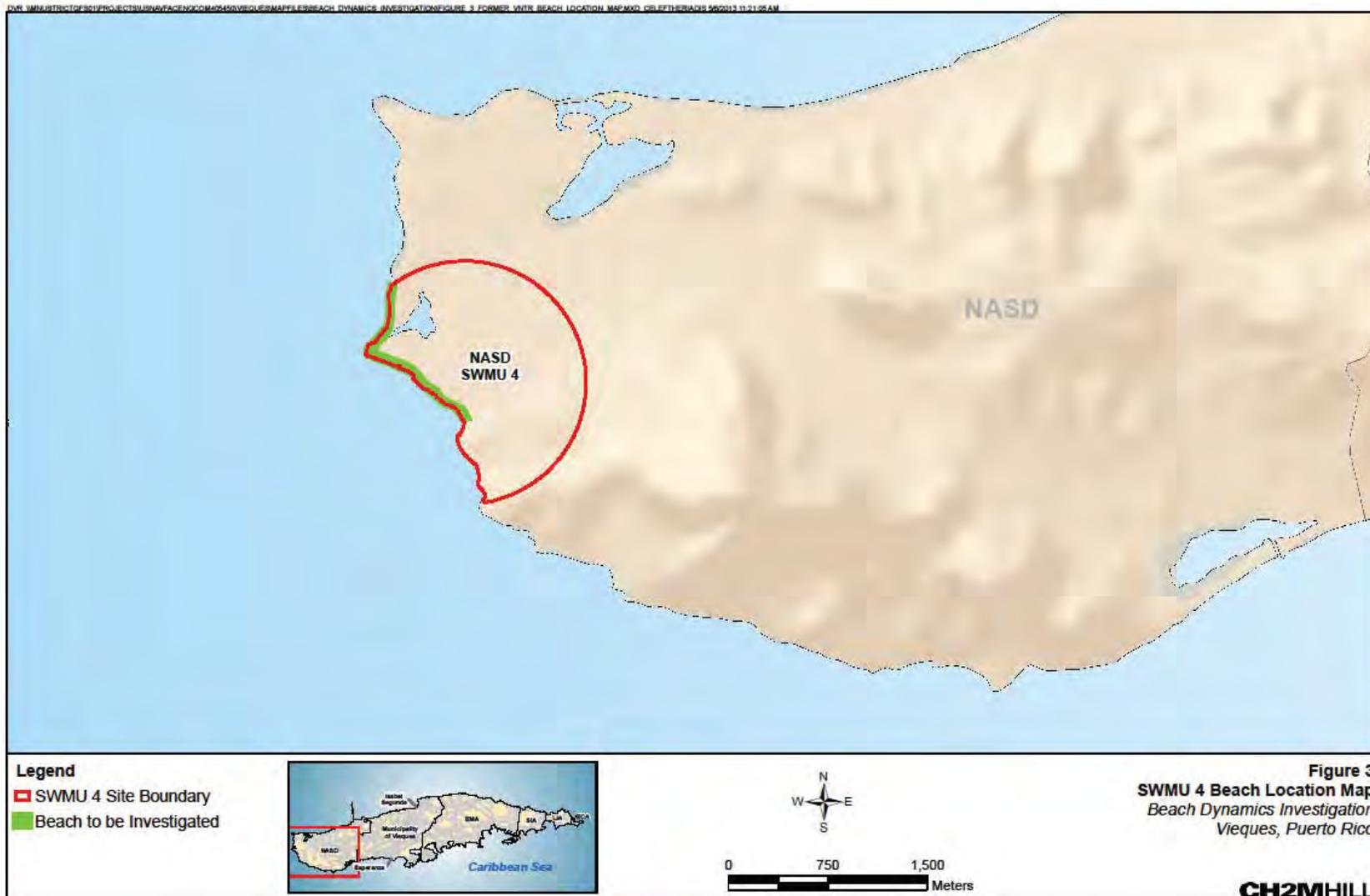
- Munitions Response Sites**
- █ UXO 2 - LIA Beaches
  - █ UXO 7 - EMA/SIA North Beaches
  - █ UXO 8 - SIA South Beaches
- █ Beach to be Investigated



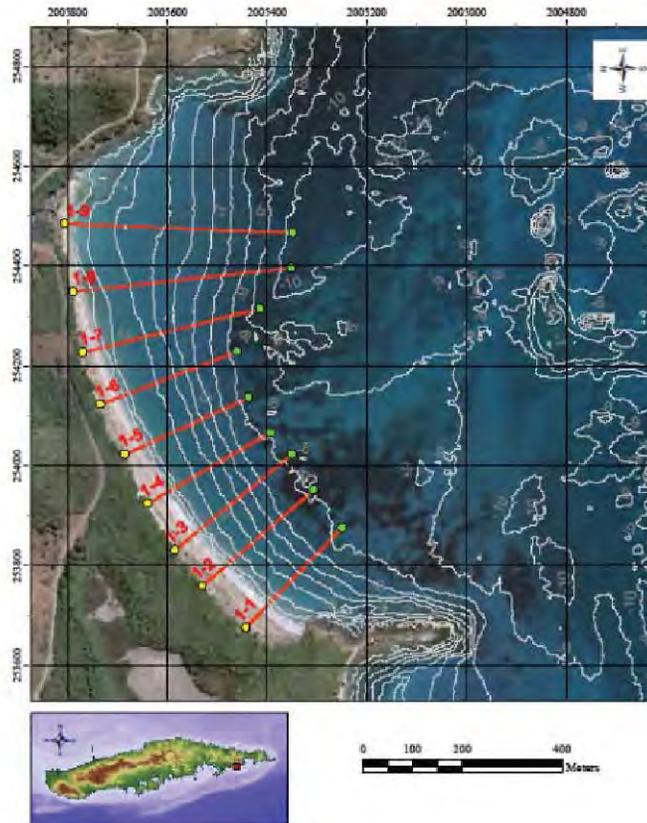
**Figure 2**  
Former VNTR Beach Location Map  
Beach Dynamics Investigation  
Vieques, Puerto Rico



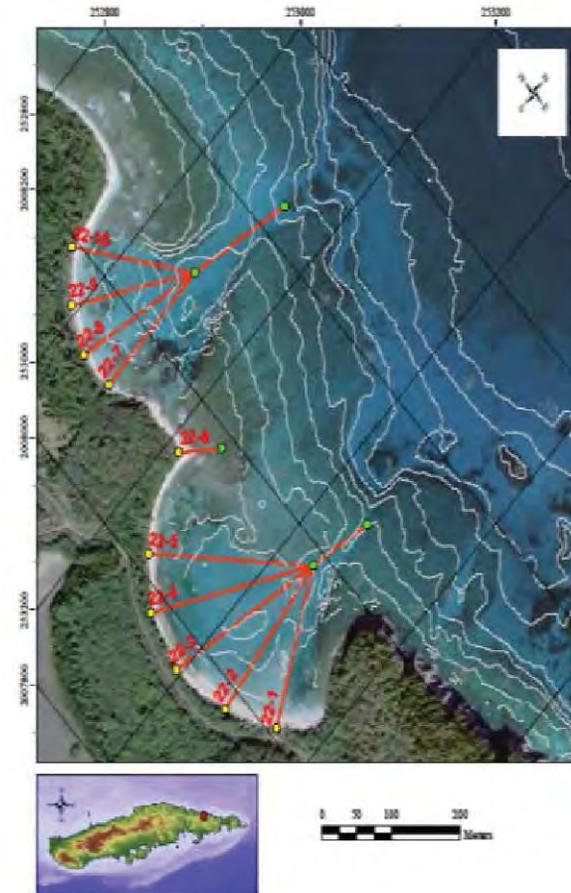
# Beach Location in the Former NASD



# 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**



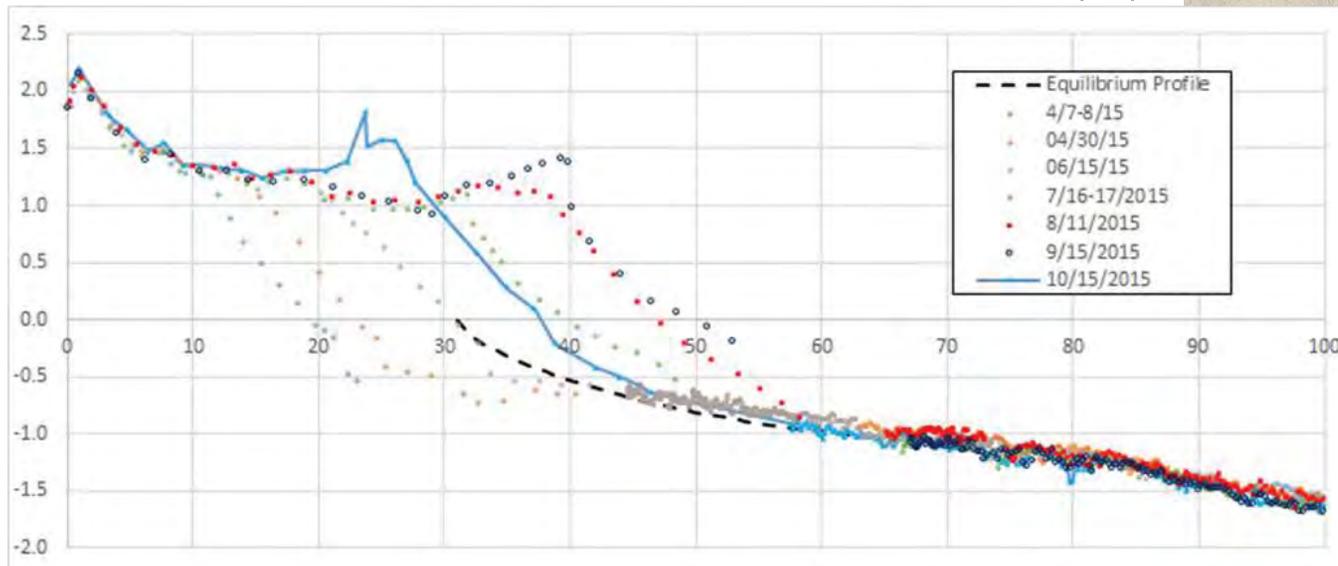
# Preliminary Survey Results to Date



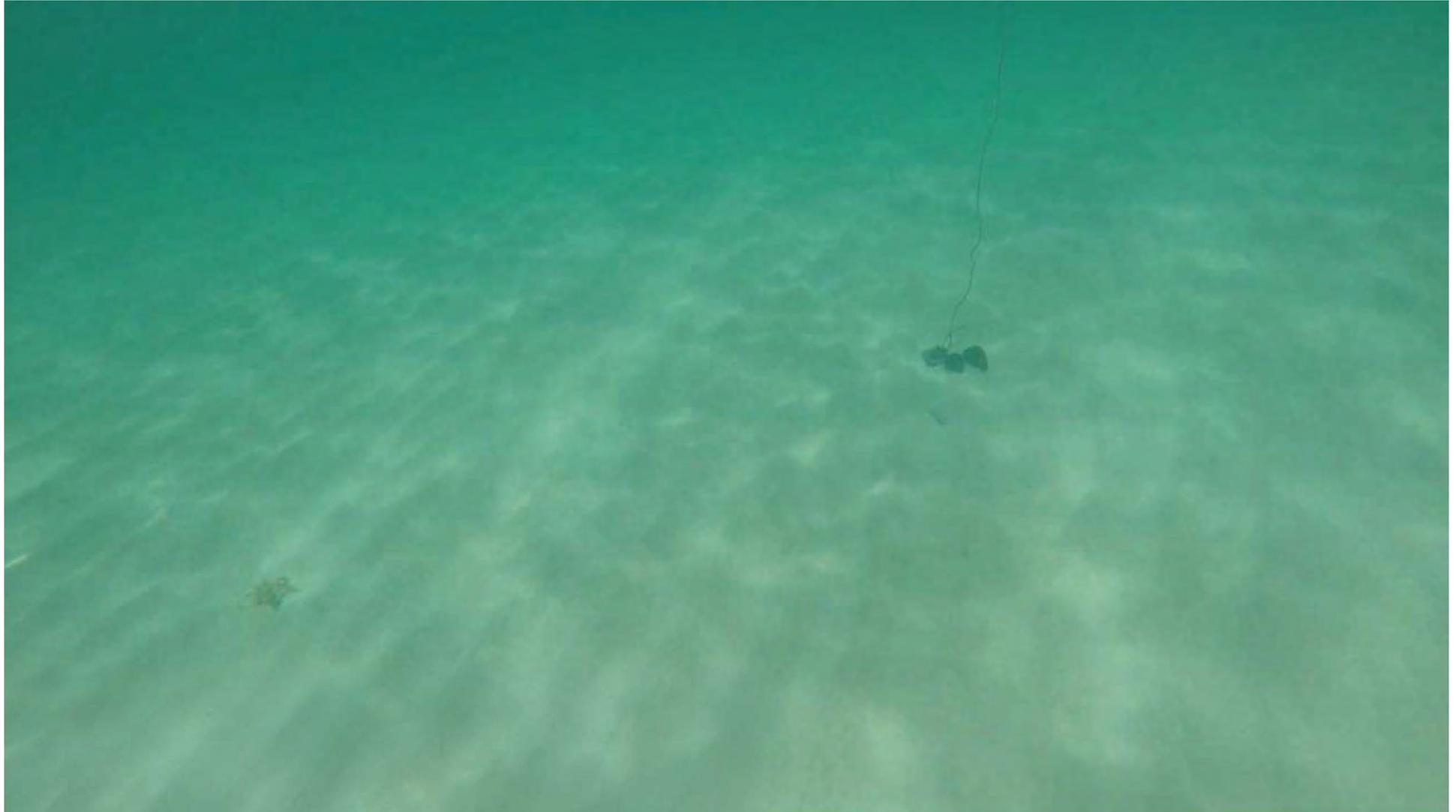
- **Stable Beaches**
  - Beaches 2, 3, 4, 5, 19 and SWMU 4
- **Moderately Dynamic Beaches**
  - Beaches 1, 12, and 22
- **Very Dynamic Beaches**
  - Beaches 14 and 24



Beach 24 Transect Profile – Elevations (m)



# Surrogate Tracking Video via Remotely Operated Vehicle (ROV)





**Navy Project Update**

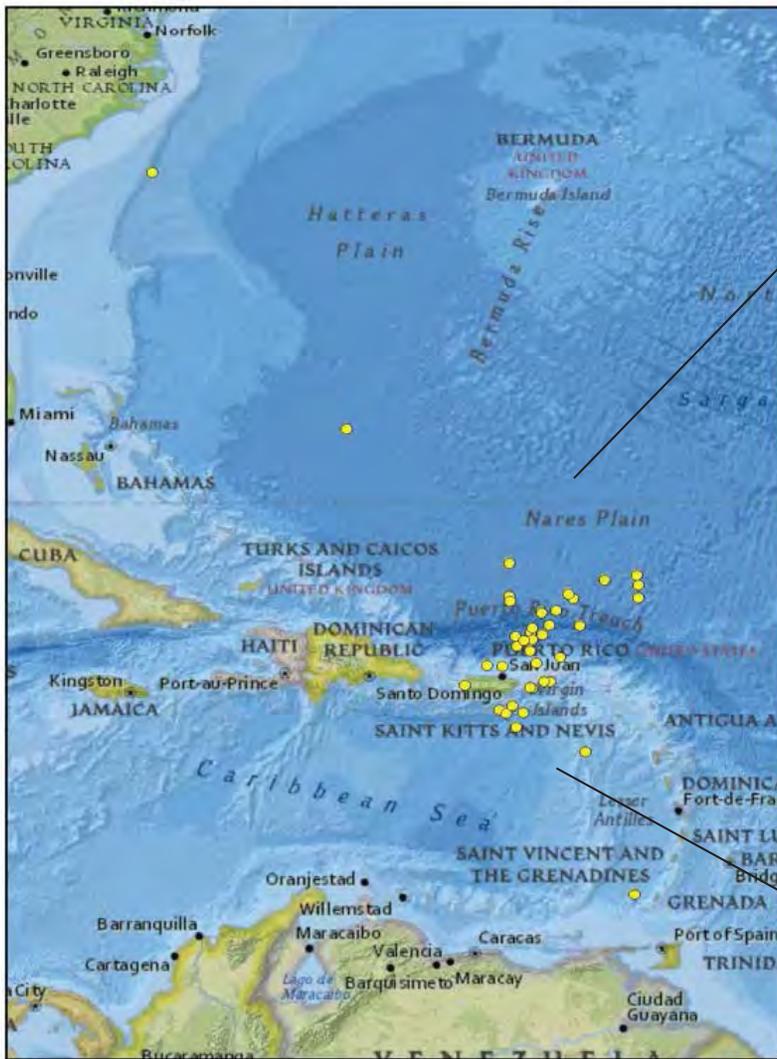
# **INFORMATION ON SUNKEN SHIPS**

# 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 Robinson**
- **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



LEGEND  
● Ship Wreck Location

0 50 100 200  
Miles

CH2MHILL

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**Navy Project Update**

# **STATUS OF SITES AND UPCOMING ACTIVITIES**

# Status of Sites and Upcoming Activities at West Vieques



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## Planned Activities

**SWMU 6:**  
Remedial Investigation Report Addendum  
Proposed Remedial Action Plan

**AOC E:**  
Remedy Implementation - Monitoring

**SWMU 4:**  
Munitions Removal Action  
Feasibility Study Addendum

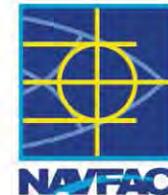
**SWMU 4 Beach:**  
Beach Dynamics Investigation

**Underwater Areas:**  
Remedial Investigation Planning and Field Work

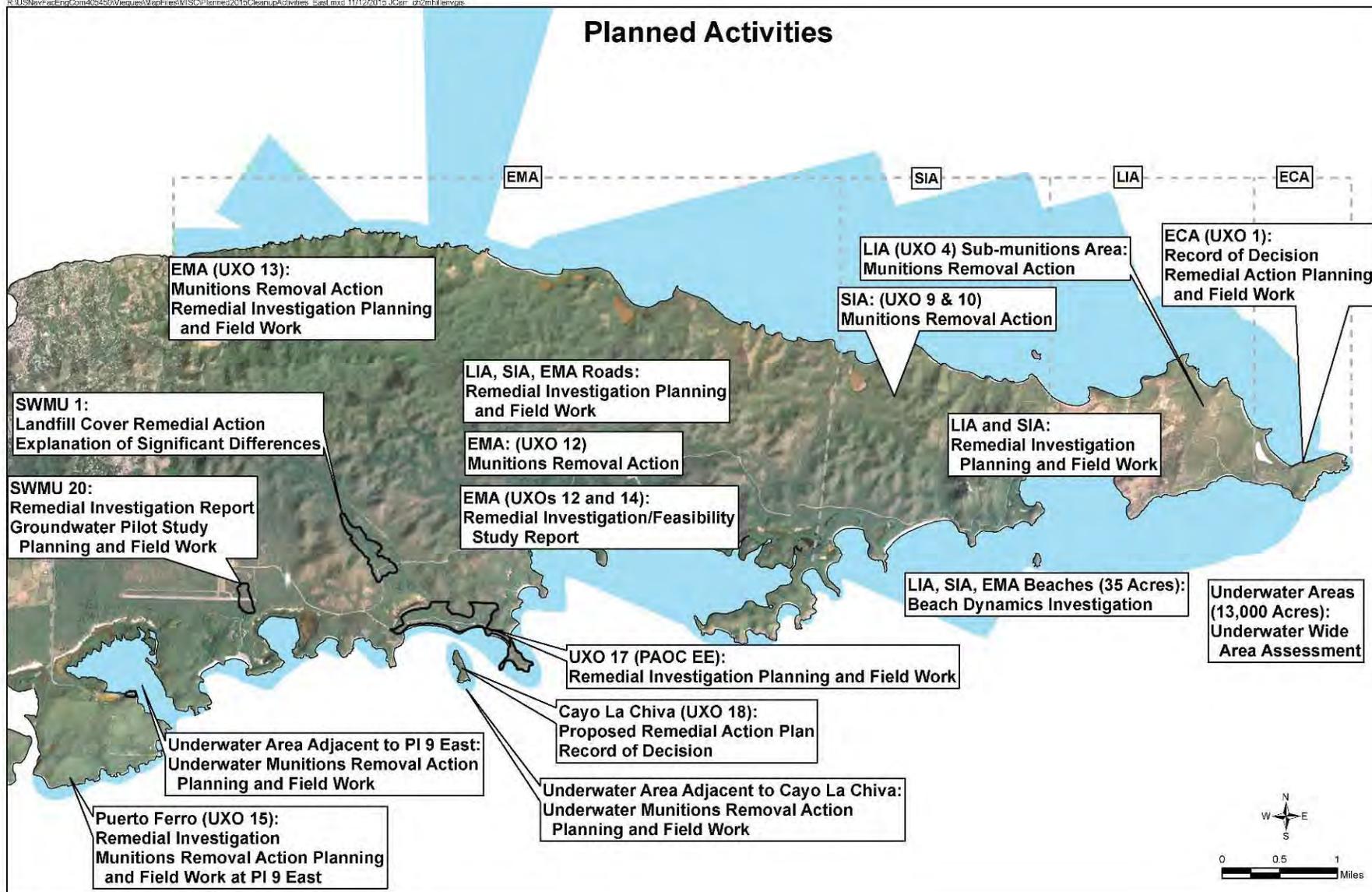


0 0.25 0.5  
Miles

# Status of Sites and Upcoming Activities at East Vieques



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**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**

- **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](http://www.facebook.com/ViequesRestoration)



The screenshot shows the Facebook page for the Vieques Environmental Restoration Program. The page header includes the Facebook logo, a search bar, and navigation links for "Home" and "Find Friends". The main cover image is a scenic view of a tropical coastline with turquoise water and green hills. A profile picture of a sea turtle is positioned on the left side of the cover. The page title is "Vieques Environmental Restoration Community". Below the title are buttons for "Like", "Follow", "Message", and a menu icon. The navigation tabs include "Timeline", "About", "Events", "Photos", and "More".

**Vieques Environmental Restoration Community**

153 people like this

Invite friends to like this Page

**ABOUT**

- Get involved in the Vieques Environmental Restoration Program! ¡Participe del Programa de Restauración Ambiental de Vieques!
- <http://www.navfac.navy.mil/vieques>

**Vieques Environmental Restoration**  
May 12 · Edited ·

Welcome to the Vieques Environmental Restoration Program page. Stay connected with us to learn about opportunities to participate by attending public meetings, review public documents, and read about progress on the various cleanup and restoration actions in Vieques.

In addition to receiving general updates, you may also submit input or questions about the cleanup activities. Questions or comments submitted through this forum will be reviewed and responded to as appropriate ...

See More

See Translation

# Vieques Administrative Record Documents Available



## Did you know?

A screenshot of the NAVFAC Environmental Administrative Record search interface. The page shows a search bar with "ADMIN RECORD SEARCH" and "SEARCH" buttons. Below the search bar is a table with columns for Record Number, Type, Date, and Title. The table contains four rows of search results.

Record Number	Type	Date	Title	
0004	PUBLIC NOTICE	03/14/2011	148	ISLAND CLEANUP RESULTS FROM REGULATIONS COMMUNITY ACTIVITIES LATEST BRIG 504 AND CASUALTY REPORTS (VIEQUES ISLAND PUERTO RICO)
0004	REPORT	03/14/2011	148	FINAL SITE MANAGEMENT PLAN FISCAL YEAR 2011 ATLANTIC FLEET RESERVE TRAINING AREA (VIEQUES ISLAND PUERTO RICO)
0005	CORRESPONDENCE	03/14/2011	084	TRANSMITTAL LETTER REQUESTING THE FINAL SITE MANAGEMENT PLAN FISCAL YEAR 2011 ATLANTIC FLEET RESERVE TRAINING AREA (VIEQUES ISLAND PUERTO RICO)
0006	PUBLIC NOTICE	03/14/2011	276	PUBLIC NOTICE INVITING PUBLIC COMMENTS ON THE ENGINEERING EVALUATION AND CRITICAL ACTION PLAN FOR A NEW TANK CRITICAL ACTION NEAR ACTION AT REACTION RESPONSE SITE JMWPC CORP OVERVIEW IN LUCAS AGREEMENT TO CAROLLA ON A ATLANTIC FLEET RESERVE TRAINING AREA (VIEQUES ISLAND PUERTO RICO)

*The Vieques Administrative Record contains all the public documents related to Vieques cleanup and restoration activities.*

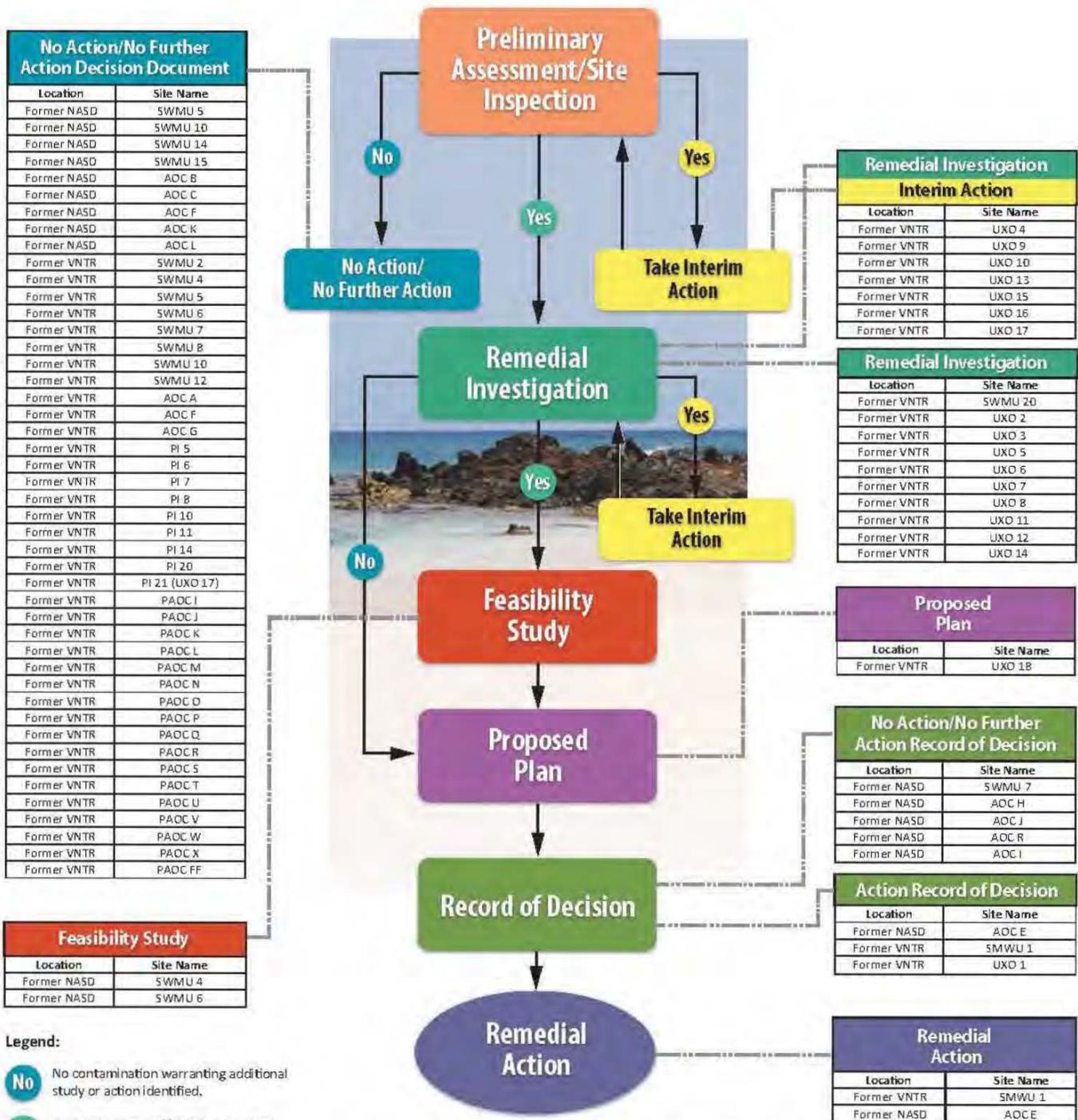
**Get informed and share!**

**[www.navfac.navy.mil/vieques](http://www.navfac.navy.mil/vieques)**



- **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](mailto:madeline.rivera@navy.mil)

# STATUS OF VIEQUES CLEANUP PROGRAM SITES UNDER CERCLA

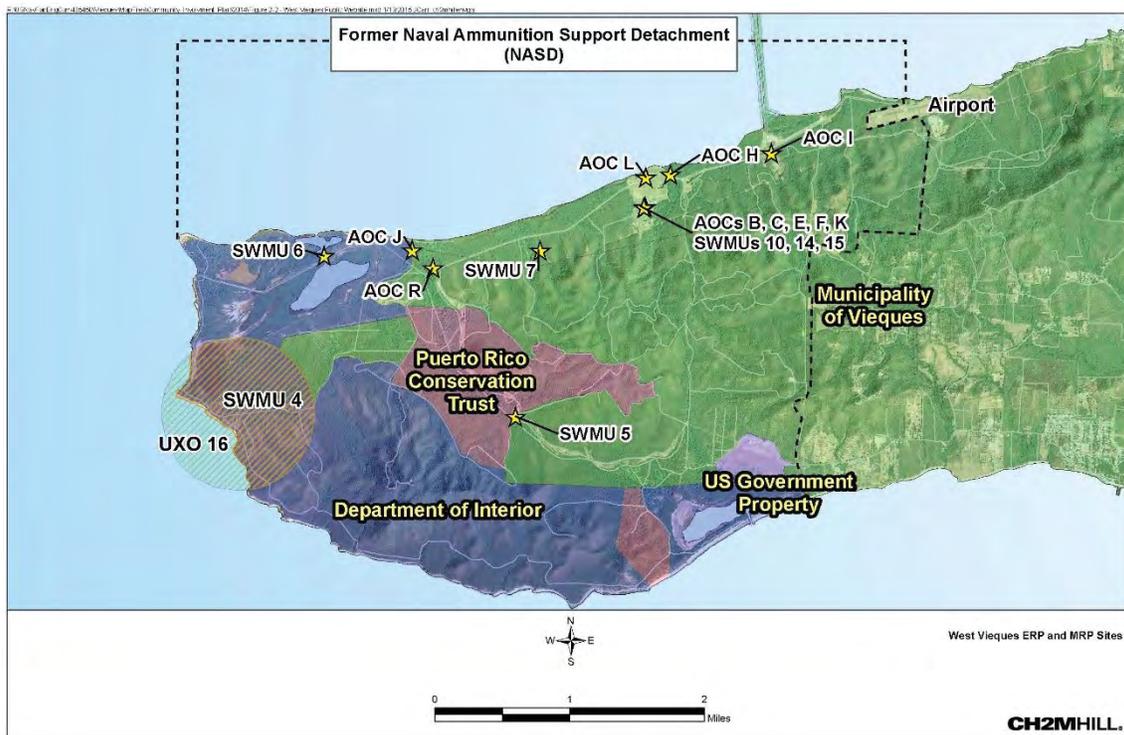
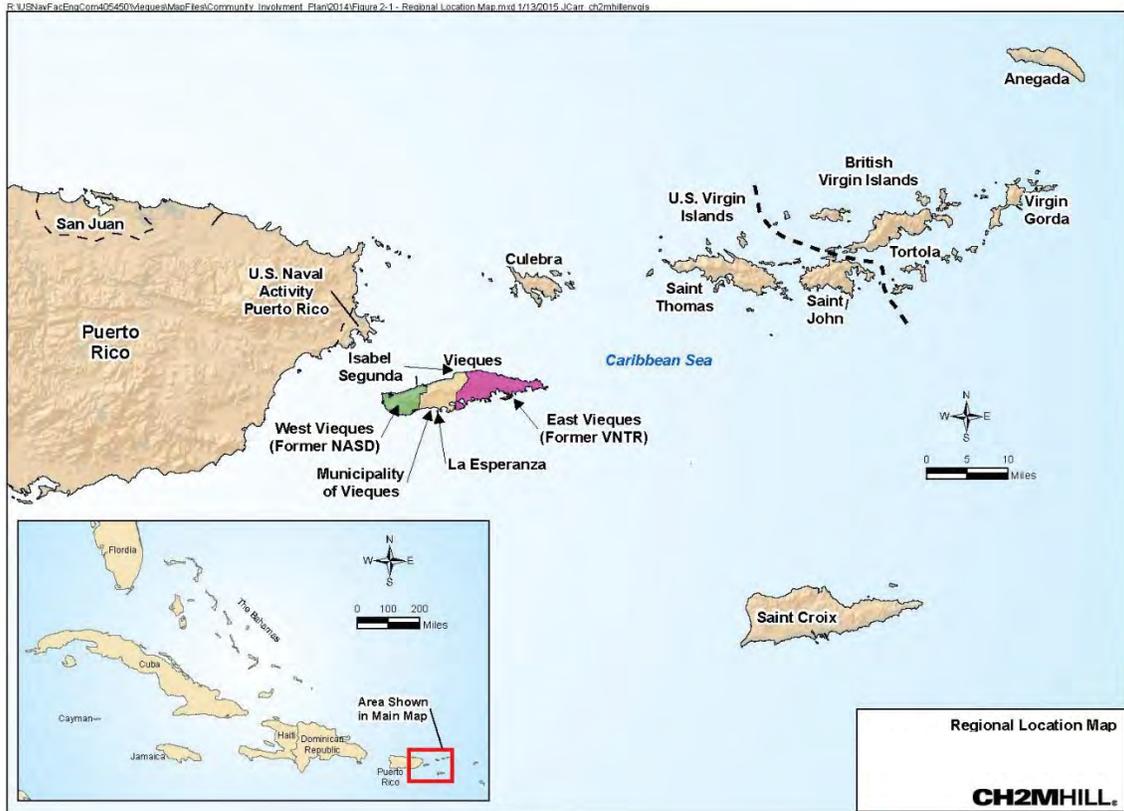


**73 Total sites --- 51 completed sites (70% of sites completed) as of end of August 2015**

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

EM/20151002/GM/DER(CLA-P06865\_FLO)/W-Q/lat

# GENERAL LOCATION OF VIEQUES AND LOCATION OF WEST 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.