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RESTORATION ADVISORY BOARD MEETING NUMBER 46 HELD ON 15 SEPTEMBER 2015 AT THE MULTIPLE USE CENTER (ENGLISH VERSION) VIEQUES ISLAND PUERTO RICO
09/15/2015
CH2M HILL

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

## RESTORATION ADVISORY BOARD

**Meeting Number 46**

**6:00 p.m. - 8:30 p.m., September 15, 2015 – Multiple Use Center, Vieques**

**AGENDA**

| | | |
|---|---|---|
| 6:00- 6:15 | Welcome and Introductions | Dan Waddill/Navy |
| 6:15 – 6:40 | NOAA Marine Resources Study Update | David Whitall/NOAA |
| 6:40 – 7:40 | Navy Project Status Update and Path Forward<br>• Underwater (UXO 16) Work Status Update<br>  o Expanded Site Inspection Adjacent to SWMU 4<br>  o Wide Area Assessment<br>  o Beach Dynamics<br>  o Underwater Video of Killen (sunken ship in Bahia Salinas del Sur)<br>• UXO 15 and UXO 16 Encrusted Munitions Non-Time-Critical Removal Action (NTCRA)<br>• SWMU 4 NTCRA Status Update<br>• Community Involvement Plan Status Update<br>• Status of Sites and Upcoming Activities | Byron Brant/Navy<br>Dan Waddill/Navy<br>Kevin Cloe/Navy<br>Daniel Hood/Navy<br>Madeline Rivera/Navy |
| 7:40 – 7:50 | Break | |
| 7:50 – 8:15 | Regulatory Agencies Update<br>• Report on Site Visit to Laguna Anones | USFWS<br>PREQB<br>EPA<br>PRDNER |
| 8:15 – 8:30 | Other Questions and Comments from the Public | Members of the Public |

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

**RESTORATION ADVISORY BOARD (RAB)**
**Meeting Number 46**

**6:00 p.m. – 9:30 p.m., September 15, 2015, Multiple Use Center, Vieques, PR**

**FINAL MINUTES**

**Attendees:**

| | |
|---|---|
| Kevin Cloe – RAB Ex-Officio Member, NAVFAC Atlantic (Navy) | Stacie Notine – Community RAB Member |
| Dan Waddill - RAB Ex-Officio Member, Navy | Luther Landrum – Community RAB Member |
| Daniel Hood – RAB Ex-Officio Member, Navy | Lirio Marquez – Community RAB Member |
| Daniel Rodríguez – RAB Ex-Officio Member, US Environmental Protection Agency (USEPA) | Jorge Fernandez Porto – Community RAB Member |
| Julio Vázquez – RAB Ex-Officio Member, USEPA | Myrna Pagan – Community RAB Member |
| Weldin Ortiz Franco – PR Environmental Quality Board (PREQB) | Colleen McNamara – Community RAB Member |
| Gloria Toro – PREQB | Shari Scott – Community Member |
| Dagmar Lugo – PREQB | Carlos Jirau – Community Member |
| Mike Barandiarán – US Fish and Wildlife Service (USFWS) | June Landrum – Community Member |
| Craig Lilyestrom – Department of Natural Resources (DNER) | James Larkins – Community Member |
| Madeline Rivera – Navy | Juan Rosa – Community Member |
| Donald Shaw – US Environmental (USAE) | Kathy Gannett – Community Member |
| Robin Miller - USAE | Gerardo Cisneros – Community Member |
| Brett Doerr – CH2M | Donna Cisneros – Community Member |
| Madeline Almodovar – CH2M | Hector Olivieri – Community Member |
| David Whitall – National Oceanic and Atmospheric Administration (NOAA) | Alba N. Cevilla – Community Member |
| Antares Ramos – NOAA | Evelyn Delevine – Community Member |
| Maria Danois – CH2M | Douglas McHoul – Community Member |
| Marta Perez – Visitor | Maria de Lourdes Santiago – Visitor, Puerto Rico Independent Party Senator |

| | |
|---|---|
| Erica Boulogne - Visitor | Liz Zivic – Visitor |
| Hector Saibre – Visitor | Ruben Melendez – Visitor |
| Leonardo Cruz – Visitor | Thomas Toady – Visitor |
| Neftali Garcia – Visitor | Claribel Rivera - Visitor |
| Jose Rivera – Visitor | Carmen M. Faria – Visitor |
| Robert Marino – Visitor | Daniel Vargas - Visitor |
| Ana V. Avache - Visitor | Patrick Reyes - Visitor |
| Juan Vera - Visitor | Gabriel Vicens - Visitor |
| Edwin A. Hernandez - Visitor | |

*These minutes represent a summary of the meeting presentations, comments, questions, and action items and are not a verbatim transcript of the meeting.*

**Topics Discussed:**

| **Opening and Introductions** | |
|---|---|
| Madeline Almodovar (CH2M/Facilitator) | • Meeting began at 6:10 PM. Welcome to Vieques Restoration Advisory Board Meeting # 46. |
| Dan Waddill (Navy - Program Manager) | • Welcomed the participants and discussed the meeting format: presenters will finish with each topic before opening the forum for questions; first the RAB will have the chance to ask questions, followed by questions or comments from the general public; approximately 5 minutes will be allotted to address each question in order to give everyone the opportunity to provide comments. Navy and agency representatives will be available during the break and after the meeting if there are follow up questions. There are also forms available for the public to write additional comments. |
| David Whitall (NOAA) | • NOAA in conjunction with DNER just completed a study of contaminants (DDT; metals and explosives) in various marine resources around Vieques. Samples were collected at Bahia Salinas del Sur, Ensenada Honda and Mosquito Pier. The species selected for the study were: red grouper, spiny lobster and queen conch. However, the team was only able to capture 16 conch specimens and 2 lobsters, therefore, while broad conclusions for the species as a whole cannot be drawn. Nevertheless, the study provided data from the specimens caught that can be compared with concentrations found elsewhere in the Caribbean.<br>• The data from Vieques were compared with similar NOAA studies in one of the East End Reserves in St. Thomas and some locations in Florida. No DDT was detected in the St. Thomas conch samples. The DDT concentration detected in the Vieques samples was 10 times lower than the DDT levels found in a study in Florida.<br>• The Vieques study did not show a definite contamination pattern for the 3 areas sampled. No munitions compounds were found in any of the samples. Metals found in the Vieques conch samples are comparable to those in St. Thomas; only chromium were detected in the lobsters tissues at higher concentrations than the data found in the literature for this species for this metal.<br>• The study did not include a human health risk assessment, as it was not on the scope. A final report is due at the end of the calendar year. It will be available to the public when the peer/regulatory reviews are completed. |
| Community Feedback | • Several members of the community expressed concerns regarding the conclusions of the study (a number verbally rejected the study) due to the small sample size and the |

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| | lack of statistical analysis to support the findings and felt more data would be necessary to be able to draw definitive conclusions.<br>o Response: David Whitall responded that statistics for conch may be included in the final report. |
| **Underwater Work Update** | |
| Dan Waddill | • Summarized the Wide Area Assessment study to be performed in 2016 and other investigations that are already underway.<br>• The Navy completed an Expanded Site Inspection to look for munitions off the coast of SWMU 4 due to the open burn/open detonation activities that took place at SWMU 4. Based on the findings of the Expanded Site Inspection, a Remedial Investigation to evaluate the potential presence of munitions constituents is being planned.<br>• A Beach Dynamics Study is underway on numerous beaches along the eastern end of the island (and one beach on the west end); this study focuses on sand movement to help evaluate how munitions might move as the beaches change. The study includes tracking the movement of 61 surrogates (metal objects shaped to look like munitions, but are filled with concrete and have no explosives). The surrogates are placed in the water just offshore of beaches and their movements are tracked on a monthly basis with the use signals from a "pinger." The information gathered will be used to help define the strategy for the munitions investigation and removal activities on beaches and the near-shore areas. Once the study is completed, the Navy will present the results at a RAB meeting as well as in a report. |
| Community Feedback | • Juan Vera (visitor) asked if there has been historic research of the US Killen (sunken ship near the coast of Vieques).<br>o Response: The Navy has done research and found information about the US Killen, and will use that information to plan future work. To date, the Navy has not collected samples where the shipwreck is located.<br>• Jorge Fernandez Porto (Community RAB member) expressed concern that the 100-meter distance between transects could result in munitions being missed by the instruments being used in the Wide Area Assessment.<br>o Response: The Wide Area Assessment is just the first step in a process to evaluate the underwater area and is intended to identify the areas with the highest densities of munitions so that areas can be prioritized for further study. The 100-meter distance between transects is appropriate for achieving this objective.<br>• Jorge asked about an acoustic technology that could be more accurate than the magnetometers to identify metal artifacts.<br>o Response: Technical experts with the Navy, EPA, and EQB evaluate potential technologies, and the magnetometer was selected as the appropriate instrument to accomplish the Wide Area Assessment objectives.<br>• A community member asked for more information on the GPS locations of the Navy sunken ships in Puerto Rico.<br>o Response: Navy will try to find out this information for the next RAB meeting. |
| **UXO 15 and UXO 16 Encrusted Munitions Non-Time Critical Removal Action (NTCRA) and SWMU 4 NTCRA Status Update** | |
| Daniel Hood (Navy Project Manager) | • Summarized the upcoming work for 2015 stating that a couple of years ago the Government of Puerto Rico requested to accelerate the cleanup of Puerto Ferro peninsula. The Navy was able to provide access to the area around the Lighthouse this year, fulfilling that request. |

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| | • The Navy has plans to remove empty shell casings from the PI-9 East area (of UXO 15) and those encrusted just offshore using robotic equipment. Before this work can start, a Biological Assessment will be conducted in coordination with USFWS and NOAA Marine Fisheries to protect the natural resources. The Engineering Evaluation/Cost Assessment for this work is currently available for public review.<br>• The Navy is currently working on the terrestrial portion of SWMU 4 on west Vieques. Two years ago the Navy proposed a final remedy for the site, and after the public voiced their opinion, the Navy revisited the proposed remedy in coordination with USFWS's priorities for future land use (picnic area, parking area, observation tower, and trails). While the final remedy for the site is yet to be determined, the Navy moved forward with a non-time critical removal action (NTCRA) to remove munitions from areas planned for public recreational use. It is anticipated the NTCRA will be finished in a couple of weeks. |
| Community Feedback | • A community member asked if the investigation included potential cultural resources on this area and if it was coordinated with the state agencies, the Institute of Puerto Rican Culture and the Council for Terrestrial and Underwater Archeology.<br>  o Response: How potential cultural resources are addressed during work at SWMU 4 and any other site is coordinated with the State Historic Preservation Office.<br>• A community member asked if there will be fences posted on SWMU4 as part of the final remedy for this site.<br>  o Response: No fences are planned for SWMU 4, just informational signs. However, the final remedy will be made in conjunction with the agencies after input from the public is solicited.<br>• Jorge Fernandez Porto stated that the terrestrial work is going to be done before the underwater activities are completed, which means that the beach should not be used.<br>  o Response: That is why the Navy is accelerating the work in the underwater area adjacent to SWMU 4. The Navy started working on the land about 10 years ago and the underwater work much more recently, which is why the terrestrial studies are ahead of the underwater work.<br>• A community member expressed that there should be more data collected for the lagoons, specifically for Laguna Anones, to have an adequate number of sediment (core) samples to be able to measure contaminant levels in the sediment strata. Additionally, he believes that corals have not been identified as an indicator species to assess the environmental changes as a result of the military activities.<br>  o Response: Many lagoons (like Anones) are still under investigation. To date, none of the lagoons have been determined No Further Action.<br>• A community member asked if DNER and the Government of Puerto Rico have jurisdiction on the maritime terrestrial zones, lagoons, and wetlands.<br>  o Response: DNER has jurisdiction over the maritime terrestrial zone, lagoons and the coastal areas; EQB, EPA and DNER participate in every step of the cleanup decision making process. |
| **Community Involvement Plan (CIP) Update** | |
| Kevin Cloe (Navy Project Manager) | • The Draft Final CIP update for 2015 was developed based on interviews and input from the community. The Draft Final CIP was provided for public review and is ready to be finalized. Even after the CIP is finalized, we will always welcome ideas and input from the community. |

| Regulatory Agencies Update | |
|---|---|
| Weldin Ortiz-Franco (PREQB President) | • Stated that he has been attending RAB meetings and that technical members of PREQB have been participating within the framework of the Federal Facilities Agreement since the early phases of the cleanup. PREQB performs technical evaluations, and participates in the Vieques Sustainability Task Force and the Vieques Technical Subcommittee Meetings. PREQB has been discussing funding mechanisms with EPA so the community can enhance their participation in the cleanup process through TAG and TAPP financial resources.<br>• PREQB agrees that the Puerto Rico scientific community could be involved in the cleanup process performing investigations on the same sites the Navy is working, like a study of the sediment strata in Anones. PREQB could coordinate access to the sites with the Navy to do a "side by side" study, increasing the transparency of the results.<br>• PREQB is always available to participate, provide answers and continue moving the process forward. |
| Community Feedback | • A community member said that recently his organization received information related to a request from the Navy to open burn 75 acres on the east portion of the firing range and asked PREQB's position regarding this activity.<br>  o PREQB and the other agencies are currently evaluating this new Navy proposal to be able to make an informed technical decision.<br>• María de Lourdes Santiago (visitor, Puerto Rico Independent Party Senator) asked for more details about the new Navy proposal.<br>  o The new proposal is similar to the original request, with two variations: the overall area requested to be burned have been reduced to 75 acres, and burning will take place on only 1 or 2 acres at a time, instead of burning the entire 75 acres in one event. The agencies have not made a decision because we need to evaluate all the information before submitting a final determination.<br>• A member of the community said that the regulatory agencies should meet with the community regularly to discuss the information being analyzed without the Navy being present.<br>  o PREQB believes that to have open dialogue with the community, it is important that the responsible party is present, that way we can have a transparent inclusive process. This is the way we work on other Superfund sites. What we could do is meet with the community to discuss and explain a specific technical issue (like the underwater munitions tracking) so the general public gets the information and understands the process.<br>• A member of the community stated that two months ago the Independent Scientific Commission requested a meeting with PREQB; to date we have not received an answer.<br>  o PREQB participated in the Scientific Forum where a number of issues brought up by the Commission were discussed. PREQB is open to having a meeting, but so far we have not been able to coordinate a meeting on the two dates that were proposed in the request. |
| Mike Barandiarán (Refuge Manager, USFWS) | • With respect to SWMU 4, USFWS and DNER are discussing the proposed cleanup alternatives, taking into account the comments received from the RAB and the community. Based on those comments, USFWS added more uses for SWMU 4 (hunting) and continue working on the details with the agencies. To date, because the underwater cleanup adjacent to SWMU 4 is not completed, USFWS is not ready to open the beach.<br>• USFWS Regional Administrator is still in the process or reviewing the Record of Decision (ROD) for UXO 1 on the Eastern Conservation Area (ECA) (which already has |

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| | been approved by the other agencies). We are trying to accelerate that review, so the restoration activities could start on the ECA.<br>• USFWS continues participating in the cleanup process aiming to have more areas open to the public soon and would welcome other studies from the scientific community on the Refuge that could help accelerate this process.<br>• We are pleased that DNER, now under a new administration, has been more involved with the decision making process, actively participating in meetings with the other agencies. Currently DNER is working with USFWS delimiting marine terrestrial zones. |
| Community Feedback | • A community member recognized that the relationship between USFWS and the Independent Scientific Commission has been cordial. The visit to Anones was coordinated with them. We expect to have the same working relationship with EQB. |
| Julio Vazquez (Project Manager, EPA) | • EPA expects to sign the ROD for UXO 1 before September 30th once it is signed by USFWS.<br>• EPA reviewed the Draft Work Plan for Cayo la Chiva (UXO 18); this document will be available for public review.<br>• EPA is finalizing the review of the Interim Remedial Action Report for Punta Conejo and the Biological Study on Laguna Boca Quebrada; and will take into account the public comments before agreeing on the final remedy for SWMU 4.<br>• Considering Laguna Anones as a special case, EPA is ready to publish the preliminary data results/maps from Laguna Anones on the EPA's website next week. |
| Community Feedback | • A member of the community asked if this information is available in Spanish.<br>  o Response: No, but we will consider that comment.<br>• A member of the community asked if those preliminary results from Laguna Anones are from surface water samples, and if it also includes sediment data?<br>  o Response: The samples included surface water and sediment from around the lagoon. |
| Craig Lilyestrom (Director of Marine Resources - DNER) | • DNER has been involved in determining the limits and jurisdiction for the Commonwealth vs federal jurisdiction areas. After taking inventory and performing an assessment and evaluation, DNER has determined that the cayos are under Commonwealth jurisdiction.<br>• DNER has been discussing the potential use for these areas and evaluating issues such as access. If you have specific ideas for use of the cayos, DNER is interested in hearing from you.<br>• On September 23th and 24th, DNER will have surveyors on site, looking at the lagoons (which are also Commonwealth jurisdiction) and continue to determine the limits of the maritime terrestrial zone. |
| **Adjournment** | |
| Madeline Almodovar | • Thank you for participating.<br>• Remember the Navy has a new Facebook page with cleanup information to complement the Navy's public website.<br>• The meeting was adjourned at approximately 9:30 pm. |

# Vieques Restoration Advisory Board Meeting #46

September 15, 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

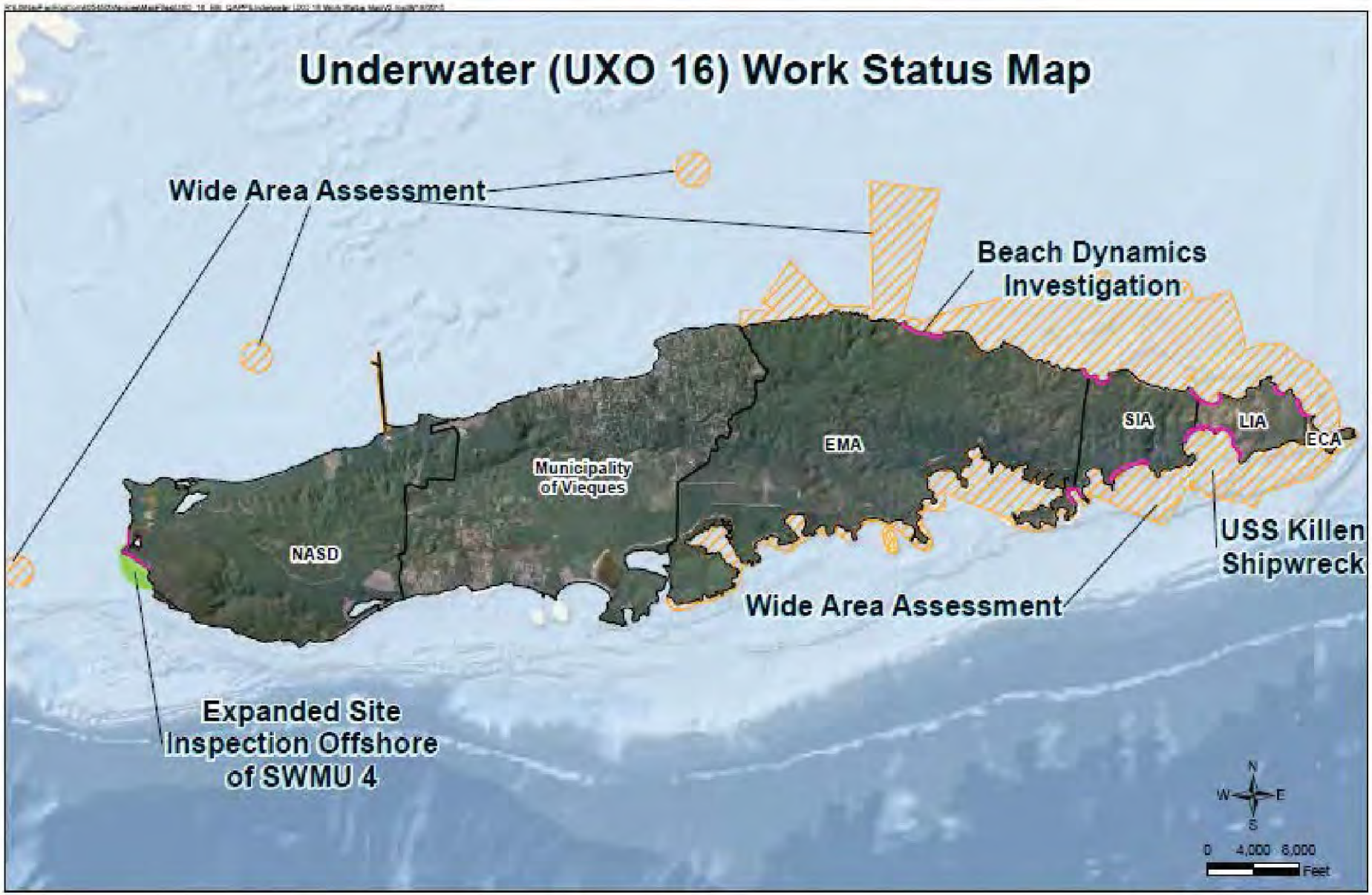
| | | |
|---|---|---|
| 6:00- 6:15 | Welcome and Introductions | Dan Waddill/Navy |
| 6:15 – 6:40 | NOAA Marine Resources Study Update | David Whitall/NOAA |
| 6:40 – 7:40 | Navy Project Status Update and Path Forward<br>• Underwater (UXO 16) Work Status Update<br>  ○ Expanded Site Inspection Adjacent to SWMU 4<br>  ○ Wide Area Assessment<br>  ○ Beach Dynamics<br>  ○ Underwater Video of Killen (sunken ship in Bahia Salinas del Sur)<br>• UXO 15 and UXO 16 Encrusted Munitions Non-Time-Critical Removal Action (NTCRA)<br>• SWMU 4 NTCRA Status Update<br>• Community Involvement Plan Status Update<br>• Status of Sites and Upcoming Activities | Byron Brant/Navy<br>Dan Waddill/Navy<br>Kevin Cloe/Navy<br>Daniel Hood/Navy<br>Madeline Rivera/Navy |
| 7:40 – 7:50 | Break | |
| 7:50 – 8:15 | Regulatory Agencies Update<br>• Report on Site Visit to Laguna Anones | USFWS<br>PREQB<br>EPA<br>PRDNER |
| 8:15 – 8:30 | Other Questions and Comments from the Public | Members of the Public |

# NOAA MARINE RESOURCES STUDY UPDATE

**Navy Project Update**

# UNDERWATER (UXO 16) WORK STATUS UPDATE

# Underwater (UXO 16) Work Status



# Findings

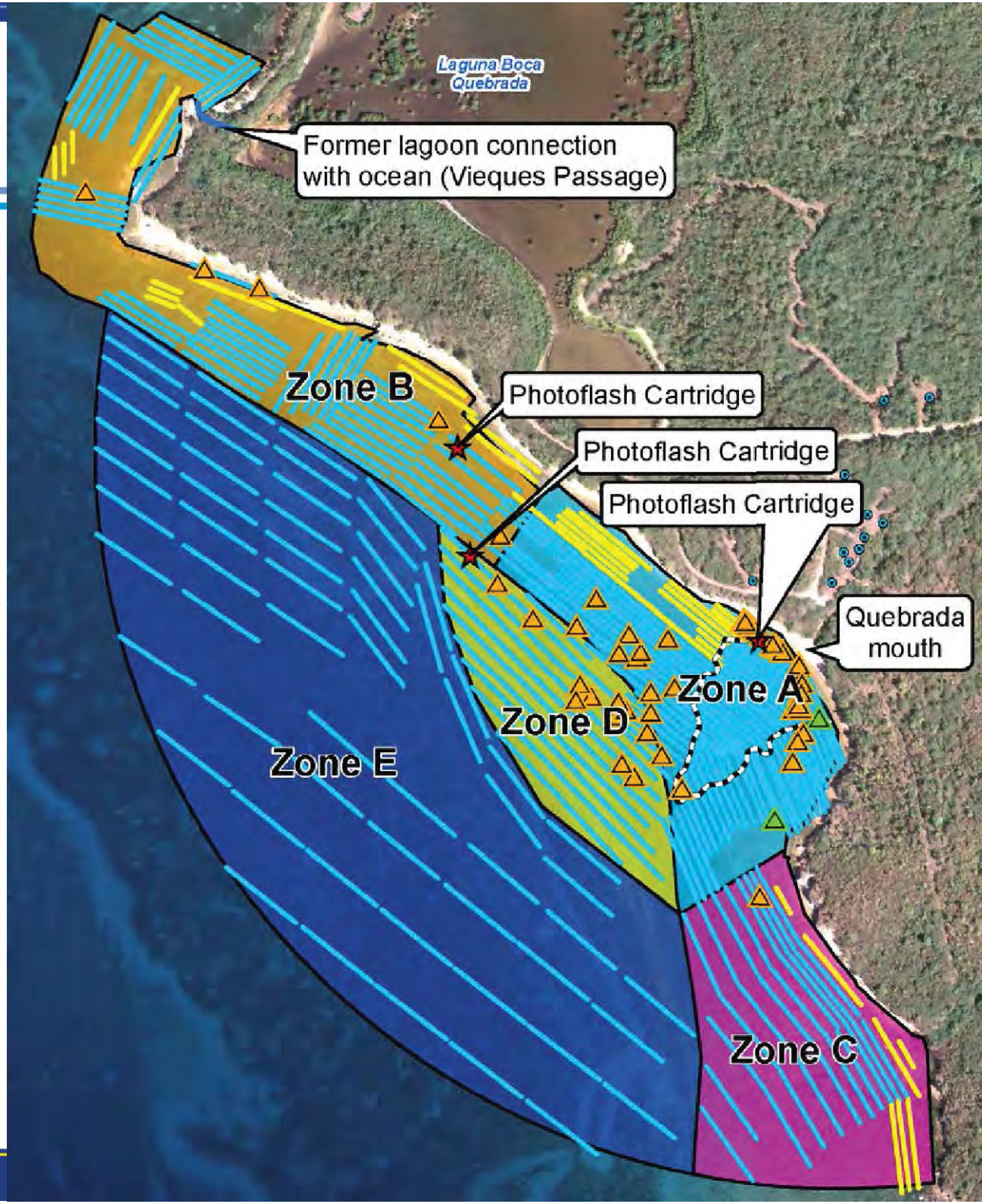
**2015 ESI**

**Munition Items** = 3
(photoflash cartridges)

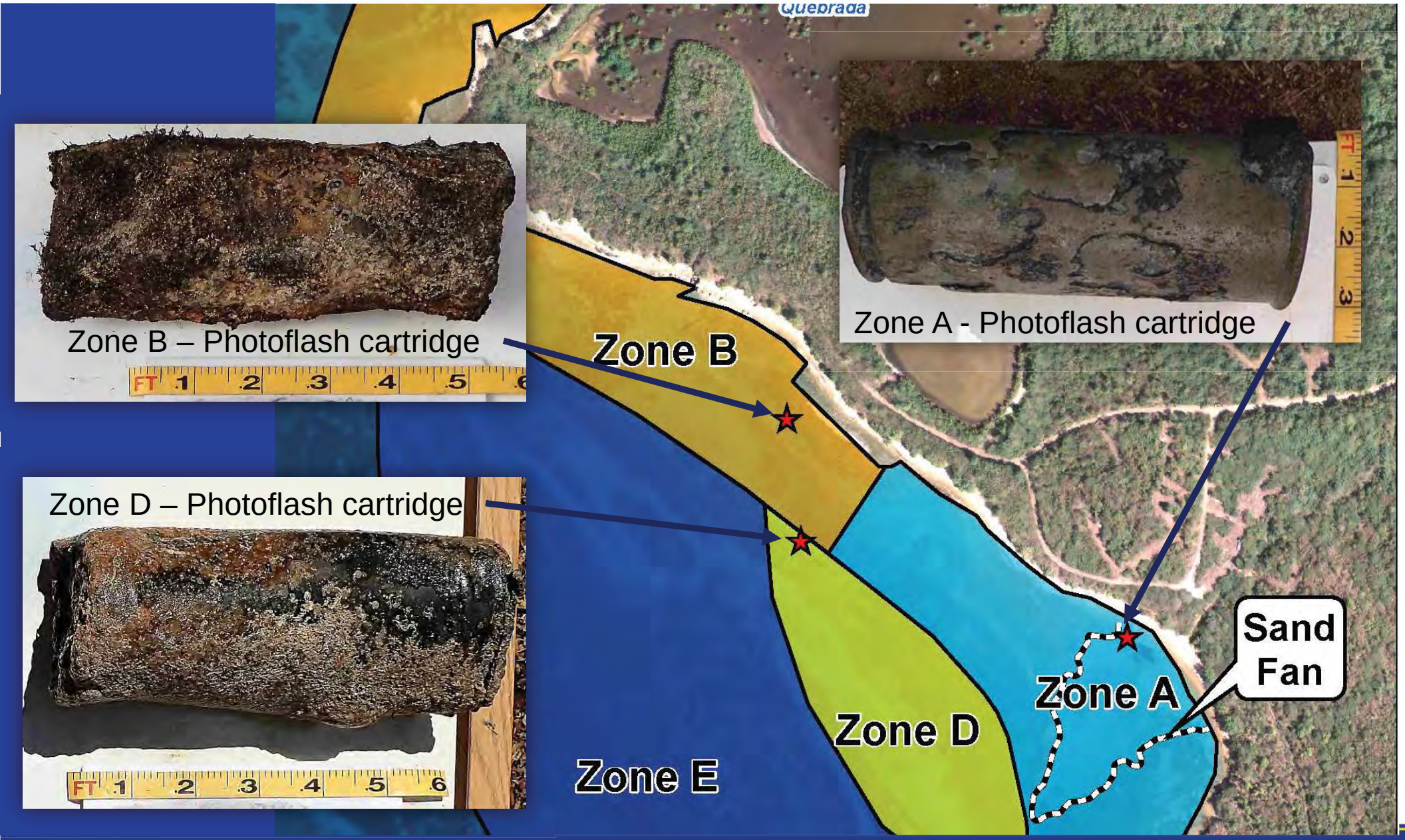
**Munitions Debris** = 57

**2012 SI**

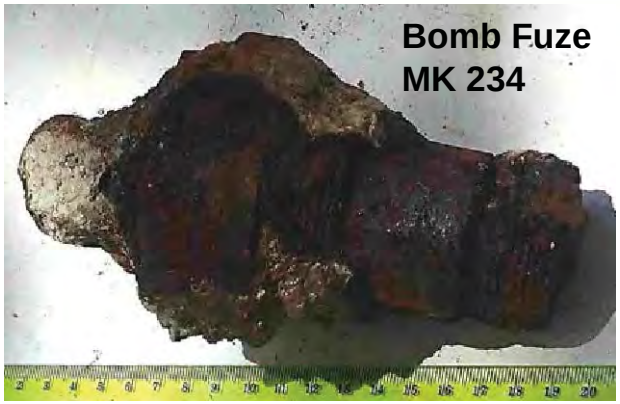
**Munition Items** = 3
(20-mm projectile, photoflash cartridge, 40-mm flare base)

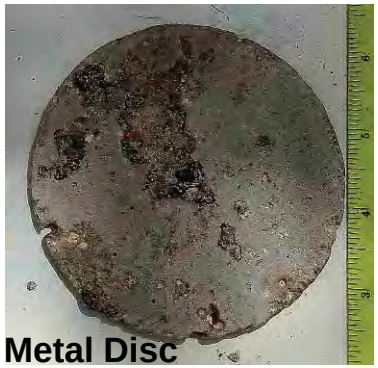


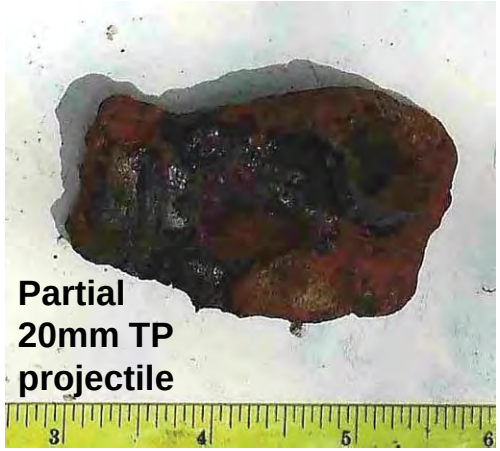
# Expanded Site Inspection: Recovered Discarded Military Munitions (DMM)

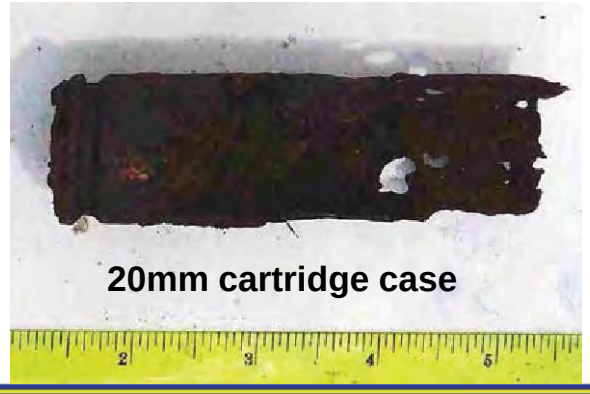


# Expanded Site Inspection: Examples of Recovered Munitions Debris

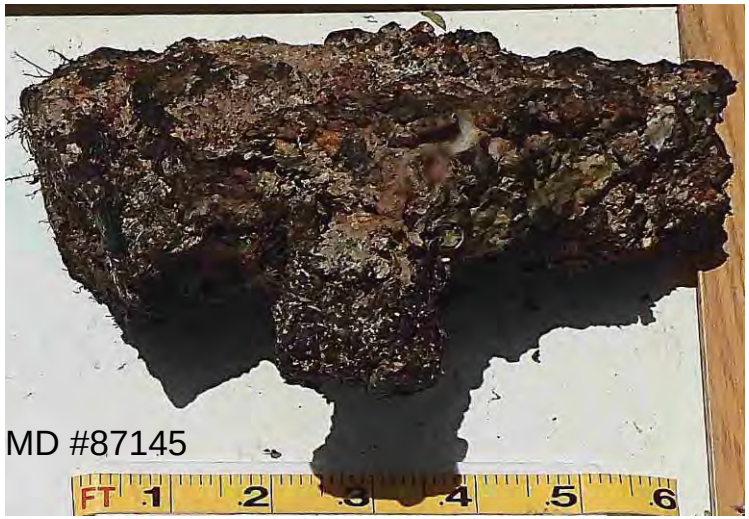






# Expanded Site Inspection: Encrusting is Prevalent and Can Disguise Items



# Beach Dynamics Study: Munitions Surrogates Tracking

- **61 Munitions Surrogates**
  - Designed to simulate common munitions found on Vieques
  - Placed in near shore areas where currents and wave action are strongest
- **Tracked Monthly**
  - Each surrogate has specific ID, color code, and is equipped with acoustic transmitter (pinger)
  - Tracked using:
    - Acoustic receiver (hydrophone)
    - Underwater viewing box
    - Remotely operated vehicle (ROV)
    - Global Positioning System (GPS)

# Munitions Surrogates

12 x 81-mm Mortar

16 x 2.75-in Rocket

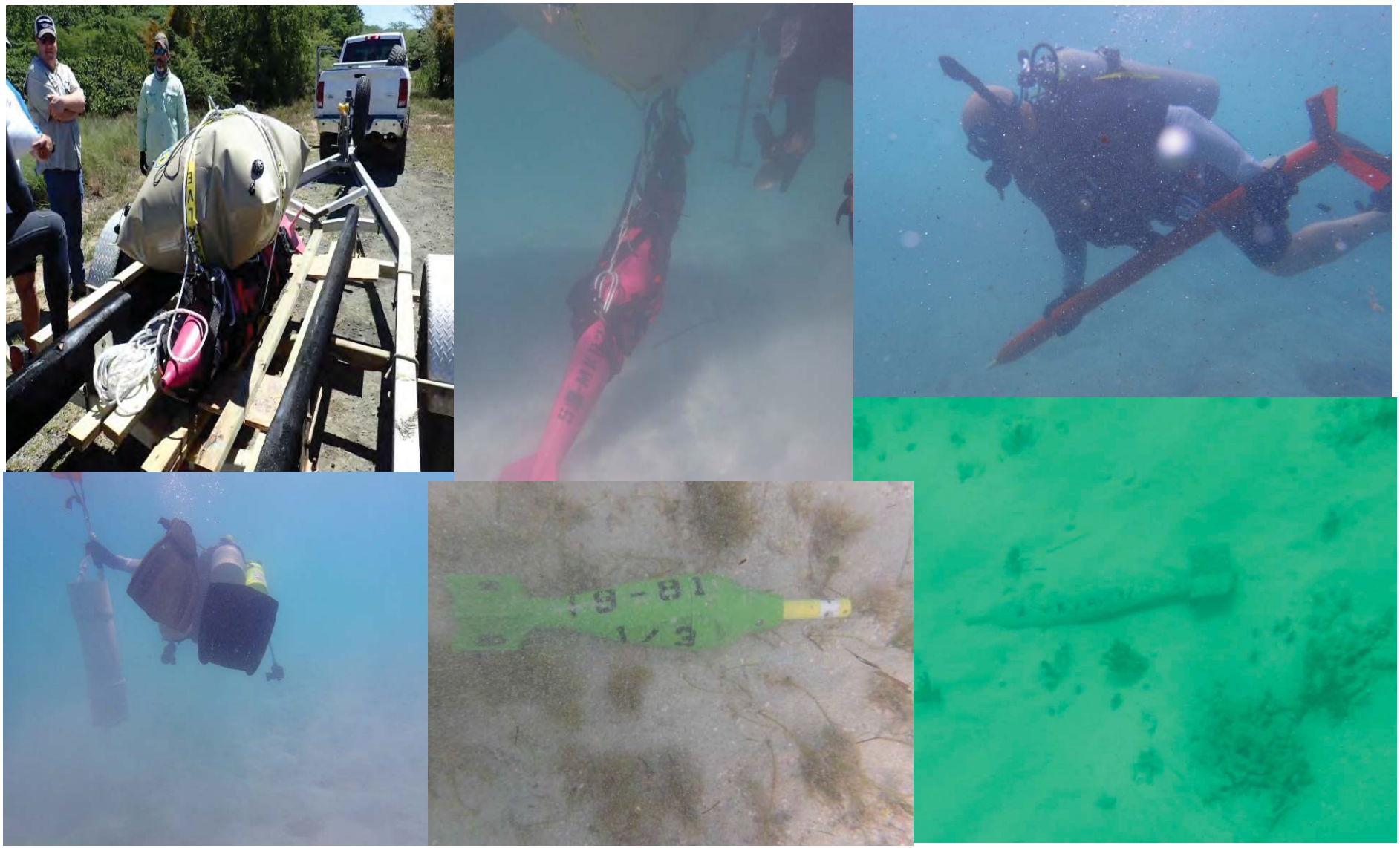
15 x 5-inch Projectile

9 x MK 76 Practice Bomb

7 x MK 82 500-lb Bomb

2 x MK 118 Sub-munition

# Munitions Surrogates Deployment



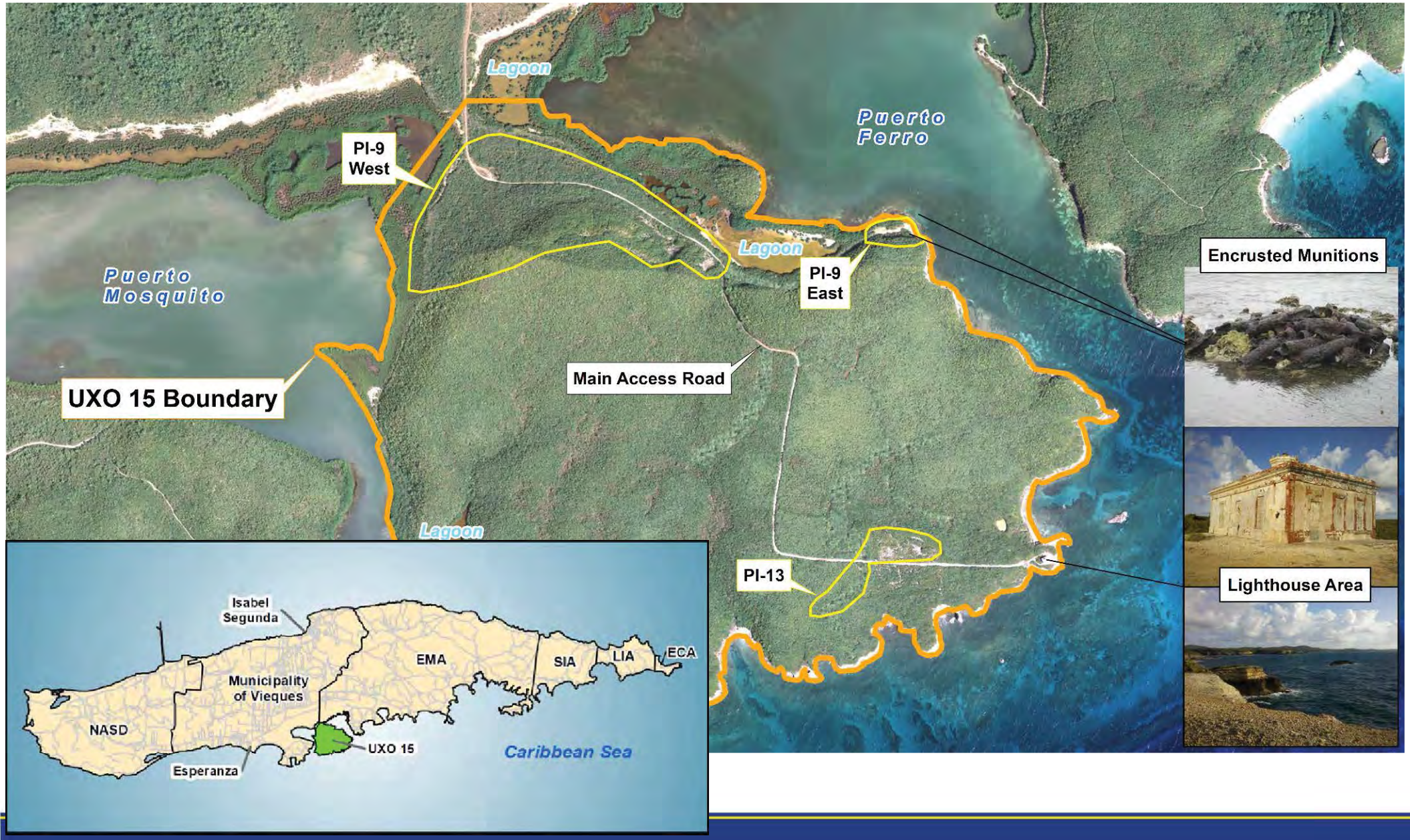
# Munitions Surrogates Tracking

# Underwater Video of Killen

**Navy Project Update**

# NON-TIME-CRITICAL REMOVAL ACTION (NTCRA) UXO 15 (PI 9 EAST) AND ADJACENT UXO 16 ENCRUSTED MUNITIONS

# UXO 15 (PI 9 East) and Adjacent UXO 16 Location and Site Features



# NTCRA Area

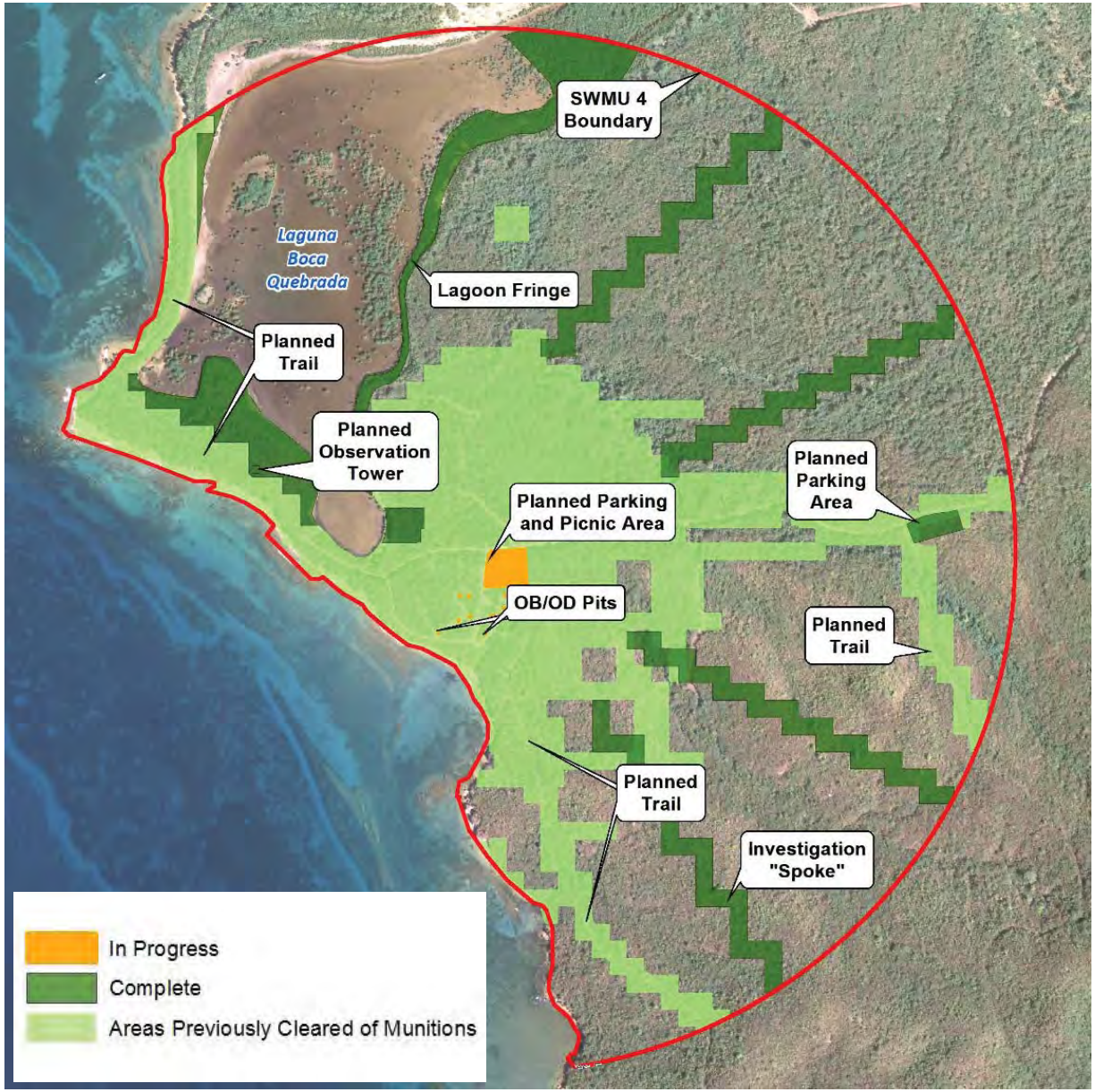
# NTCRA Scope and Status

- NTCRA will address terrestrial and underwater areas where encrusted items have been identified
  - UXO 15 PI-9 East
    - 0.25-acre area
  - UXO 16
    - Small pile (0.06-acre area)
- Biological evaluation and associated protection measures will be implemented
- Engineering Evaluation/Cost Analysis (EE/CA) currently available for public review and comment
  - Review period August 3, 2015 to September 16, 2015

**Navy Project Update**

# SWMU 4 NON-TIME CRITICAL INTERIM REMOVAL ACTION

# Status of NTCRA



# SWMU 4 NTCRA Status Update

- **Digital Geophysical Mapping (DGM) survey to identify the location of buried metallic objects within planned parking, picnic, and observation tower areas**

# SWMU 4 NTCRA Status Update

- **MEC Team conducting mag & dig operations at SWMU 4**

# SWMU 4 NTCRA Status Update

- **Munitions Removal Operations**

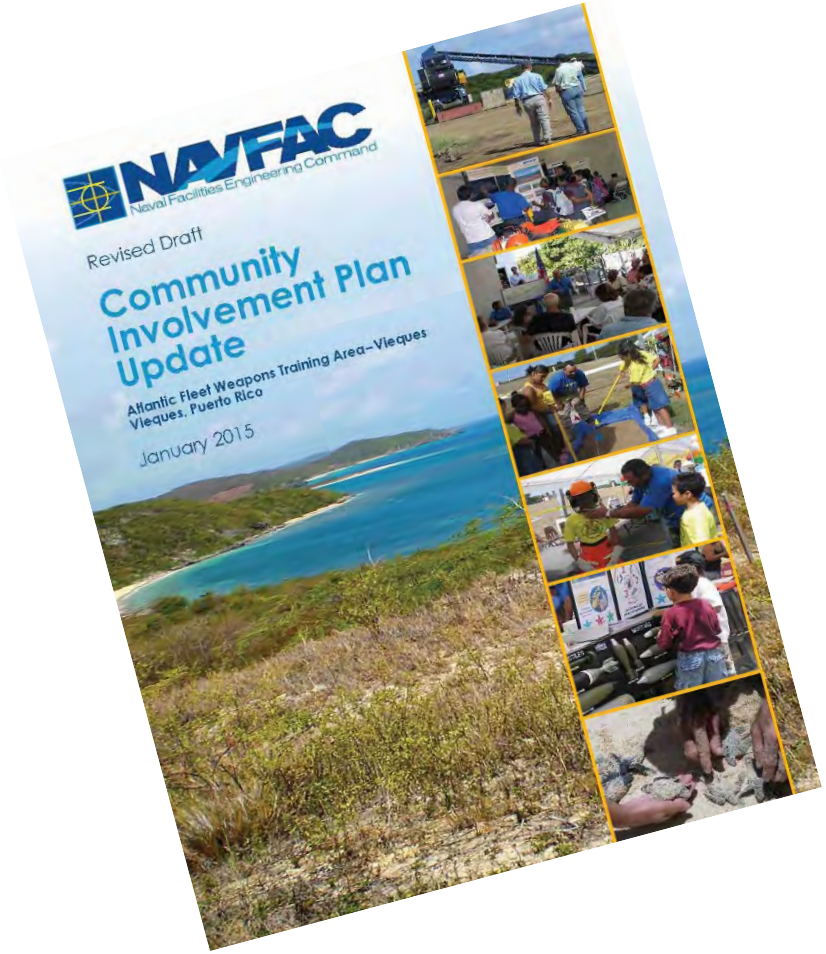
Lagoon Perimeter

Parking, Picnic, Tower Areas

**Navy Project Update**

# COMMUNITY INVOLVEMENT PLAN STATUS UPDATE

# Community Involvement Plan Update

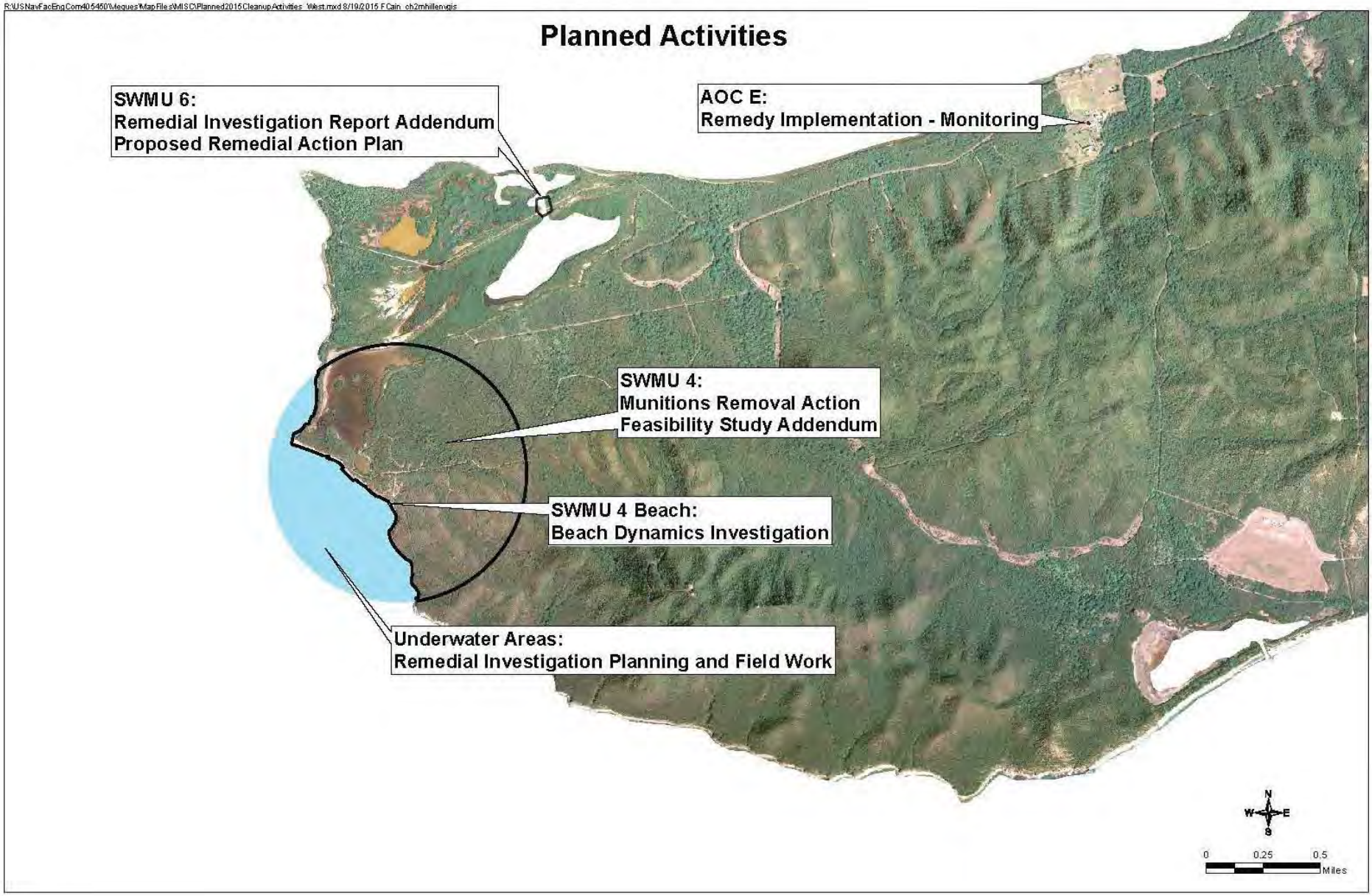



- **The CIP Update was based on community input, including 88 interviews and 164 questionnaires**
- **The public comment period for the Draft Final Community Involvement Plan (CIP) began June 30, 2015 and ended August 14, 2015**
- **The Final CIP will be available in a few weeks on the Navy's and EPA's websites and in the Administrative Record**

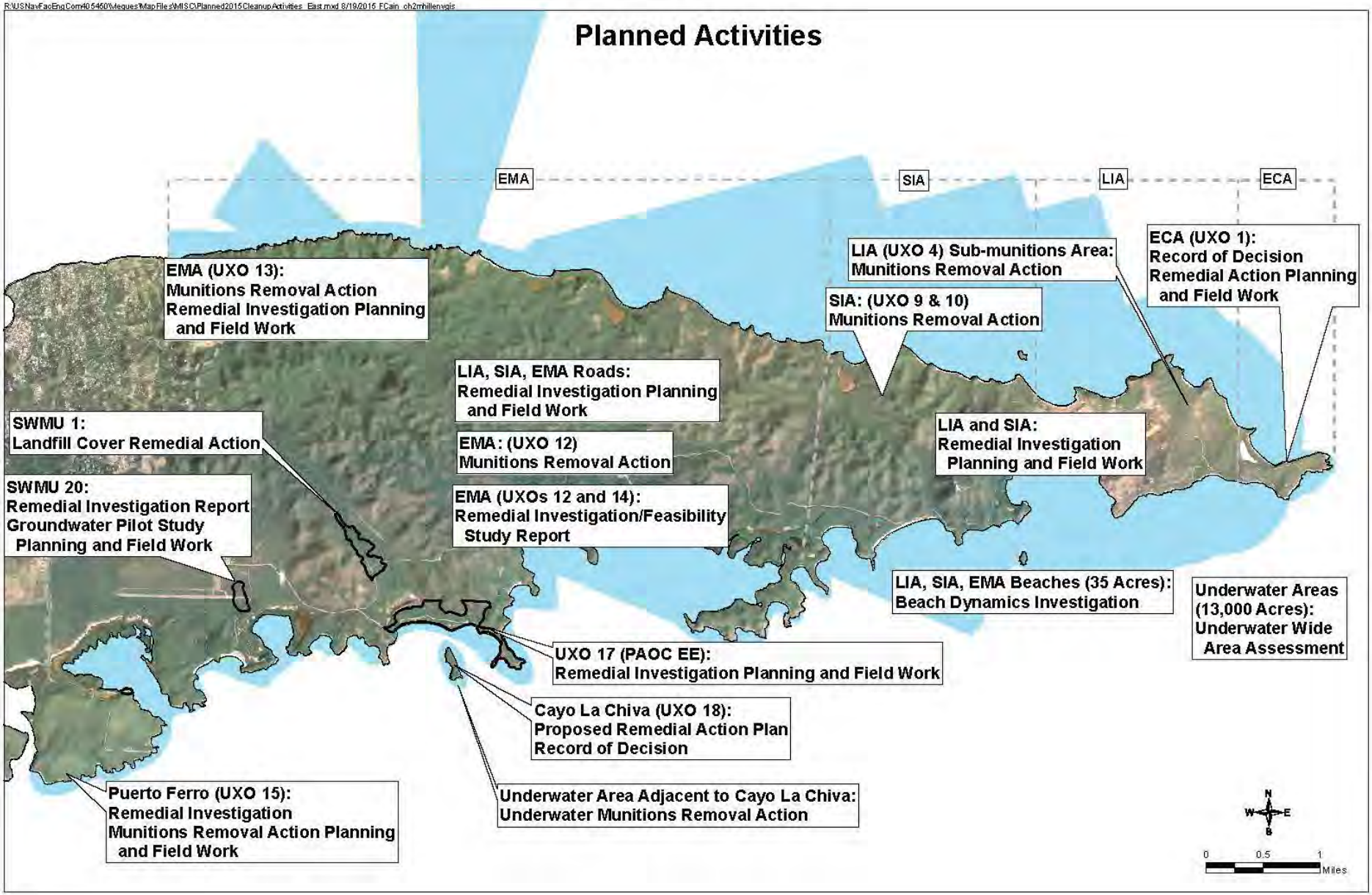
**Navy Project Update**

# STATUS OF SITES AND UPCOMING ACTIVITIES

# Status of Sites and Upcoming Activities at West Vieques



# Status of Sites and Upcoming Activities at East Vieques



**Regulatory Agency Updates**

# REGULATORY AGENCIES

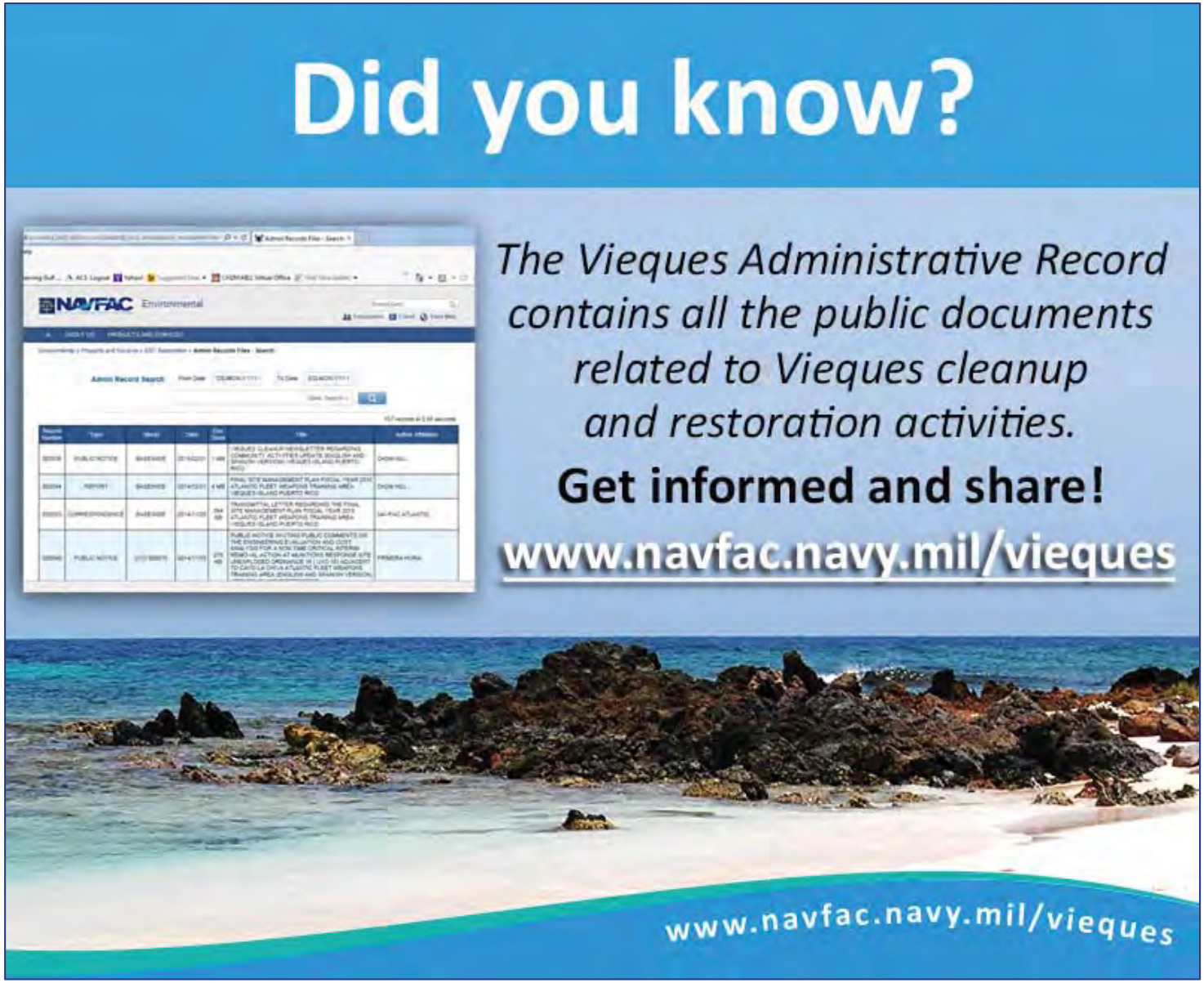
# Regulatory Agency Updates

- **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:**

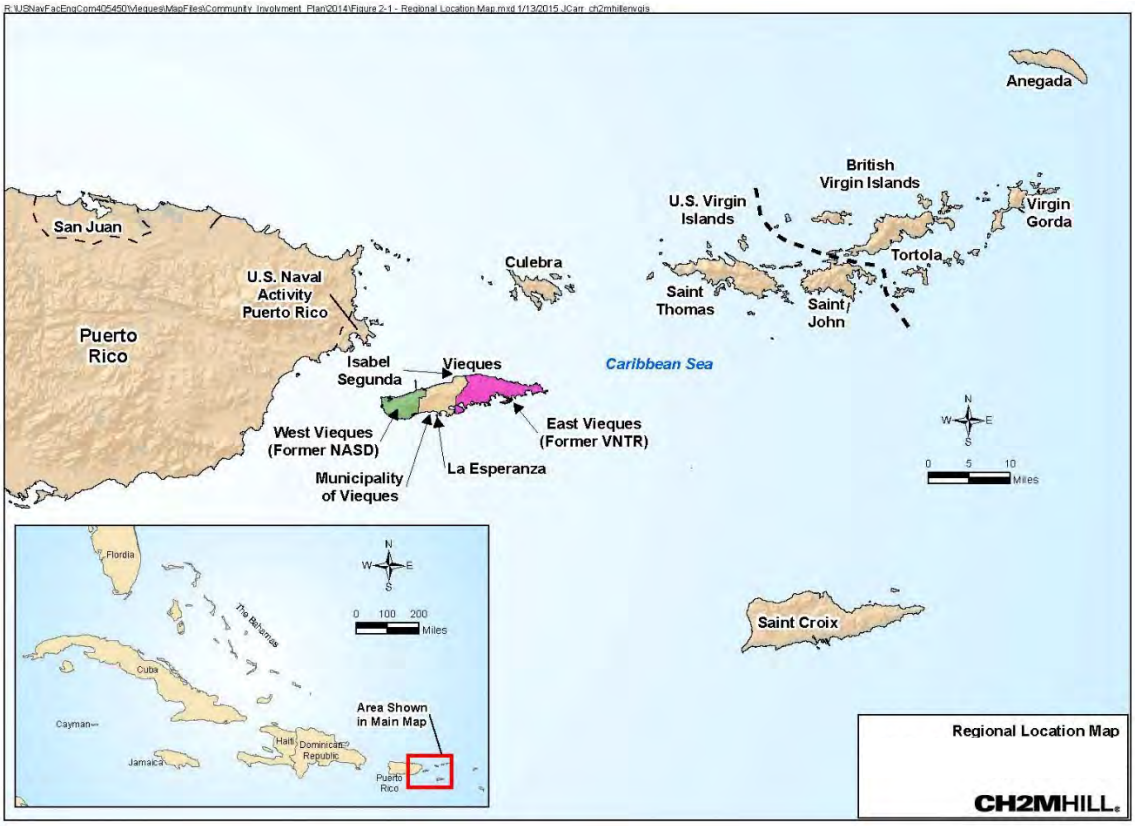
- **No** — No contamination warranting additional study or action identified.
- **Yes** — Contamination and/or risk warranting further investigation or action identified.
- **Yes** — Significant contamination and imminent/ substantial risk identified.

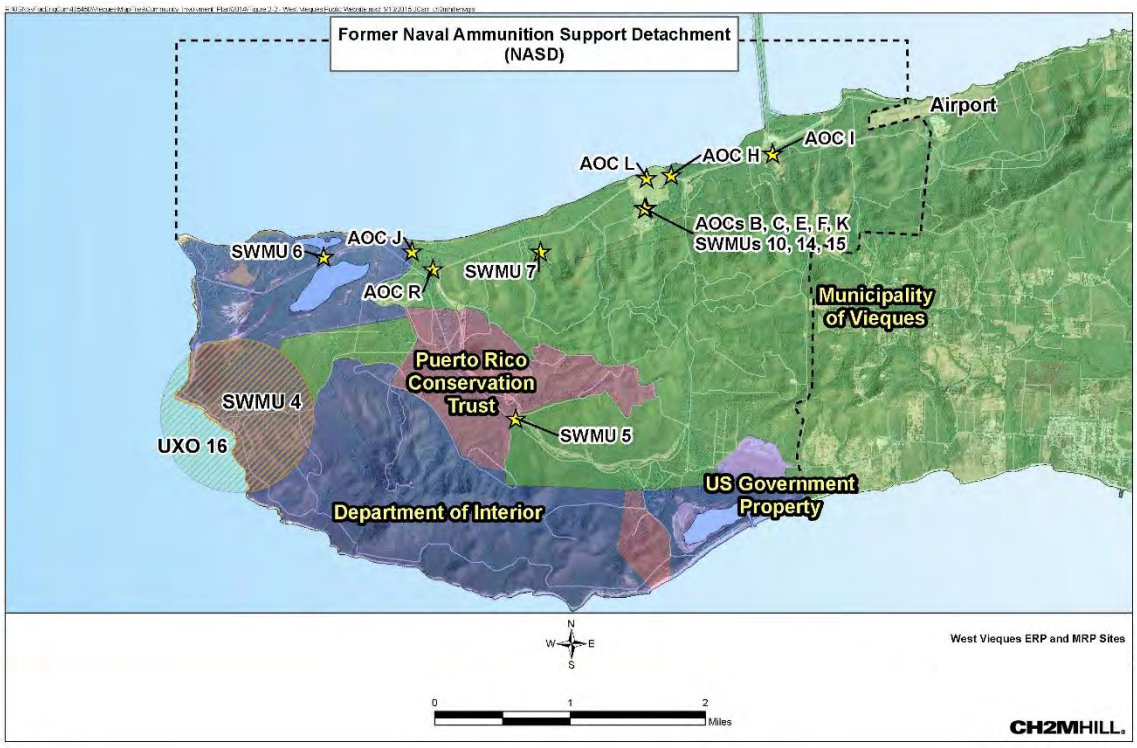
**73 Total sites --- 51 completed sites (70% of sites completed) as of end of August 2015**

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

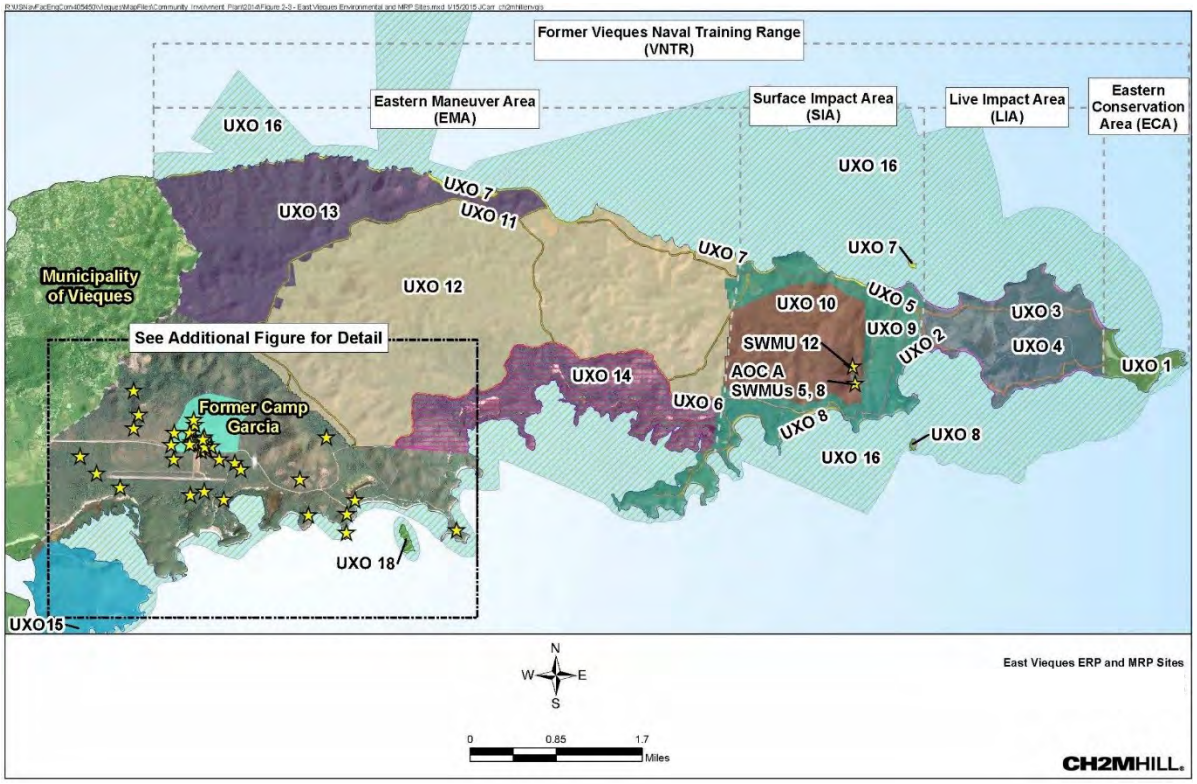
EN0220151002GNV CERCLA-Process_FLOW-Chart

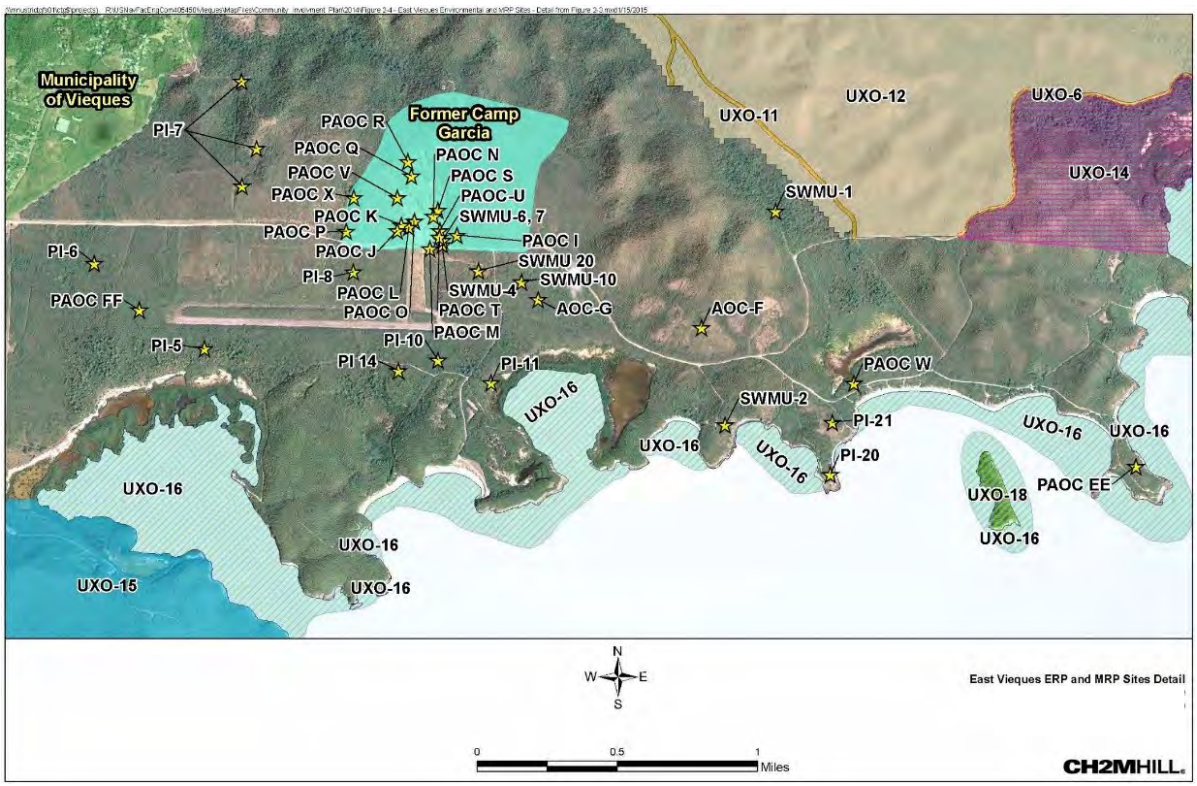
# GENERAL LOCATION OF VIEQUES AND LOCATION OF WEST VIEQUES ENVIRONMENTAL RESTORATION PROGRAM AND MUNITIONS RESPONSE PROGRAM SITES



# 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.