

# **Munitions Response Site Prioritization**

**Former Vieques Naval Facilities**

**Vieques, Puerto Rico**

**Restoration Advisory Board Meeting**

**October 27, 2010**



# Munitions Response Prioritization Protocol (32 CFR Part 179)



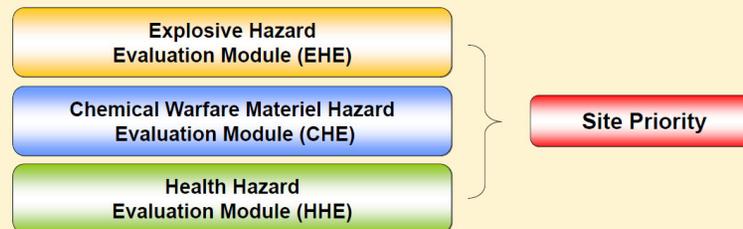
## *The Munitions Response Site Prioritization Protocol*

Congress required the U.S. Department of Defense to set priorities for investigating all munitions response sites.

The Protocol:

- Provides a method for scoring and ranking each munitions response site
- Allows sites to be consistently scored and ranked
- Is used to set priorities for long-term munitions response actions on Vieques and at other Navy munitions response sites nationwide

Priority scores are based on the results of one or more of these Hazard Evaluation modules:



The Protocol allows for early and continuous community and stakeholder participation in the process, including consideration of:

- Cultural and social factors
- Economic factors
- Potential future land use
- Short- and long-term ecological effects
- Availability of appropriate technology
- Other potential environmental impacts

# Site Identification



- **In April, 2010 the former site was divided into 18 munitions sites**
  - Munitions response sites were established based on geographic parcels and future land use rather than as operational units
  - Sites prioritized to achieve site closure sooner within the CERCLA process

# Site Identification



- Includes 17 sites on east Vieques: UXO-1 through UXO-17
- Only 1 site on west Vieques ([NASD] UXO-1 aka SWMU4)



# MRS Prioritization Protocol

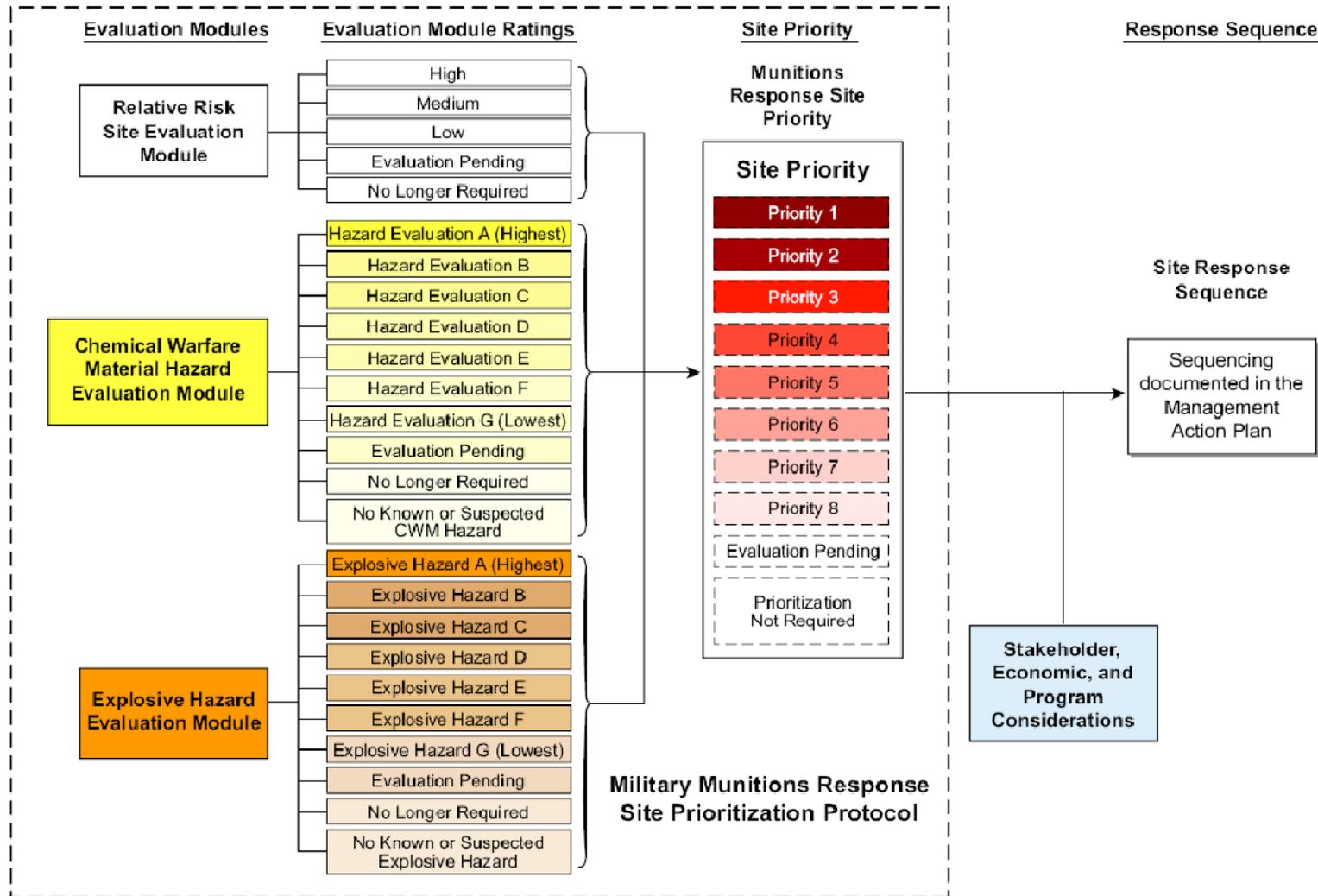


Figure 1-3  
Munitions Site Prioritization  
Site Management Plan, Vieques, Puerto Rico

# Prioritization Approach

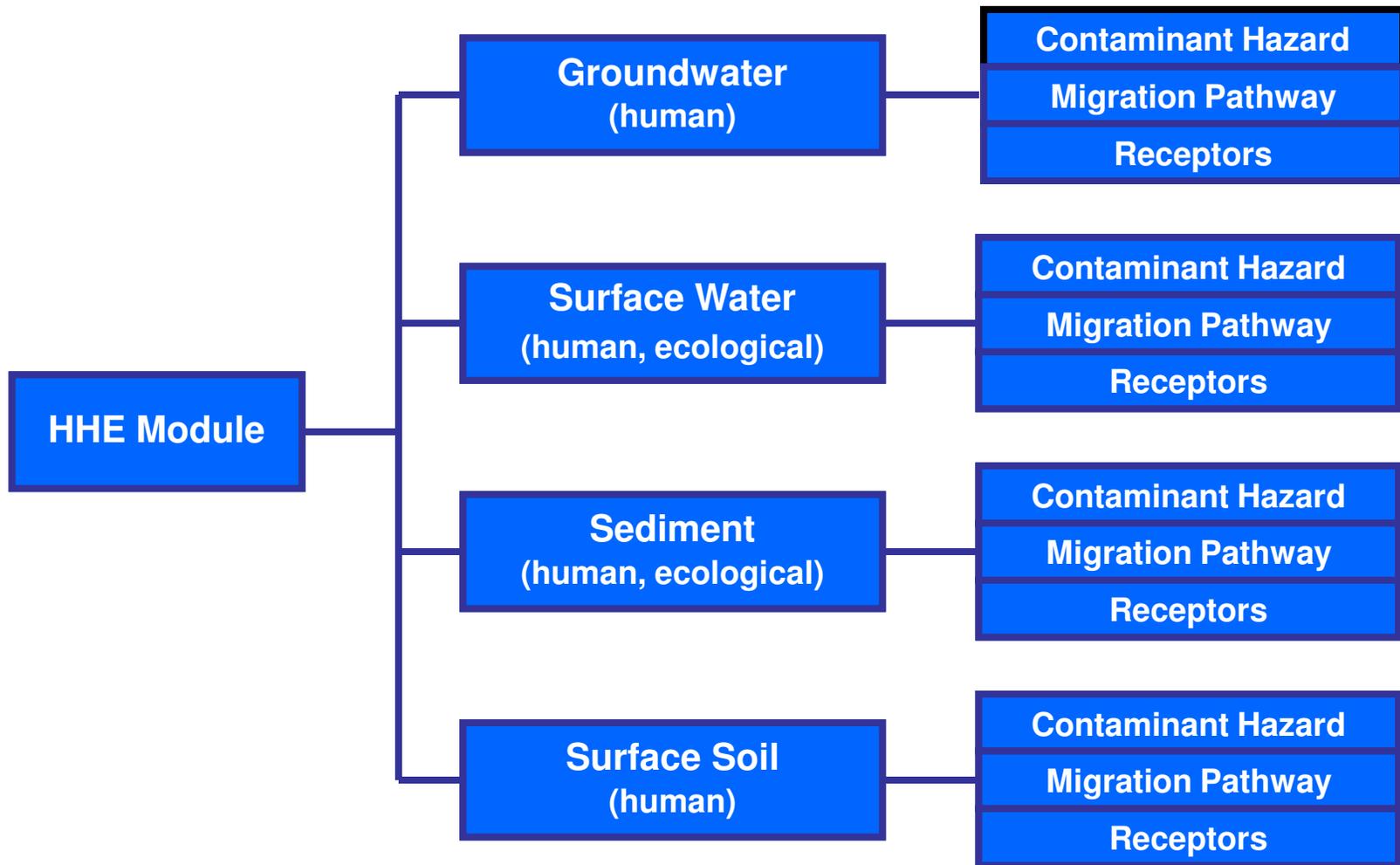


- **Cleanup will address both explosives hazards and human health / ecological risks**
- **Current prioritization is driven by:**
  - Explosive hazard module as main driver
  - Human health / ecological module is second driver
- **Chemical weapons module does not apply to Vieques based on historical information**

# Explosive Hazard Evaluation (EHE) Module

| Explosive Hazard | Munitions Type 30   |  | Source of Hazard 10  |   | EHE Module Ratings<br>Total Score from all data elements  |  |  |  |
|------------------|---|--|--|---|---|--|--|--|
|                  | <ul style="list-style-type: none"> <li>• Sensitive 30</li> <li>• High explosive (used or damaged) 25</li> <li>• Pyrotechnic (used or damaged) 20</li> <li>• High explosives (unused) 15</li> <li>• Propellant 15</li> <li>• Bulk secondary high explosives, pyrotechnics, or propellant 10</li> <li>• Pyrotechnic (not used or damaged) 10</li> <li>• Practice 5</li> <li>• Riot control 3</li> <li>• Small arms 2</li> <li>• Evidence of no munitions 0</li> </ul> |  | <ul style="list-style-type: none"> <li>• Former ranges 10</li> <li>• Former munitions treatment (i.e., OB/OD) units 8</li> <li>• Former practice munitions ranges 6</li> <li>• Former maneuver area 5</li> <li>• Former burial pit or other disposal area 5</li> <li>• Former industrial operating facilities 4</li> <li>• Former firing points 4</li> <li>• Former missile or ADA emplacements 2</li> <li>• Former storage or transfer points 2</li> <li>• Former small arms range 1</li> <li>• Evidence of no munitions 0</li> </ul> |   |   |  |  |  |
| Accessibility    | Location of Munitions 25  |  | Ease of Access 10  |   | Status of Property 5  |  |  |  |
|                  | <ul style="list-style-type: none"> <li>• Confirmed surface 25</li> <li>• Confirmed subsurface, active 20</li> <li>• Confirmed subsurface, stable 15</li> <li>• Suspected (physical evidence) 10</li> <li>• Suspected (historical evidence) 5</li> <li>• Subsurface, physical constraint 2</li> <li>• Small arms (regardless of location) 1</li> <li>• Evidence of no munitions 0</li> </ul>   |  | <ul style="list-style-type: none"> <li>• No barrier 10</li> <li>• Barrier to MRS access is incomplete 8</li> <li>• Barrier to MRS access is complete but not monitored 5</li> <li>• Barrier to MRS is complete and monitored 0</li> </ul>  | <ul style="list-style-type: none"> <li>• Non-DoD control 5</li> <li>• Scheduled for transfer from DoD control 3</li> <li>• DoD control 0</li> </ul>   | <ul style="list-style-type: none"> <li>• Priority A (Highest) &gt;92</li> <li>• Priority B 82 - 91</li> <li>• Priority C 71 - 81</li> <li>• Priority D 60 - 70</li> <li>• Priority E 48 - 59</li> <li>• Priority F 38 - 47</li> <li>• Priority G (Lowest) 0 - 37</li> <li>• Evaluation Pending</li> <li>• No Longer Required</li> <li>• No Known or Suspected Explosive Hazard</li> </ul> |  |  |  |
| Receptors        | Population Density 5  |  | Population Near Hazard 5   |   | Types of Activities/Structures 5  |  | Ecological and/or Cultural Resources 5 |  |
|                  | <ul style="list-style-type: none"> <li>• &gt; 500 5</li> <li>• 100 - 500 3</li> <li>• &lt; 100 1</li> </ul>   |  | <ul style="list-style-type: none"> <li>• 26 or more 5</li> <li>• 16 to 25 inhabited structures 4</li> <li>• 11 to 15 inhabited structures 3</li> <li>• 6 to 10 inhabited structures 2</li> <li>• 1 to 5 inhabited structures 1</li> <li>• 0 inhabited structures 0</li> </ul>  | <ul style="list-style-type: none"> <li>• Residential, educational, commercial, or subsistence 5</li> <li>• Parks and recreational areas 4</li> <li>• Agricultural, forestry 3</li> <li>• Industrial or warehousing 2</li> <li>• No known or recurring activities 1</li> </ul> | <ul style="list-style-type: none"> <li>• Ecological and Cultural 5</li> <li>• Ecological 3</li> <li>• Cultural 3</li> <li>• No ecological or cultural resources present 0</li> </ul>  |  |  |  |

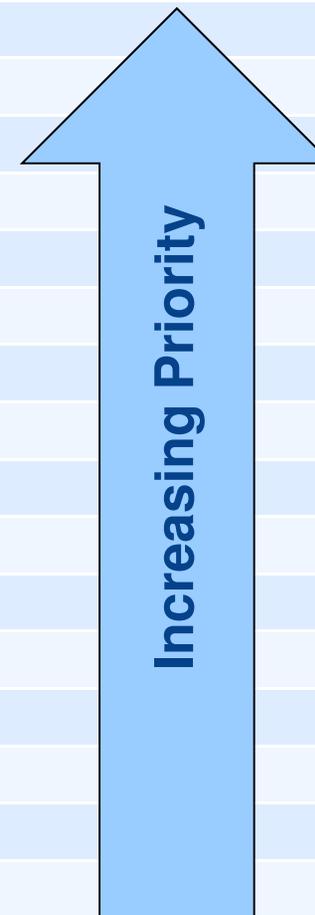
# Health Hazard Evaluation (HHE)



# MRS Priority Scoring For Vieques



| MUNITIOS RESPONSE SITE           | PRIORITY RANKING |
|----------------------------------|------------------|
| UXO-1 Eastern Conservation Area  | 2                |
| UXO-2 LIA Beaches                | 2                |
| UXO-3 LIA Roads                  | 2                |
| UXO-4 LIA Interior               | 2                |
| UXO-5 SIA Restricted Roads       | 2                |
| UXO-6 EMA/SIA Public Roads       | 2                |
| UXO-7 EMA/SIA North Beaches      | 2                |
| UXO-8 SIA South Beaches          | 2                |
| UXO-9 SIA Exterior               | 2                |
| UXO-10 SIA Interior              | 2                |
| UXO-11 EMA Public Roads          | 2                |
| UXO-12 EMA Interior              | 2                |
| UXO-13 EMA West                  | 2                |
| UXO-14 EMA South                 | 2                |
| UXO-16 Underwater Areas          | 2                |
| (West Vieques) UXO-4 SWMU 4      | 2                |
| UXO-15 Puerto Ferro              | 3                |
| UXO-17 Other Sites (Camp Garcia) | 4                |



# Future Prioritization Process For Vieques



- **Sites will be re-scored annually as more site investigation data becomes available.**
- **Prioritization results will be available:**
  - At the outreach event on October 27, 2010
  - As part of the Site Management Plan
  - On the public website by November 5, 2010.