

Marine Corps Base (MCB) Camp Lejeune Restoration Advisory Board (RAB) Meeting Minutes

MEETING DATE: August 30, 2023

LOCATION: Coastal Carolina Community College, Business Technology Building, Jacksonville, North Carolina

ATTENDEES:

Laura Spung/MCB Camp Lejeune	Ben Francisco/NAVFAC
David Towler/MCB Camp Lejeune	Matt Louth/CH2M
Jennifer Tufts/EPA	Monica Fulkerson/CH2M
Laura Bader/RAB Co-Chair	Keith LaTorre/CH2M
Steven Thompson/RAB member	Angela Moore/NCDEQ (via phone)
Rob Johnson/Community member	Leigh Cobb/Court Reporter (Site UXO-30 Public Meeting only)
Thomas Mattison/RAB member	

FROM: Monica Fulkerson/CH2M

DATE: September 18, 2023

I. Welcome and Introductions

Ms. Spung began the meeting, introduced the team, and explained the purpose of the RAB.

II. Site UXO-30 Public Meeting

A public meeting was held to present the Proposed Plan and implemented remedial action for Site UXO-30. A court reporter recorded the meeting and minutes will be available on the MCB Camp Lejeune Administrative Record. There were no questions or discussion items.

III. Sites UXO-28, UXO-29, and UXO-31 Updates

Objective: The purpose of this agenda item is to present a background summary of UXO Sites 28, 29, and 31, a summary of the investigations completed at each site, the munitions findings for each site, and the next step/schedule for each site.

Overview: A presentation was reviewed by Mr. LaTorre.

An overview of Site UXO-28 was presented. Site UXO-28 includes 81 acres along Parachute Tower Road. It is partially developed, with wooded and wetland areas in the northern and southern portions and an area cleared of vegetation in the central portion of the site. The Site was a former skeet range (D-9) and likely a maneuver training area (1950s to 2000s). Munitions were found during soil removal of flying clay targets and lead shot associated with the D-9 range. The Site was expanded to include 144 acres of a historical maneuver training area that had not been previously investigated (Site UXO-28 Expanded Investigation Area [EIA]).

Investigations and remedial actions at the Site have included a Focused Site Inspection (SI) (2007-2008); Focused Preliminary Assessment/SI (2008-2010); Wallace Creek Expanded Site Investigation (ESI) (2009-

2010); Soil Removal Action (2012-2016); Site UXO-23 ESI (2013-2017); Remedial Investigation (RI) (2015-2021); and Munitions Surface Clearance (2022).

During these investigations and remedial actions, 23 munitions and explosives of concern (MEC), which require disposal by demolition, and 205 material potentially presenting an explosive hazard (MPPEH) items were found. Of these, 82% were illumination flares, grenades (hand or rifle), and 3.5" inert training rockets. Most (60%) of the items were found just below the ground surface (less than 1.5 ft deep) and the remainder found on the ground surface. Potential former fighting positions were found in the woods north and south of the central-cleared area, suggesting the use of the area for training.

The Feasibility Study (FS) is (ongoing), which will present alternatives to address potential explosive hazards at the Site. The FS is anticipated to be finalized in Winter 2024. The Proposed Plan (PP), which identifies the preferred alternative for addressing the potential site explosive hazards for public review, is anticipated to be finalized in Spring 2024. This will be followed by the Record of Decision (ROD), which documents the selected remedy to address the potential site explosive hazards, in Fall 2024.

Mr. Johnson asked if there was any ongoing work, as he observed high grasses in the area. Surface clearance was conducted so that maintenance could continue safely.

An overview of Site UXO-29 was presented. Site UXO-29 covers 286 acres adjacent to the southern end of the MCAS New River runway and Morgan Bay of the New River. The northern tree-cleared portion is part of the approach and take-off safety zone for MCAS New River. Approximately 20 acres in the northeast encompass a Recreation Area. The Southern Peninsula includes 130 acres covered by forest, marsh, and scrub bush. The Site includes portions of three historical/former ranges: the Infantry Weapons Demonstration Course, B-17; the Artillery Training Area; and the Hand Grenade Range (Practice) Demonstrator, M-113. Munitions were found in 2013 during the construction of Perimeter Road.

Investigations and remedial actions at the Site have included a Munitions Response investigation associated with the Perimeter Road Military Construction expansion (2013); Preliminary Assessment/Site Inspection (PA/SI) (2017); RI (2019-2020); Munitions Surface Clearance (2022); and a subsurface investigation within a potential high-density metallic area (2023).

During these investigations and remedial actions, 1,751 (243 MEC and 1,508 MPPEH) items were found. Of these, 80% were 2.36" rockets or rocket components/fragmentation. The majority were found within the southern portion of the Recreation Area and a shallow area adjacent to the west side of the Recreation Area. Most items were found less than 2 feet deep. Only 5 expended parachute flares were found within the Southern Peninsula. The Site was likely used as a rocket range/training area.

Mr. Johnson asked if the water has been investigated. Mr. LaTorre responded that it had not.

The FS is ongoing and is anticipated to be finalized in Winter 2024. The PP is anticipated to be finalized in Spring 2024, and the ROD will follow in Fall 2024.

An overview of Site UXO-31 was presented. Site UXO-31, or the Off-Base Surface Danger Zones (SDZs), encompass 1,610 acres of upland terrain (above mean high tide), water channels, and salt marsh. There are no residences or commercial buildings in the area. The former range was used for artillery and airborne strafing, rocket firing, and bombing from 1945 to 2001. Munitions were found within the area during the 2010 PA/S. The revised site boundary now includes 153 acres within the southwest portion of the area, adjacent to the former range target on Browns Island. MEC/MPPEH has been found in this area.

Investigations and remedial actions at the Site have included a Focused PA/SI (2010), which included digital geophysical mapping (DGM) via helicopter; Expanded SI (2013); installation of warning signs around the Site UXO-31 boundary (2014); an engineering evaluation/cost analysis (2015); and a PA/SI is in progress.

During these investigations and remedial actions, 71 (7 MEC and 64 MPPEH) items were found. Of these, 6 MEC and 15 MPPEH items were found within the Site UXO-31 boundary, consisting of aircraft illumination flares, rockets (2.75- and 5-inch), bombs (bomb dummy unit-33, practice), cartridge casings (20 mm); sub-caliber aircraft 2.25-inch rockets, and ordnance fragments. Items were found on the ground surface to less than 3 feet deep. Sampling data showed no munition constituent hazards are present.

An RI will be conducted to further evaluate the nature and extent of MEC/MPPEH at Site UXO- 31 and confirm or adjust the current site boundary, if needed. The proposed RI approach includes conducting DGM using an unmanned aerial vehicle (drone) to identify metallic anomalies and high-density metallic anomaly areas. Helicopters are no longer used for this purpose. DGM will be conducted within 100% of Site UXO-31 (153 acres), plus adjacent areas outside the site boundary. Based on DGM data, select anomalies will be intrusively investigated to determine the source of the anomalies and assess the nature and extent of any MEC/MPPEH.

The MR-QAPP (work plan) for the RI is in progress. It is anticipated that field work will be conducted in Spring 2024 and the RI will be finalized in Winter 2024. The FS is anticipated in Spring 2025.

IV. RAB Business

The next RAB meeting will be scheduled for early December 2023* and an email with the projected date will be sent to the RAB members.

Ms. Spung facilitated a vote for Mr. Johnson to be added to the RAB. Mr. Johnson was confirmed as a RAB member.

**Ms. Spung was notified after the meeting adjourned that the next RAB date has been set for November 15, 2023.*



CAMP LEJEUNE

HOME OF
EXPEDITIONARY
FORCES IN READINESS



Sites UXO-28, UXO-29, and UXO-31 Updates

MCB Camp Lejeune Restoration Advisory Board (RAB) Meeting
August 30, 2023



Objectives

- Present a background summary of UXO Sites 28, 29, and 31
- Present a summary of the investigations completed at each site
- Present the munitions findings for each site
- Present the next step/schedule for each site

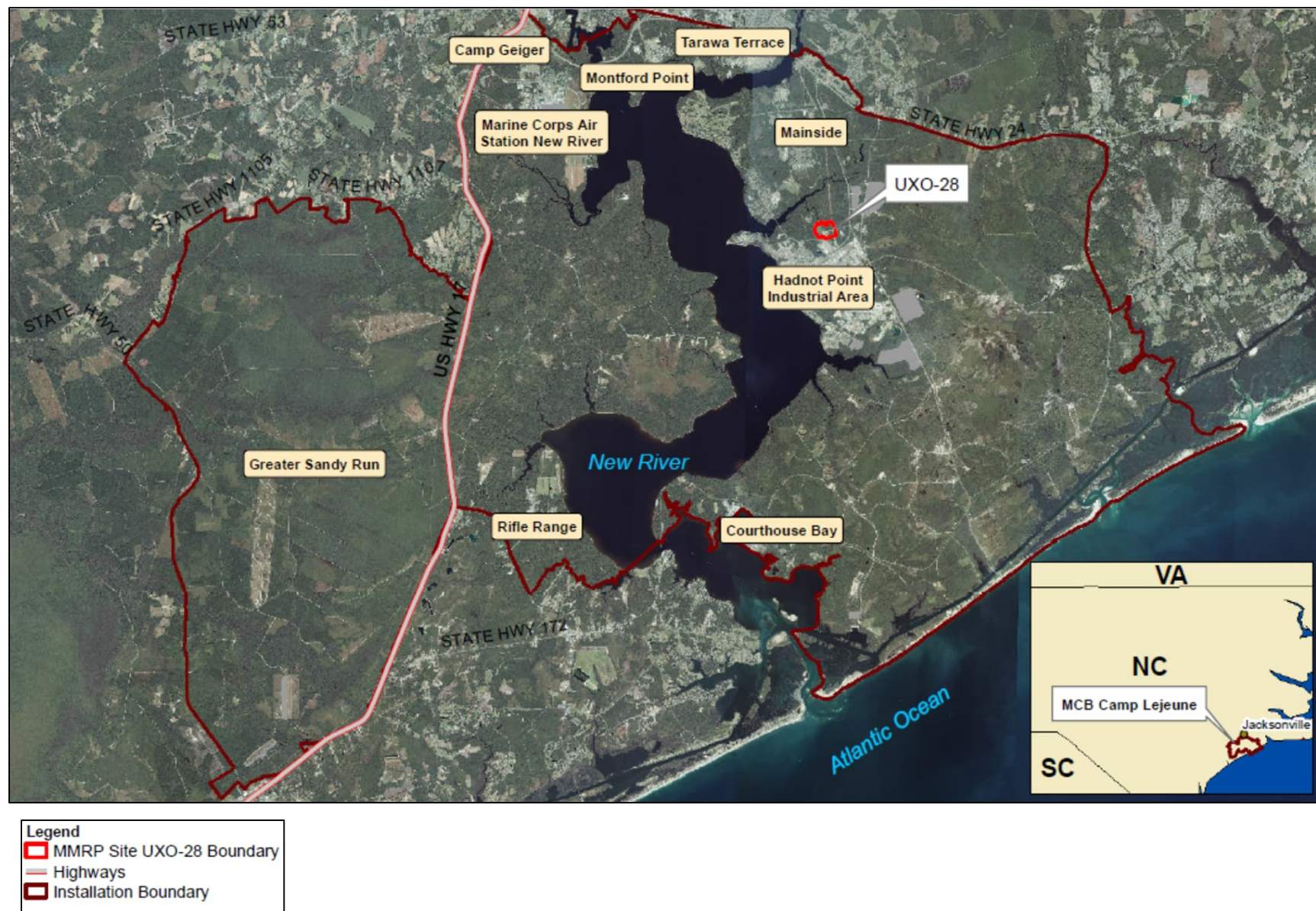


UXO Team Surface Clearing for Munitions at Site UXO-28



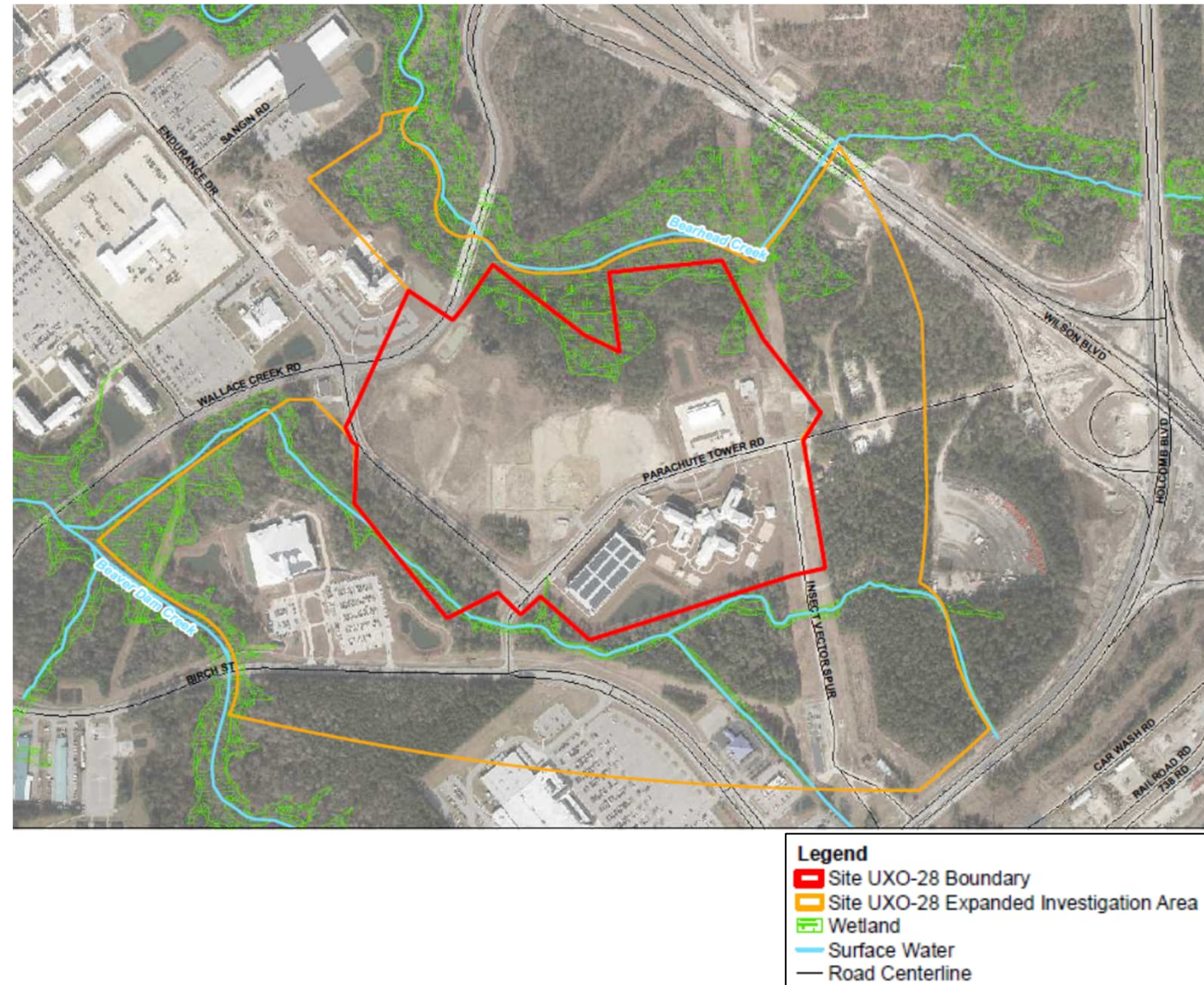
Site UXO-28

Site UXO-28 Location



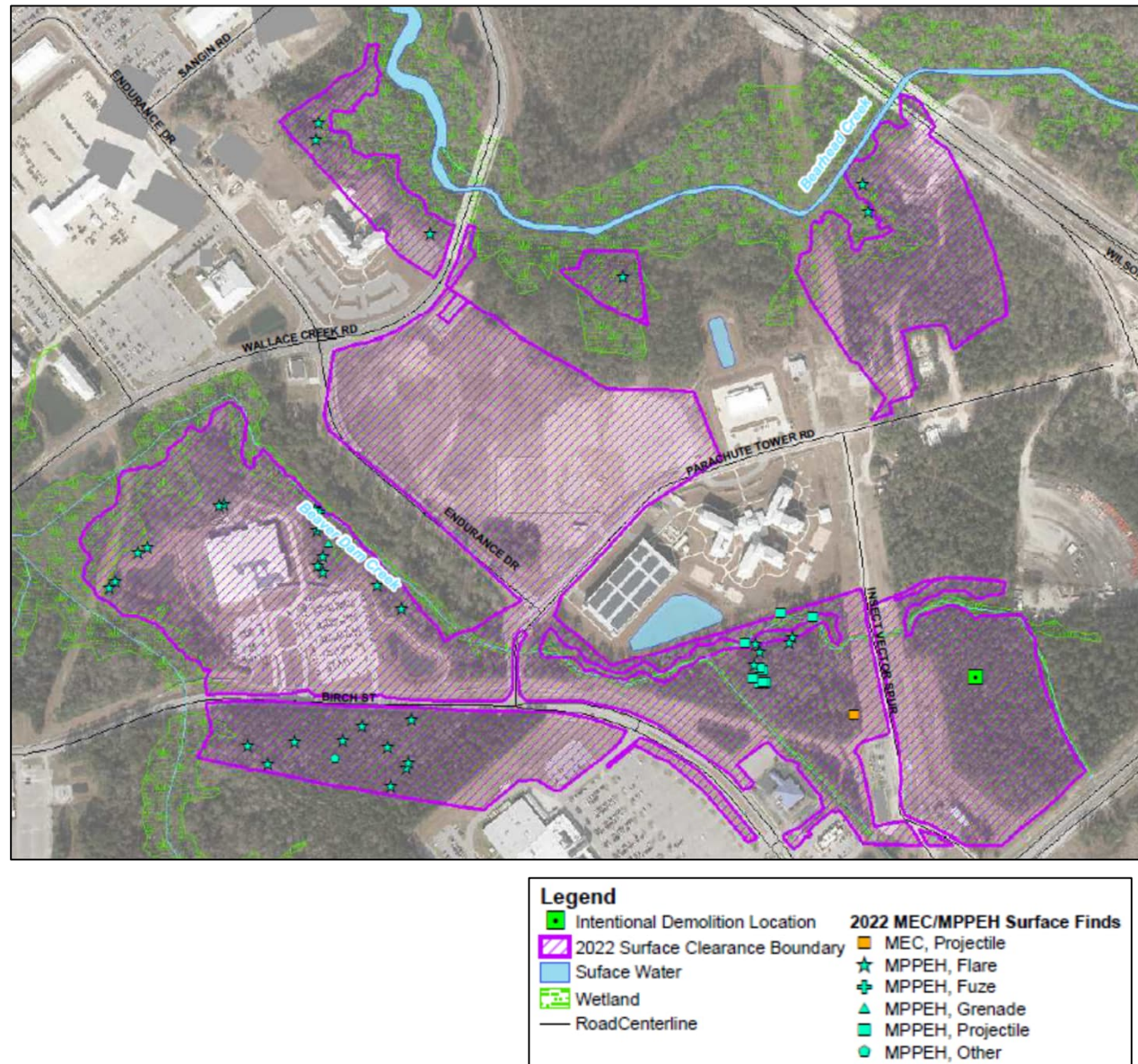
Site UXO-28 Background

- 81 acres along Parachute Tower Road
- Partially developed, with wooded and wetland areas in the northern and southern portions and an area cleared of vegetation in the central portion of the site
- Site was a former skeet range (D-9) and likely a maneuver training area (1950's to 2000's)
- Munitions were found during soil removal of flying clay targets and lead shot associated with the D-9 range
- Expanded to include 144 acres of a historical maneuver training area that had not been previously investigated (Site UXO-28 Expanded Investigation Area [EIA])



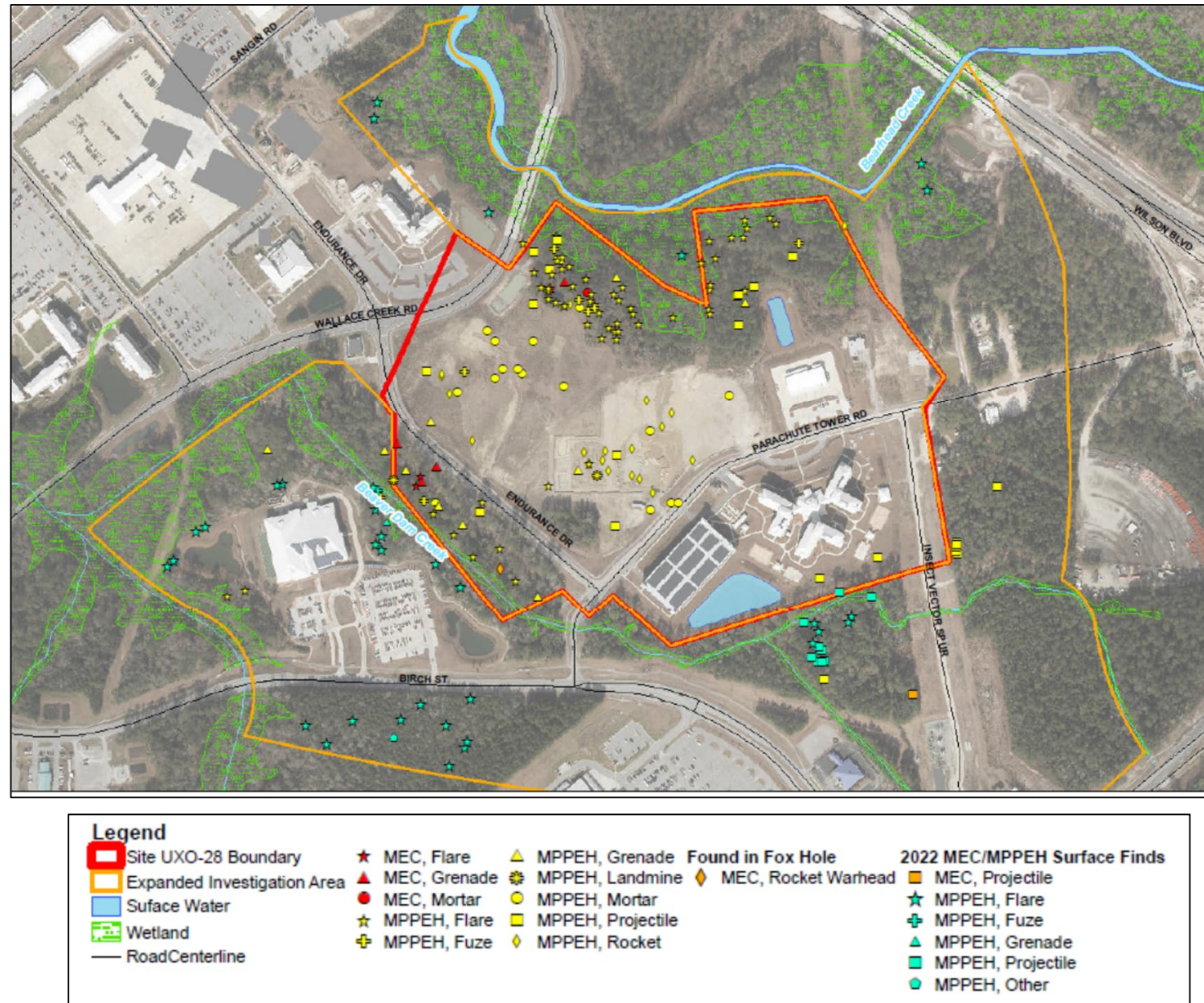
Site UXO-28 Investigations

- 2007 – 2008: Focused Site Inspection (SI)
- 2008 – 2010: Focused Preliminary Assessment/SI
- 2009 – 2010: Wallace Creek Expanded Site Investigation (ESI)
- 2012 – 2016: Soil Removal Action
- 2013 – 2017: Site UXO-23 ESI
- 2015 – 2021: Remedial Investigation (RI)
- 2022: Munitions Surface Clearance (see figure)



Site UXO-28 Munitions Finds

- 23 munitions and explosives of concern (MEC) and 205 material potentially presenting an explosive hazard (MPPEH) items found
- 82% were illumination flares, grenades (hand or rifle), and 3.5" inert training rockets
- 60% of the items were found just below the ground surface (less than 1.5 ft deep) and the remainder found on the ground surface
- Potential former fighting positions found in the woods north and south of the central-cleared area



Next Steps

- Feasibility Study – (ongoing)
presents alternatives to address potential explosive hazards at the site
 - Final - Winter 2024
- Proposed Plan – identifies the preferred alternative for addressing the potential site explosive hazards – made available for public review
 - Final – Spring 2024
- Record of Decision– documents the selected remedy to address the potential site explosive hazards
 - Final – Fall 2024



MEC Item Found (40mm HEDP M433 Grenade)



MPPEH Item Found (M127 Flare, expended)



Site UXO-29

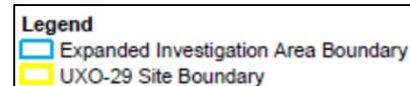
Site UXO-29 Location



- Legend
- Site UXO-29 Boundary
 - Highways
 - Installation Boundary

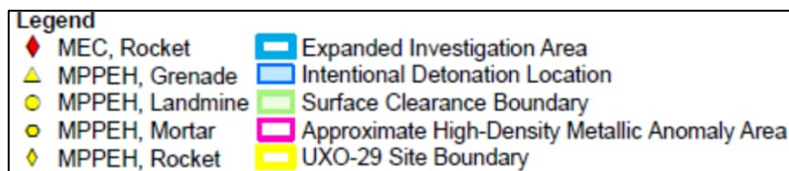
Site UXO-29 Background

- Site covers 286 acres adjacent to the southern end of the MCAS New River runway and Morgan Bay of the New River
- Northern tree-cleared portion is part of the approach and take-off safety zone for MCAS New River
- 20 acres in the northeast encompass a Recreation Area
- Southern Peninsula: 130 acres covered by forest, marsh, and scrub bush
- Includes portions of 3 historical/former ranges: Infantry Weapons Demonstration Course, B-17; Artillery Training Area; and Hand Grenade Range (Practice) Demonstrator, M-113
- Munitions were found in 2013 during the construction of Perimeter Road



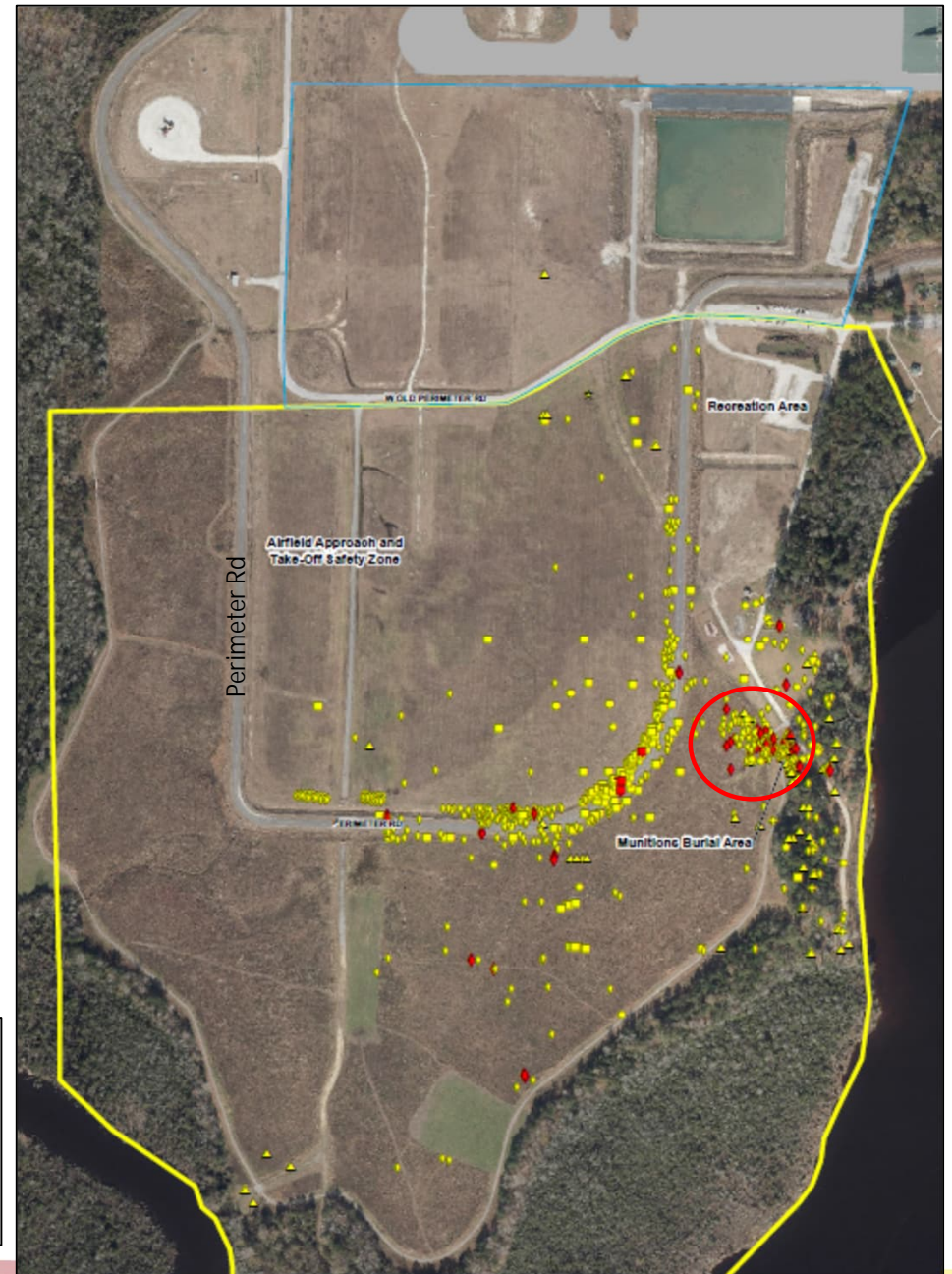
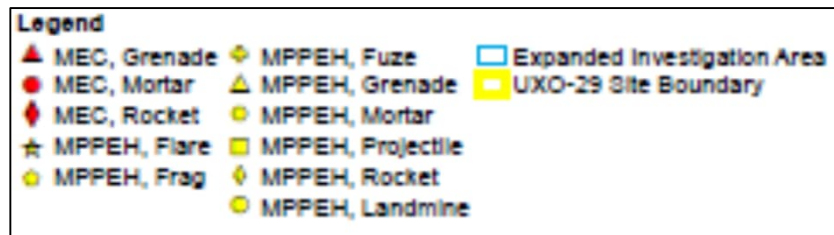
Site UXO-29 Investigations

- 2013 – Munitions Response investigation associated with the Perimeter Road Military Construction expansion
- 2017 – Preliminary Assessment/Site Inspection (PA/SI)
- 2019/2020 - Remedial Investigation (RI)
- 2022 – Munitions Surface Clearance
- 2023 – Subsurface investigation within a potential high-density metallic area (pink area on figure)



Site UXO-29 Munitions Finds

- 1,751 (243 MEC and 1,508 MPPEH) items found to date
- 80% were 2.36" rockets or rocket components/fragmentation
- Majority found within the southern portion of the Recreation Area and a shallow area adjacent to the west side of the Recreation Area (red circle on figure)
- Majority of items were found less than 2 feet deep
- Only 5 expended parachute flares were found within the southern peninsula
- Site was likely used as a rocket range/training area



Finds (cont.)

Potential Metal Rocket
Targets with Impact Holes
Found at the Site



2.36" Rockets Found within High
Density Anomaly Area

Next Steps

- **Feasibility Study** – (ongoing)
presents alternatives to address potential explosive hazards at the site
 - Final - Winter 2024
- **Proposed Plan** – identifies the preferred alternative for addressing the potential site explosive hazards – made available for public review
 - Final – Spring 2024
- **Record of Decision**– documents the selected remedy to address the potential site explosive hazards
 - Final – Fall 2024



Vegetation Clearing – Site UXO-29

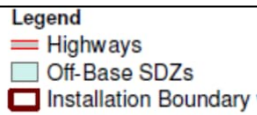
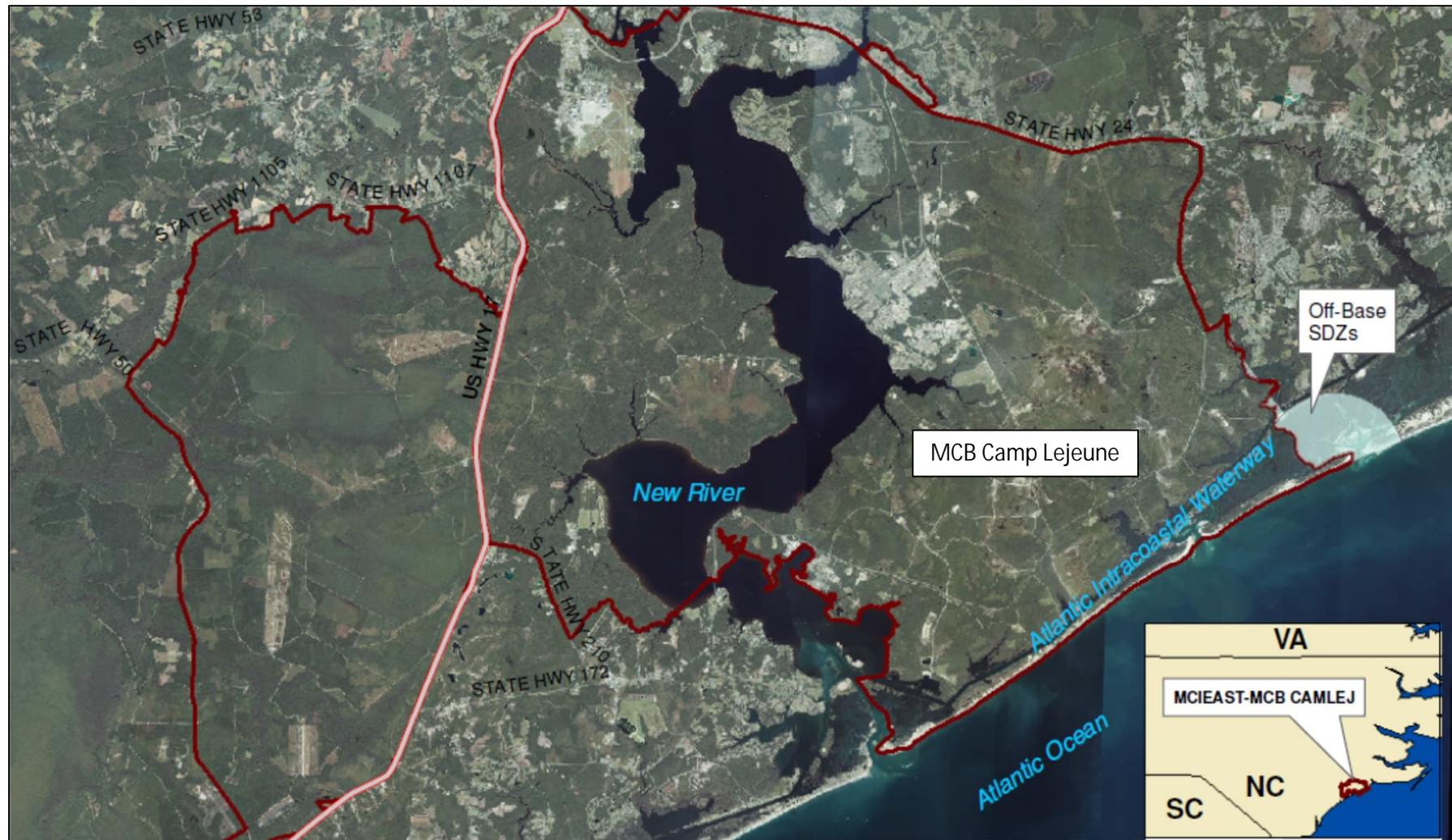


Surface Clearing at Site UXO-29



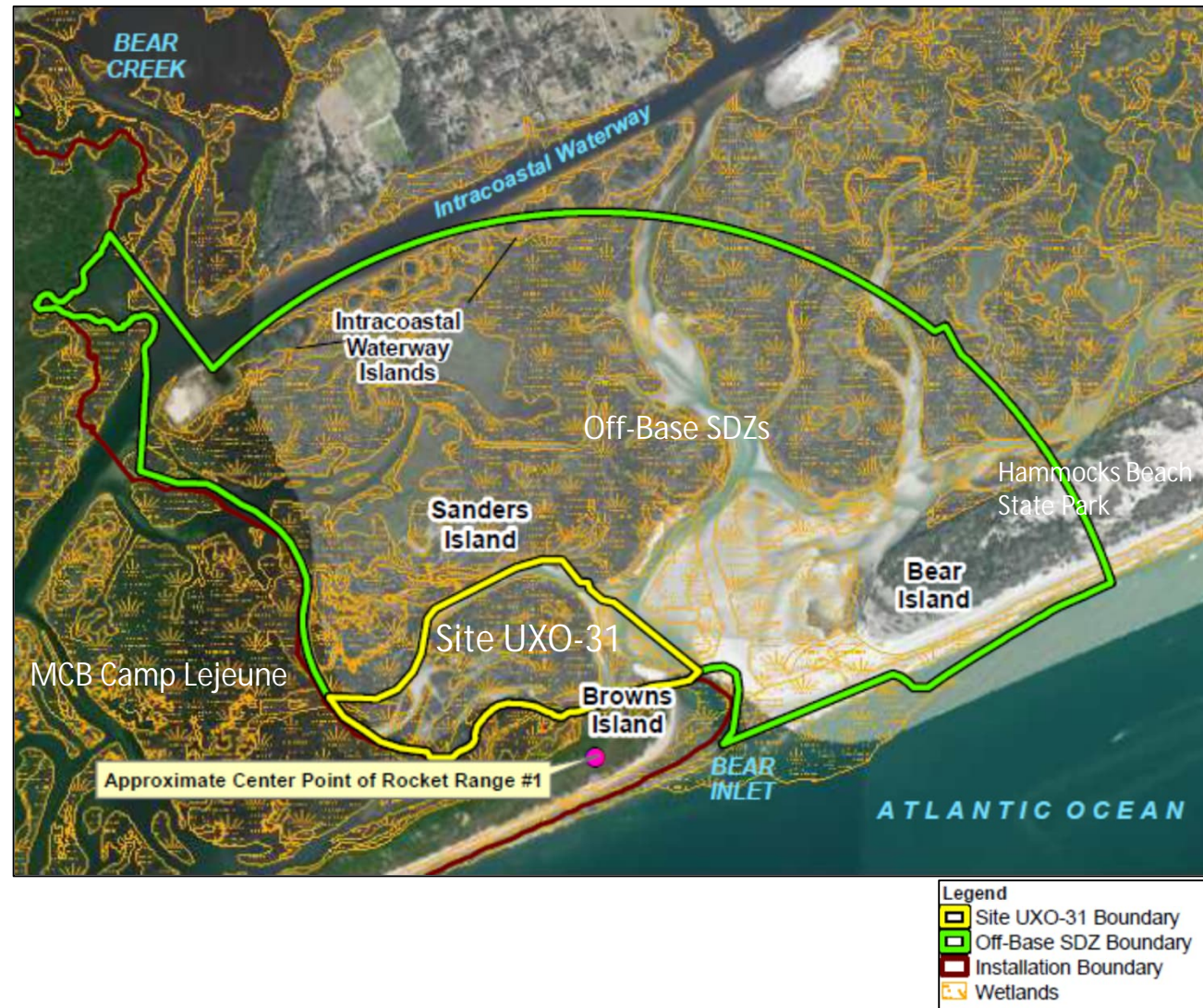
Site UXO-31

Site UXO-31 (Off-Base SDZs) Location



Site UXO-31 and Off-Base SDZs Background

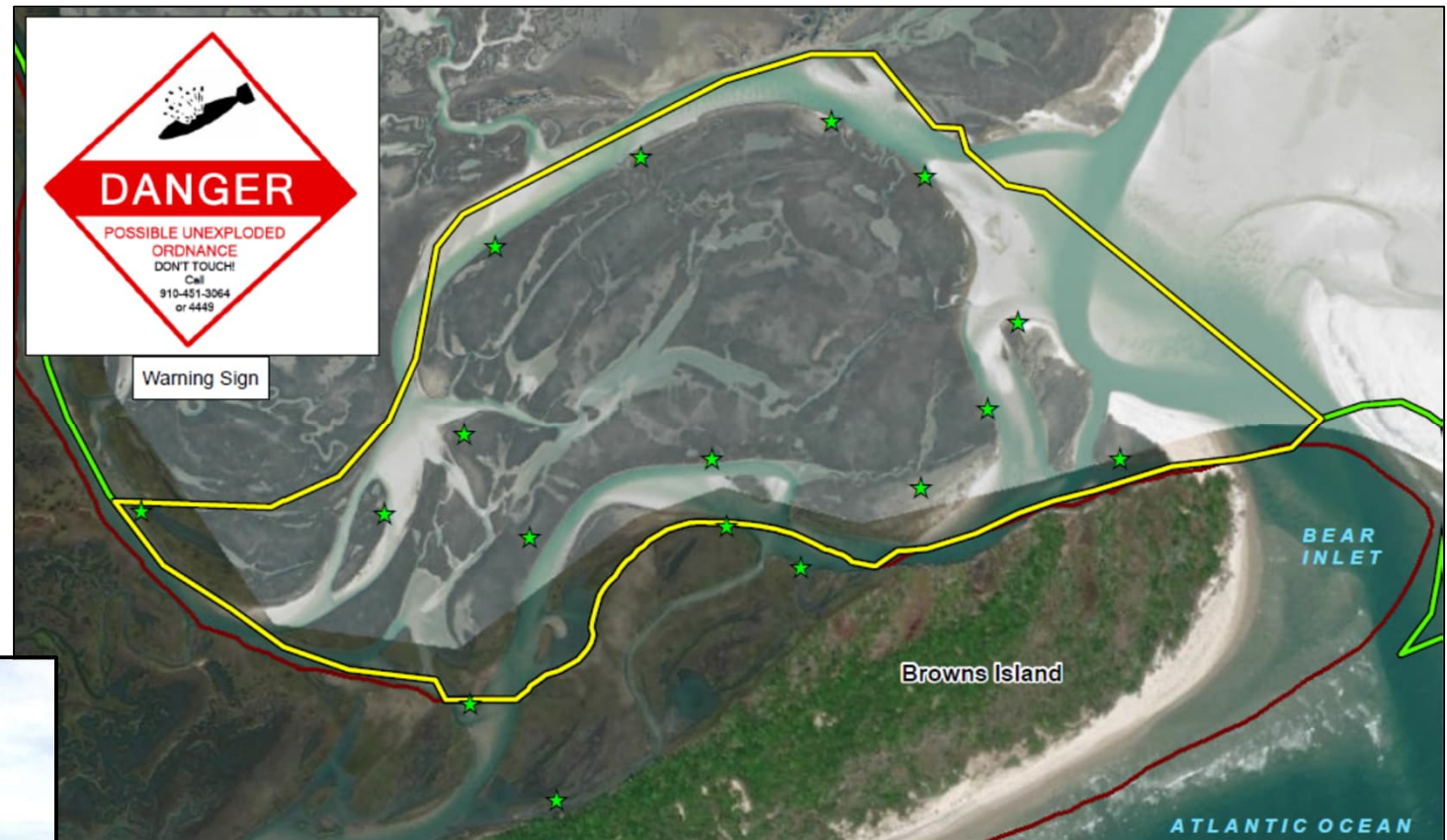
- Off-Base SDZs encompass 1,610 acres of upland terrain (above mean high tide), water channels, and salt marsh
- No residences or commercial buildings in the area
- Former range was used for artillery and airborne strafing, rocket firing, and bombing from 1945 to 2001
- Munitions were found within the area during the 2010 PA/SI
- Revised site boundary now includes 153 acres within the southwest portion of the area – adjacent to the former range target on Browns Island – MEC/MPPEH found in this area



Site UXO-31 and SDZs Investigations and Actions

- 2010 – Focused Preliminary Assessment/Site Inspection (PA/SI)
- 2013 - Expanded SI
- 2014 – Warning sign installation around Site UXO-31 boundary
- 2015 – Engineering Evaluation/Cost Analysis
- 2023 – PA/SI Report

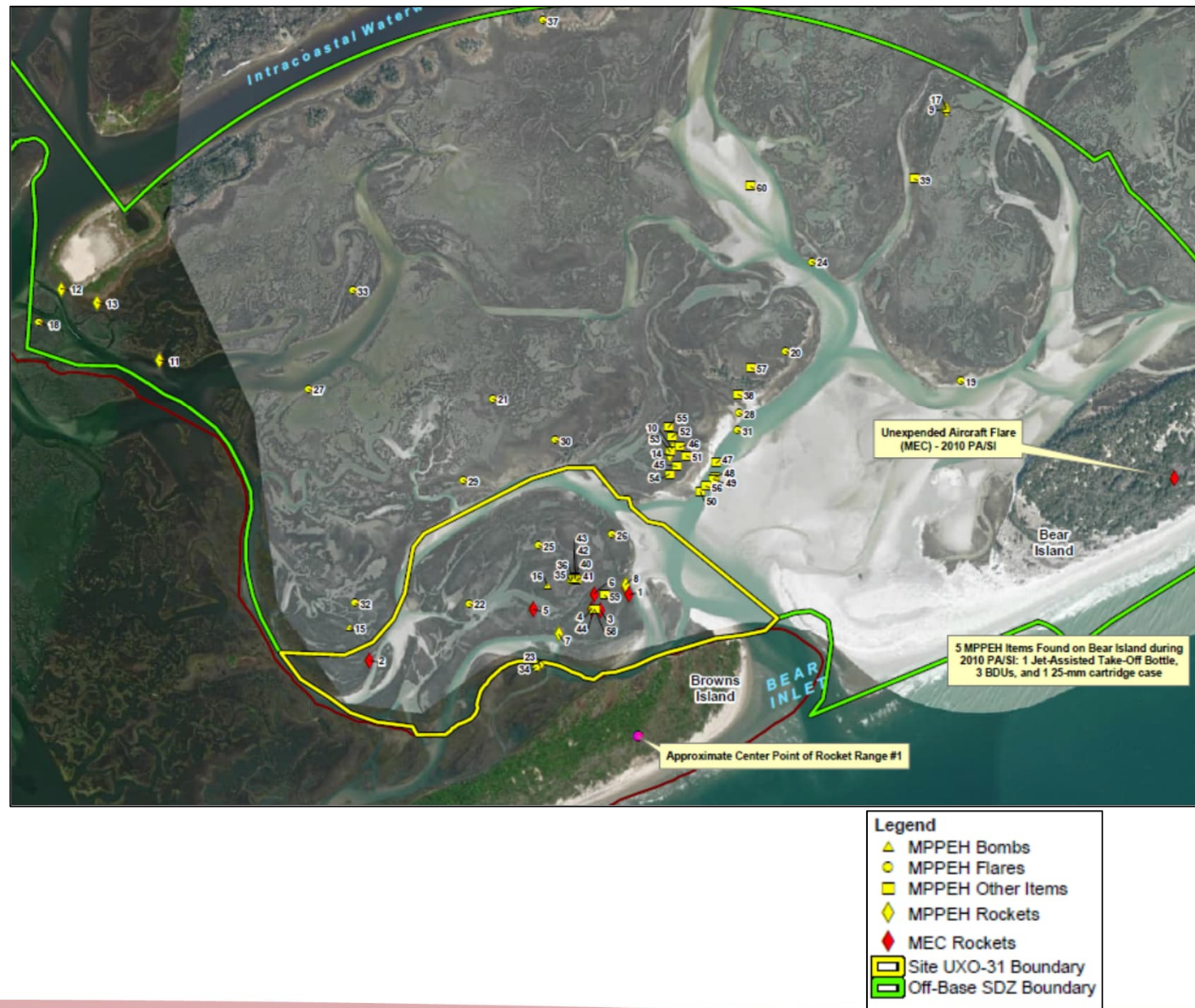
Warning Sign Locations



- Legend
- ★ Warning Sign Locations
 - Site UXO-31 Boundary
 - Off-Base SDZ Boundary
 - Installation Boundary

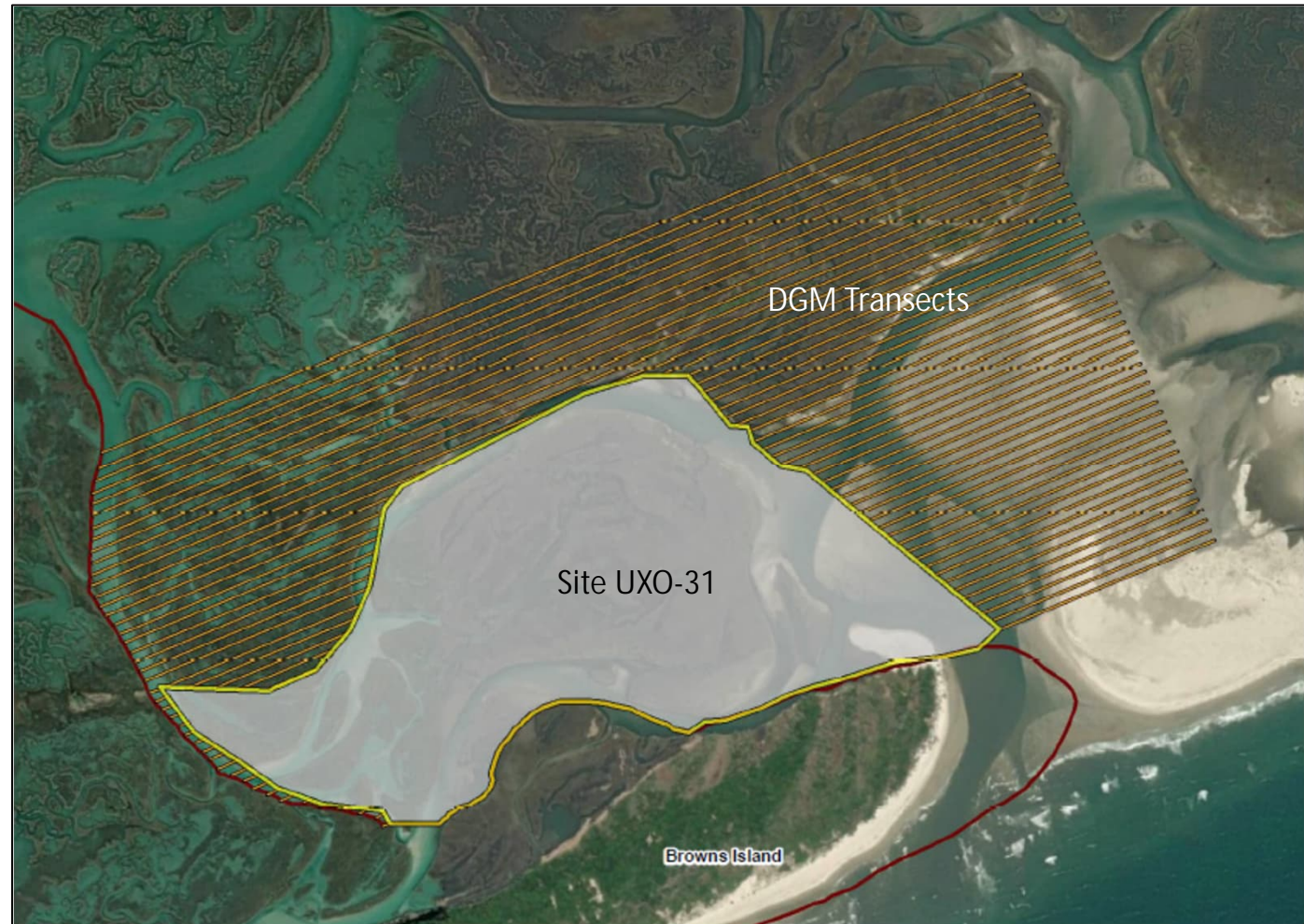
Site UXO-31 and SDZs Munitions Finds

- 71 (7 MEC and 64 MPPEH) items found; Of these, 6 MEC and 15 MPPEH items were found within the Site UXO-31 boundary
- Items consisted of: Flares, aircraft illumination; Rockets, 2.75- and 5-inch; Bombs, bomb dummy unit-33, practice; Cartridge casings, 20 mm; Rockets, sub-caliber aircraft, 2.25-inch; and ordnance fragments
- Items were found on the ground surface to less than 3 feet deep
- Sampling data showed no munition constituent hazards are present



Proposed RI Approach

- Conduct digital geophysical mapping (DGM) using an unmanned aerial vehicle (drone) to identify metallic anomalies and high-density metallic anomaly areas
- DGM will be conducted within 100% of Site UXO-31 (153 acres), plus adjacent areas outside the site boundary
- Based on DGM data, select anomalies will be intrusively investigated to determine the source of the anomalies and assess the nature and extent of any MEC/MPPEH



Potential DGM investigation areas

Next Steps

- Remedial Investigation (RI) – to further evaluate the nature and extent of MEC/MPPEH at Site UXO-31 and to confirm or adjust the current site boundary if needed
 - MR-QAPP (work plan) in progress
 - Anticipate field work in spring 2024
- RI Report – anticipated Winter 2024
- Feasibility Study – presents alternatives to address MEC/MPPEH that may be present at the site
 - Spring 2025



5-in Rocket Warhead (MEC) found within Site UXO-31

Questions?

