# PUBLIC MEETING FOR
# RVAAP-032-R-01 40MM FIRING RANGE
# RVAAP-016-R-01 FUZE AND BOOSTER QUARRY
# MUNITIONS RESPONSE SITES

Contract W912DR-15-D-0016
Delivery Order 0001


**U.S. ARMY CORPS OF ENGINEERS**
**BALTIMORE DISTRICT**
**10 S. HOWARD STREET, ROOM 7000**
**BALTIMORE, MARYLAND 21201**

Prepared by:
HydroGeoLogic, Inc. (HGL)
11107 Sunset Hills Road
Suite 400
Reston, Virginia 20190

March 2019

# REPORT DOCUMENTATION PAGE

*Form Approved*
*OMB No. 0704-0188*



**PLEASE DO NOT RETURN YOUR FORM TO THE ABOVE ORGANIZATION.**

| 1. REPORT DATE *(DD-MM-YYYY)* | 2. REPORT TYPE | 3. DATES COVERED *(From - To)* |
|---|---|---|
| 3-26-2019 | Meeting Memorandum | November 2018 |

**4. TITLE AND SUBTITLE**
Public Meeting Memorandum for RVAAP-032-R-01 40MM Firing Range and RVAAP-016-R-01 Fuze and Booster Quarry Munitions Response Sites, for the meeting held November 1, 2018

**5a. CONTRACT NUMBER**
W912DR-15-D-0016, Delivery Order 0001

**5b. GRANT NUMBER**
NA

**5c. PROGRAM ELEMENT NUMBER**
NA

**6. AUTHOR(S)**
Kimberly Vaughn, PG, HydroGeoLogic, Inc. (HGL)

**5d. PROJECT NUMBER**
NA

**5e. TASK NUMBER**
NA

**5f. WORK UNIT NUMBER**
NA

**7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)**
HGL
11107 Sunset Hills Rd, Suite 400
Reston, VA 20190

**8. PERFORMING ORGANIZATION REPORT NUMBER**
NA

**9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)**
U.S. Army Corps of Engineers, North Atlantic Division, Baltimore District
2 Hopkins Plaza
Baltimore, MD 21201

**10. SPONSOR/MONITOR'S ACRONYM(S)**
USACE

**11. SPONSOR/MONITOR'S REPORT NUMBER(S)**
NA

**12. DISTRIBUTION/AVAILABILITY STATEMENT**
Administrative Record availability

**13. SUPPLEMENTARY NOTES**
None

**14. ABSTRACT**
This draft public meeting memorandum describes the activities conducted, documents public attendance and public comment, and records details relevant to the public meeting held November 1, 2018. The Army National Guard conducted the public meeting, in consultation with the Ohio Environmental Protection Agency, to submit for public review and comments four Proposed Plans for munitions and explosives of concern and munitions constituents at two munitions response sites at the former Ravenna Army Ammunition Plant in Portage and Trumbull counties, Ohio: RVAAP-032-R-01 40MM Firing Range and RVAAP-016-R-01 Fuze and Booster Quarry.

**15. SUBJECT TERMS**

| 16. SECURITY CLASSIFICATION OF: | | | 17. LIMITATION OF ABSTRACT | 18. NUMBER OF PAGES | 19a. NAME OF RESPONSIBLE PERSON |
|---|---|---|---|---|---|
| a. REPORT | b. ABSTRACT | c. THIS PAGE | | | Kimberly Vaughn |
| U | U | U | SAR | 174 | 19b. TELEPHONE NUMBER *(Include area code)* 512-658-6828 |

Reset

# Paid News Releases and Affidavits of Publication

**PUBLIC NOTICE**
**Camp Ravenna Joint Military Training Center**
Camp Ravenna Environmental Office
1438 State Route 534 SW – Newton Falls, OH 44444
614-336-6136

**Public meeting to be held Thursday, November 1, 2018 for Army National Guard Release of Proposed Plans for two Munitions Response Sites at the Former Ravenna Army Ammunition Plant: Fuze and Booster Quarry 40mm Firing Range**

Ravenna – The Army National Guard, in consultation with the Ohio Environmental Protection Agency, submits for public review and comment two (2) Proposed Plans for two Munitions Response Sites at the former Ravenna Army Ammunition Plant (RVAAP) in Portage and Trumbull counties, Ohio.

The Fuze and Booster Quarry and 40mm Firing Range are Munitions Response Sites (MRSs) within the former RVAAP (now known as Camp Ravenna) in Portage and Trumbull Counties, Ohio. These MRSs are being addressed under the Military Munitions Response Program (MMRP) in accordance with the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). The Proposed Plans present the current status and information regarding the MRSs. The Proposed Plans detail the recommendation for No Further Action at both MRSs and provide the rationale for these recommendations.

On Thursday November 1, 2018, a public meeting will be held at the Shearer Community Center (Paris Township Hall) at 9355 Newton Falls Road, Ravenna, Ohio 44266 beginning at 6:00 p.m., with an informal open house when technical staff will be available to answer questions. At 6:30 p.m., the Army National Guard will briefly describe the assessment of the MRSs, present the No Further Action recommendation, and then request verbal comments from the public. Written comments regarding this recommendation may be submitted to the Army National Guard during the 30-day comment period from October 25, 2018 to December 1, 2018. All written comments should be addressed to Camp Ravenna Environmental Office; 1438 State Route 534 SW, Newton Falls, OH 44444 or sent via email to Kathryn.s.tait.nfg@mail.mil.

In accordance with CERCLA, the No Further Action recommendation presented in the Proposed Plans was summarized and also presented in earlier remedial investigation and feasibility study reports. All reports are now available for public review at the RVAAP Restoration Program Information Repositories at the Reed Memorial Library (167 East Main Street, Ravenna) and the Newton Falls Public Library (204 South Canal Street, Newton Falls). The reports are also available online at www.rvaap.org.

The final remedy for the MRSs will be selected based, in part, on public comments. In coordination with Ohio Environmental Protection Agency, the Army National Guard will select a final remedy after reviewing and considering all public comments submitted during the 30-day public comment period from October 25, 2018 to December 1, 2018. The Army National Guard encourages the public to review and comment on the recommendation presented in this document.

For more information or to participate in the review, please visit the RVAAP Restoration Program website (www.rvaap.org) or call Kathryn Tait at 614-336-6136.

#294-2T-October 21 & 28, 2018 #WOH0046311

PROOF OF PUBLICATION

STATE OF OHIO
TRUMBULL COUNTY SS: PAMELA EAZOR

BEING DULY SWORN, UPON OATH STATES THAT SHE IS AN AUTHORIZED REPRESENTATIVE OF THE TRIBUNE CHRONICLE, (A DIVISION OF EASTERN OHIO NEWSPAPERS INC) A DAILY NEWSPAPER PRINTED IN THE CITY OF WARREN, COUNTY OF TRUMBULL, STATE OF OHIO AND OF GENERAL CIRCULATION IN THE CITY OF WARREN, TRUMBULL COUNTY, OHIO AND IS INDEPENDENT IN POLITICS.

THAT THE ATTACHED ADVERTISEMENT WAS PUBLISHED IN THE TRIBUNE CHRONICLE EVERY: SUNDAY FOR (2) TWO CONSECUTIVE WEEKS AND THAT THE FIRST INSERTION WAS ON SUNDAY THE 21ST DAY OF OCTOBER 2018.

Pamela Eazor

SWORN TO BEFORE ME AND SUBSCRIBED IN MY PRESENCE ON THIS 31st DAY OF October 2018

NOTARY PUBLIC

CONSTANCE A. PACEK
Notary Public, State of Ohio
My Commission Expires
March 7, 2021

ADVERTISING COST $ 1186.54

3124 0405

**Proof of Publication**

Record Publishing Company
1050 W. Main Street,
Kent, OH 44240
Phone (330) 541-9400
Fax (330) 673-6363

I, Thompson being first duly sworn depose and say that I am Advertising Clerk of

**Record Publishing Company**

30 Record-Courier a newspaper printed and published in the city of Kent, and of General circulation in the County of Portage, State of Ohio, and personal knowledge of the facts herein stated and that the notice hereto annexed was Published in said newspapers for 2 insertions on the same day of the week from and after the 21st day of October, 2018 and that the fees charged are legal.

Name of Account: HydroGeoLogic Inc
Ad Number: 12499589
No. of Lines: 70

Day(s) Published: 10/21, 10/28.
Printers Fee: $432.00

Sworn to and subscribed before this 29th day of October, 2018.

Elizabeth McDaniel
Notary Public
Commission Expires June 19, 2021

**PUBLIC NOTICE**

**Camp Ravenna Joint Military Training Center**

Camp Ravenna Environmental Office

1438 State Route 534 SW – Newton Falls, OH 44444

614-336-6136

**Public meeting to be held Thursday, November 1, 2018 for Army National Guard Release of Proposed Plans for two Munitions Response Sites at the Former Ravenna Army Ammunition Plant: Fuze and Booster Quarry 40mm Firing Range**

**Ravenna** – The Army National Guard, in consultation with the Ohio Environmental Protection Agency, submits for public review and comment two (2) Proposed Plans for two Munitions Response Sites at the former Ravenna Army Ammunition Plant (RVAAP) in Portage and Trumbull counties, Ohio.

The Fuze and Booster Quarry and 40mm Firing Range are Munitions Response Sites (MRSs) within the former RVAAP (now known as Camp Ravenna) in Portage and Trumbull Counties, Ohio. These MRSs are being addressed under the Military Munitions Response Program (MMRP) in accordance with the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). The Proposed Plans present the current status and information regarding the MRSs. The Proposed Plans detail the recommendation for No Further Action at both MRSs and provide the rationale for these recommendations.

On Thursday November 1, 2018, a public meeting will be held at the Shearer Community Center (Paris Township Hall) at 9355 Newton Falls Road, Ravenna, Ohio 44266 beginning at 6:00 p.m., with an informal open house when technical staff will be available to answer questions. At 6:30 p.m., the Army National Guard will briefly describe the assessment of the MRSs, present the No Further Action recommendation, and then request verbal comments from the public. Written comments regarding this recommendation may be submitted to the Army National Guard during the 30-day comment period from October 25, 2018 to December 1, 2018. All written comments should be addressed to Camp Ravenna Environmental Office; 1438 State Route 534 SW, Newton Falls, OH 44444 or sent via email to Kathryn.s.tait.nfg@mail.mil.

In accordance with CERCLA, the No Further Action recommendation presented in the Proposed Plans was summarized and also presented in earlier remedial investigation and feasibility study reports. All reports are now available for public review at the RVAAP Restoration Program Information Repositories at the Reed Memorial Library (167 East Main Street, Ravenna) and the Newton Falls Public Library (204 South Canal Street, Newton Falls). The reports are also available online at www.rvaap.org.

The final remedy for the MRSs will be selected based, in part, on public comments. In coordination with Ohio Environmental Protection Agency, the Army National Guard will select a final remedy after reviewing and considering all public comments submitted during the 30-day public comment period from October 25, 2018 to December 1, 2018. The Army National Guard encourages the public to review and comment on the recommendation presented in this document.

For more information or to participate in the review, please visit the RVAAP Restoration Program website (www.rvaap.org) or call Kathryn Tait at 614-336-6136.

KO-10648637

# Public Meeting Sign-In Sheet

| Name | Phone Number | Email |
| --- | --- | --- |
| Emily Justice | [redacted] | |
| Kim Gross | | |
| Cheryl Edwards | | |
| Jo Ann Rupert | | |
| Robert Rupert | | |
| Kimberly Vaughn | | |
| Caroline Borgini | | |
| Kevin Sedlak | | |
| George Tompkins | | |
| Bob Paloumbis | | |
| Nick Rogge | | |
| Mark Johnson | | |
| Joseph C. Buttle | | |
| Eve & Greg Francis | | |
| Ed Samec | | |

# PUBLIC SIGN-IN SHEET

**Ravenna Army Ammunition Plant Restoration Program**
**Proposed Plans Public Meeting**
**November 1, 2018**

| Name | Phone Number | Email |
|---|---|---|
| Katie Tait | [redacted] | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

# 40mm Firing Range Fact Sheet

Ravenna Army Ammunition Plant

RVAAP Facts

# No Further Action Proposed Plan for 40mm Firing Range Munitions Response Site

## Where is the 40mm Firing Range?

The RVAAP-032-R-01 40mm Firing Range Munitions Response Site (MRS) is an 8.55-acre parcel located in the southern-central portion of the former Ravenna Army Ammunition Plant (RVAAP), now known as Camp Ravenna. Camp Ravenna is located in east-central Portage County and southwestern Trumbull County, Ohio about 3 miles east-northeast of the city of Ravenna and 1-mile northwest of the city of Newton Falls.

## How was this area used?

The MRS is a former 40mm Firing Range that operated between 1969 and 1971. Munitions fired at the former range included M407A1-series 40mm practice grenades and M406-series high explosive grenades. The target impact area was well-defined with a berm that has since been removed. The firing point was situated at the eastern portion of the former range.

## What is happening now at the 40mm Firing Range?

Between 2007 and 2015, the United States (U.S.) Army conducted munitions investigative activities that included a Site Inspection (SI) and Remedial Investigation (RI) activities at the MRS under the Military Munitions Response Program (MMRP). The purpose of the investigations was to determine if any explosive safety hazards or munition constituents (MC) associated with the historical activities that occurred at the MRS are present.

No DoD military munitions confirmed to be MEC were identified at the firing point or in the area between the firing point and impact area; however, multiple DoD military munitions that were confirmed by UXO-qualified personnel as munitions debris (MD) were found on the ground surface at the suspected impact area and 100 feet beyond. The MD consisted of aluminum 40mm grenade nose caps and casings.

Geophysical data collection, intrusive investigations, and environmental sampling were completed during the RI. Numerous MD items were encountered on the ground surface and subsurface. The MD recovered were associated with the 40mm practice grenades known to have been discharged at the MRS. No DoD military munitions confirmed to be MEC items were identified. Surface soil sampling did not identify any chemicals of concerns in surface soils. Additional sampling efforts were not warranted. A summary of the previous investigations and findings from the most recent activities at the MRS are presented in the *Final Remedial Investigation Report for RVAAP-032-R-01 40mm Firing Range MRS, Version 1.0*, published in April 2015.

Based on further evaluation of the RI results, the Army concluded the 40mm Firing Range MRS be recommended for No Further Action (NFA). Since the RI recommended conducting a Feasibility Study (FS), the FS was conducted to provide the necessary rationale to support and document the NFA determination. The NFA alternative is technically and administratively implementable and there are no costs. The NFA alternative is protective of human health and the environment because no explosive hazard or unacceptable risk due to MC-related contamination are present at the MRS.

## What is the Proposed Plan?

The Proposed Plan is a document used to facilitate public involvement in the remedy selection process. The document presents the preliminary recommendations concerning how best to address contamination at the site, presents alternatives that were evaluated, and explains the reasons that the Preferred Alternative is

Ravenna Army Ammunition Plant

RVAAP Facts

# No Further Action Proposed Plan for 40mm Firing Range Munitions Response Site

recommended. In the case of the 40mm Firing Range MRS, the No Action alternative is protective of human health and the environment because no explosive hazard or unacceptable risk due to MC-related contamination is present at the MRS.

The Proposed Plan meets the statutory requirements promulgated by the *Comprehensive Environmental Response, Compensation, and Liability Act of 1980* (CERCLA). The recommendations provided in the Proposed Plan are not final, and the Army, in consultation with the Ohio EPA, is soliciting input to provide the public with an opportunity to participate in the recommended action selection process. The *No Further Action Proposed Plan for RVAAP-032-R-01 40mm Firing Range Munitions Response Site*, published in October 2018 is available for public comment.

## What is the recommended action?

Since there are no explosive safety hazards or associated risks from MC-related contamination, the Army, in consultation with the Ohio EPA, is recommending NFA for the 40mm Firing Range MRS.

## How can the public participate?

The recommended action can change based on public comments received during a 30-day comment period. The Army encourages interested citizens to review documents related to the 40mm Firing Range MRS and comment on the proposed action. During the 30-day comment period from October 25 to December 1, 2018, the public can read about the proposed action, ask questions, and make recommendations.

The Proposed Plan is available online at **www.rvaap.org** (*click RVAAP Documents and choose Documents for Public Review and Comment*). The full Administrative Record can be found at:

**Reed Memorial Library**
167 East Main Street
Ravenna, Ohio 44266
(330) 296-2827
Hours of operation:
9 a.m.–9 p.m. Monday–Thursday
9 a.m.–6 p.m. Friday
9 a.m.–5 p.m. Saturday
1 p.m.–5 p.m. Sunday

**Newton Falls Public Library**
204 South Canal Street
Newton Falls, Ohio 44444
(330) 872-1282
Hours of operation:
9 a.m.–8 p.m. Monday–Thursday
9 a.m.–5 p.m. Friday and Saturday

## Where do I send my responses to the Proposed Plan?

Please send your comments, questions, or suggestions about the Proposed Plan to kathryn.s.tait.nfg@mail.mil or you can mail them directly to:

**Ms. Kathryn Tait**
**Camp Ravenna Environmental Office**
1438 State Route 534 SW
Newton Falls, Ohio 44444

**The last day to postmark your responses to the Proposed Plan is December 1, 2018**.

# Fuze and Booster Quarry Fact Sheet

Ravenna Army Ammunition Plant

RVAAP Facts

# No Further Action Proposed Plan for Fuze and Booster Quarry MRS

## Where is the Fuze and Booster Quarry?

The RVAAP-016-R-01 Fuze and Booster Quarry Munitions Response Site (MRS) is a 4.92-acre parcel located in the south-central portion of the former Ravenna Army Ammunition Plant (RVAAP), now known as Camp Ravenna. Camp Ravenna is located in east-central Portage County and southwestern Trumbull County, Ohio about 3 miles east-northeast of the city of Ravenna and 1-mile northwest of the city of Newton Falls.

## How was this area used?

The Fuze and Booster Quarry MRS was a stone and ballast quarry excavated to provide building material for RVAAP. Between 1945 and 1949 the quarry was used as an open burn area. Thereafter, the quarry was used as a landfill accepting fuze and booster assemblies, projectiles, residual ash, and sanitary waste. In 1976, landfill materials including munitions-related items were removed and transferred to either Ramsdell Quarry Landfill or another RVAAP burning ground. Between 1987 and 1993, spent brine regenerate and sand filtration backwash was discharged into the three elongated settling ponds.

## What is happening now at the Fuze and Booster Quarry?

Between 2007 and 2015, the United States (U.S.) Army conducted investigative activities that included a site inspection (SI) and remedial investigation (RI) activities at the MRS under the Military Munitions Response Program (MMRP). The purpose of the investigations was to determine if any explosive safety hazards or associated munition constituents (MC) associated with the historical activities that occurred at the MRS were present.

During the SI, instrument-aided visual surveys were performed on the quarry banks and surroundings areas. Munitions debris (MD) was found on the southeastern side of the southern pond. Multiple high-concentrations areas of **subsurface anomalies** were detected during the survey. These areas were suspected to represent possible buried munitions-related items. No munitions and explosives of concern (MEC) were encountered at the MRS during the SI field work.

Geophysical data collection, intrusive investigations, and environmental sampling were completed during the RI. All items recovered were inspected and classified and munitions debris (MD). No munitions and explosives of concern (MEC) were identified. The RI determined that site-related chemicals identified from environmental sampling and analysis did not originate from munitions or other munitions-related activities. A summary of the previous investigations and findings from the most recent activities at the MRS are presented in the *Final Remedial Investigation Report for RVAAP-016-R-01 Fuze and Booster Quarry MRS, Version 1.0*, published in June 2015.

Based on further evaluation of the RI results, the Army concluded the Fuze and Booster Quarry MRS be recommended for No Further Action (NFA). Since the RI recommended conducting a Feasibility Study (FS), the FS was conducted to provide the necessary rationale to support and document the NFA determination. The NFA alternative is technically and administratively implementable and there are no costs. The NFA alternative is protective of human health and the environment because no explosive hazard or unacceptable risk due to MC-related contamination are present at the MRS.

Ravenna Army Ammunition Plant

RVAAP Facts

# No Further Action Proposed Plan for Fuze and Booster Quarry MRS

## What is the Proposed Plan?

The Proposed Plan is a document used to facilitate public involvement in the remedy selection process. The document presents the preliminary recommendations concerning how best to address contamination at the site, presents alternatives that were evaluated, and explains the reasons that the Preferred Alternative is recommended. In the case of the Fuze and Booster Quarry MRS, the No Action alternative is protective of human health and the environment because no explosive hazard or unacceptable risk due to MC-related contamination is present at the MRS. The Proposed Plan meets the statutory requirements promulgated by the *Comprehensive Environmental Response, Compensation, and Liability Act of 1980* (CERCLA). The recommendations provided in the Proposed Plan are not final, and the Army, in consultation with the Ohio EPA, is soliciting input to provide the public with an opportunity to participate in the recommended action selection process. The *No Further Action Proposed Plan for RVAAP-016-R-01 Fuze and Booster Quarry Munitions Response Site*, published in October 2018 is available for public comment.

## What is the recommended action?

Since there are no explosive safety hazards or risks from MC-related contamination, the Army, in consultation with the Ohio EPA, is recommending NFA for the Fuze and Booster Quarry MRS.

## How can the public participate?

The recommended action can change based on public comments received during a 30-day comment period. The Army encourages interested citizens to review documents related to the Fuze and Booster Quarry MRS and comment on the proposed action. During the 30-day comment period from October 25 to December 1, 2018, the public can read about the proposed action, ask questions, and make recommendations.

The Proposed Plan is available online at **www.rvaap.org** and at the following information repositories:

**Reed Memorial Library**
167 East Main Street
Ravenna, Ohio 44266
(330) 296-2827
Hours of operation:
9 a.m.–9 p.m. Monday–Thursday
9 a.m.–6 p.m. Friday
9 a.m.–5 p.m. Saturday
1 p.m.–5 p.m. Sunday

**Newton Falls Public Library**
204 South Canal Street
Newton Falls, Ohio 44444
(330) 872-1282
Hours of operation:
9 a.m.–8 p.m. Monday–Thursday
9 a.m.–5 p.m. Friday and Saturday

## Where do I send my responses to the Proposed Plan?

Please send your comments, questions, or suggestions about the Proposed Plan to kathryn.s.tait.nfg@mail.mil or you can mail them directly to:

**Ms. Kathryn Tait**
**Camp Ravenna Environmental Office**
1438 State Route 534 SW
Newton Falls, Ohio 44444

**The last day to postmark your responses to the Proposed Plan is December 1, 2018**.

# Slide Presentation

# NO FURTHER ACTION PROPOSED PLANS
# FOR TWO MUNITIONS RESPONSE SITES

## FUZE AND BOOSTER QUARRY
## AND
## 40MM FIRING RANGE

***Presented by:***

**HydroGeoLogic, Inc.**

**November 1, 2018**

*"The views, opinions and findings contained in this report are those of the authors(s) and should not be construed as an official Department of the Army position, policy or decision, unless so designated by other official documentation."*

US Army Corps of Engineers.

ARMY NATIONAL GUARD

U.S.ARMY

# Presentation Agenda

- Summary of Military Munitions Response Program
- The presentation of each munitions response site (MRS) Proposed Plan will include the following:
  - Historical Operations and Investigations
  - Current Conditions
  - Remedial Investigation Results
  - Recommendations and Rationale for No Further Action
- Questions

US Army Corps of Engineers.

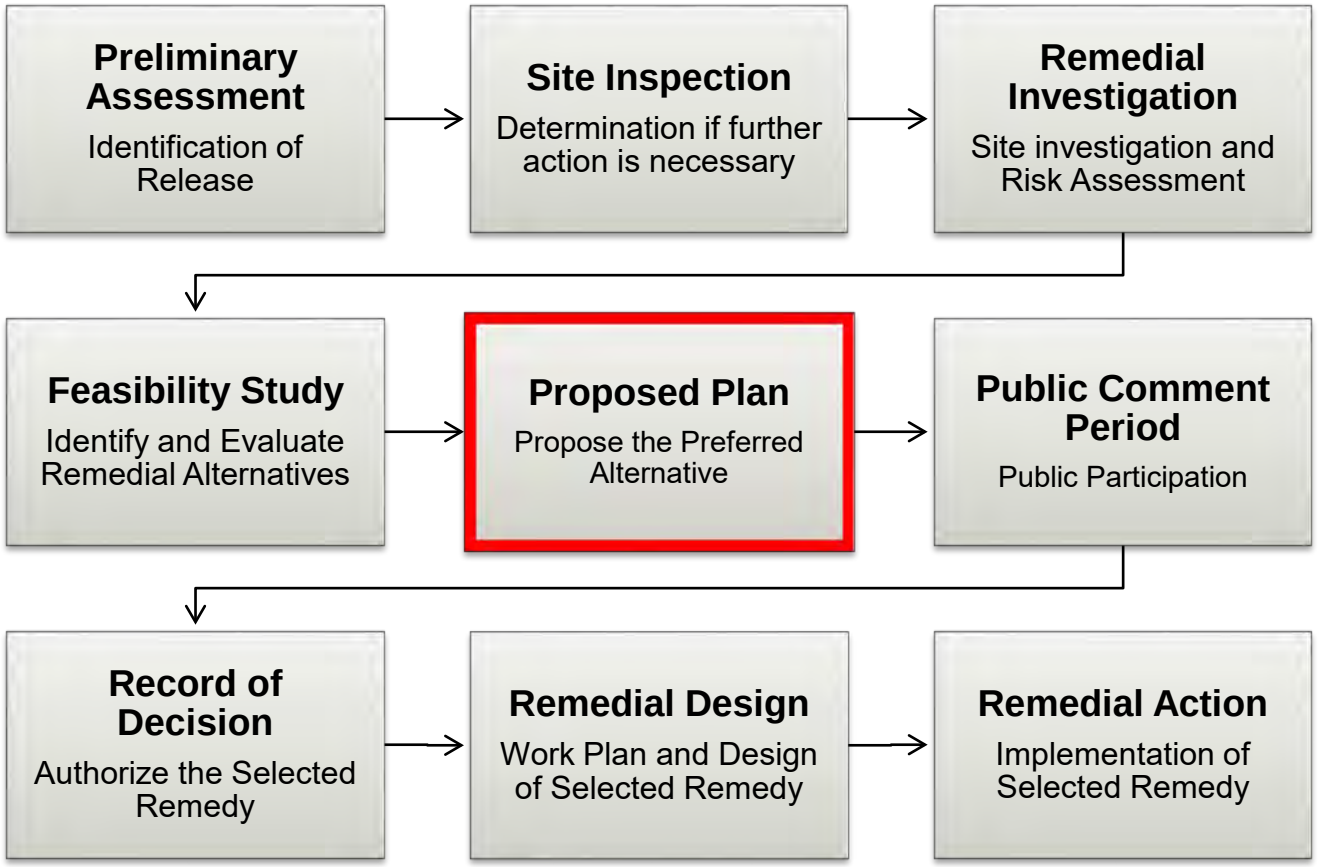
# Acronym Cheat Sheet

| | |
|---|---|
| AOC | Area of Concern |
| CERCLA | Comprehensive Environmental Response, Compensation and Liability Act |
| MC | munitions constituents |
| MD | munitions debris |
| MEC | munitions and explosives of concern |
| MMRP | Military Munitions Response Program |
| MPPEH | material potentially presenting an explosive hazard |
| MRS | munitions response site |
| RVAAP | Former Ravenna Army Ammunition Plant |

# Understanding the MMRP

- The Military Munitions Response Program (MMRP) is a Department of Defense program
  - Follows the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), or Superfund, process to address sites
  - These munitions response sites (MRS) are suspected or known to contain munitions and explosives of concern (MEC) and/or munitions constituents (MC)
- MEC may remain on an MRS due to former munitions-related activities:
  - Munitions firing training and testing
  - Munitions manufacturing or maintenance
  - Munitions destruction and disposal
- MC may be generated by munitions-related activities

# The Stages of an MMRP Project




US Army Corps of Engineers.

# Former Ravenna Army Ammunition Plant Location


US Army Corps of Engineers.

# Munitions Response Site Locations


US Army Corps of Engineers.

# Fuze and Booster Quarry MRS

# Historical Background

- The Fuze and Booster Quarry MRS is located in the south-central portion of the facility.
  - Originally 12.47-acres in size
  - The stone and ballast quarry provided building materials for the installation
  - Between 1945 and 1949 the MRS was used for open burn activities
  - The MRS was later used as a landfill for fuze and booster assemblies, projectiles, residual ash, and sanitary waste

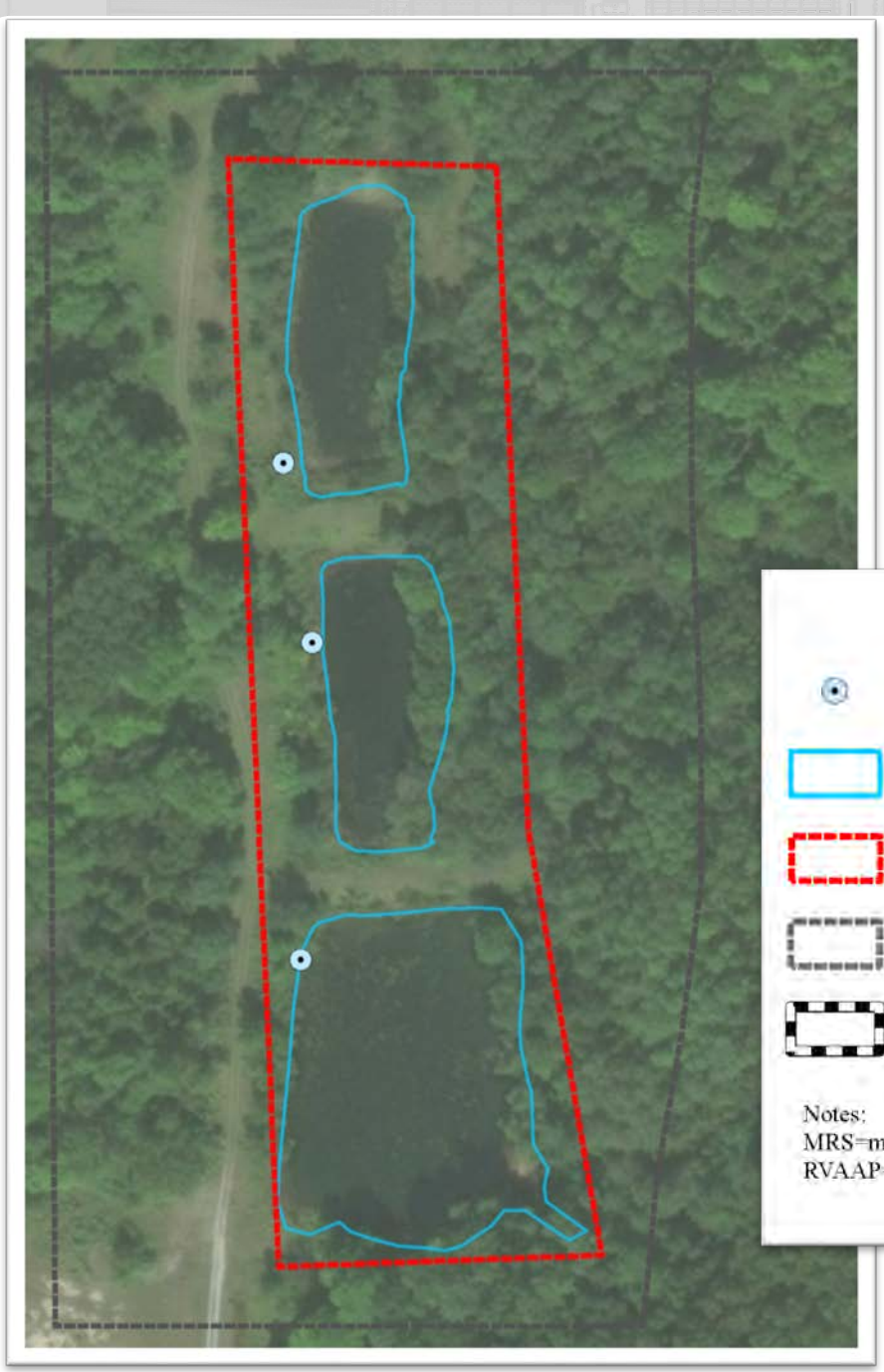
- Landfill materials were removed from the MRS in 1976
  - Removed materials included the munitions-related items previously disposed of at the landfill
  - Materials were transferred to Ramsdell Quarry or other burning grounds within the facility
  - Three settling ponds were constructed to accept spent brine regenerate and sand filtration backwash water discharge between 1987 and 1993

- The size of the MRS was reduced to 4.92-acres and encompasses three ponds and the immediate surrounding area

# Historical Investigations

- **2007, Historical Records Review**
  - Identified the 12.47-acre MRS.
  - No previous surveys for munitions-related items had been conducted at the time of the HRR
  - Recommended MEC investigations for all three settling ponds
- **2008, Site Inspection**
  - Instrument-assisted visual surveys were conducted
    - Multiple areas with high-concentrations of subsurface anomalies were identified in terrestrial areas
    - Settling ponds were not investigated
  - Recommended further investigation of the reduced MRS area, 4.92 acres.
- **2015, Remedial Investigation**
- **2018, Feasibility Study**

# Fuze and Booster Quarry MRS Features




US Army Corps of Engineers.

# Current conditions

- The Fuze and Booster Quarry MRS is 4.92 acres
  - Encompasses three settling ponds
  - Ponds surrounded by thick vegetation and steep slopes

- Access to the facility is controlled; however, access to the MRS is unrestricted

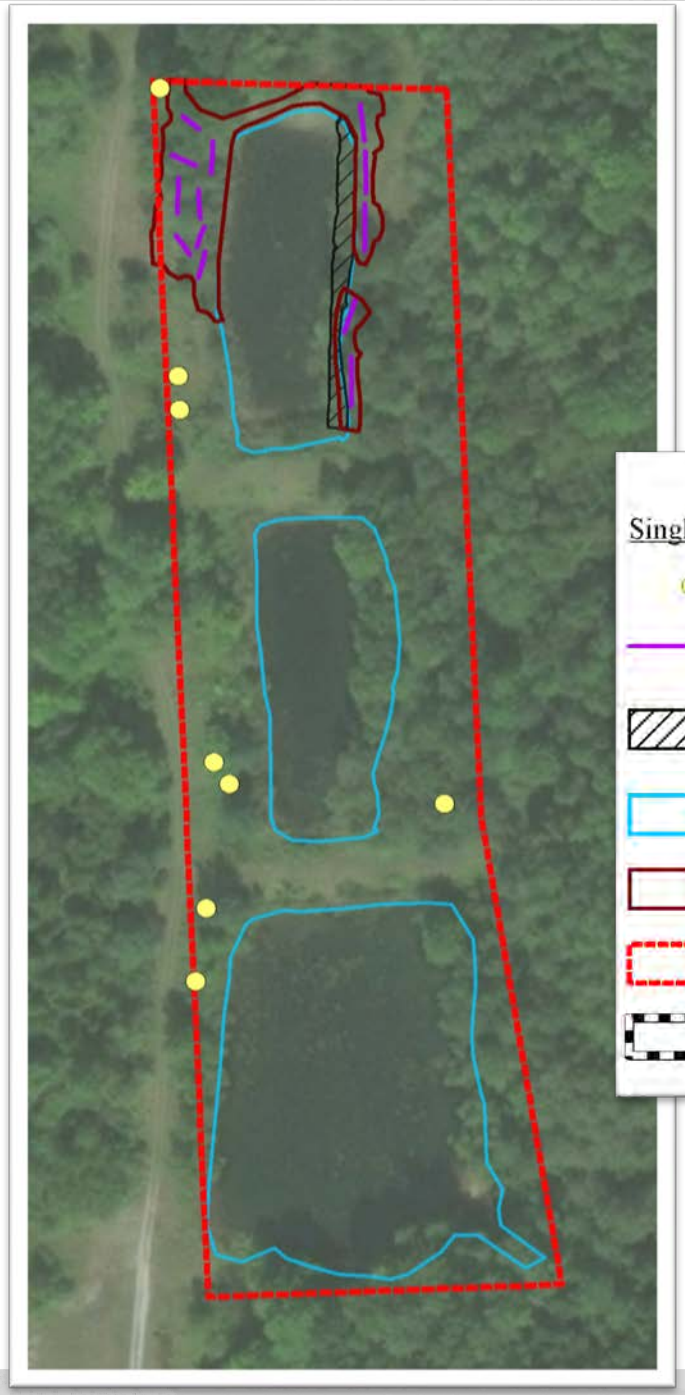
- Unimproved gravel roads are located throughout the site

# Remedial Investigation

- Field work conducted in multiple phases:
  - Geophysical data collection - December 2011
  - Anomaly reacquisition – April 2012 and August 2013
  - Environmental Sampling – August 2013

- Activities included
  - Digital geophysical mapping survey across 2.6 acres
    - 0.75 acres were determined to be inaccessible due to thick vegetation and safety hazards (steep slopes)
  - Four wet sediment ISM samples were collected from sediment surface to 0.5-feet below sediment surface
    - Two samples were collected from the southern-most pond
    - One sample was collected from the north pond
    - One sample was collected from the central pond

# Remedial Investigation Results




US Army Corps of Engineers.

# Remedial Investigation Results



- Digital geophysical surveys identified individual anomalies and high anomaly density areas
  - 227 individual anomalies were hand dug
  - Trenches were completed in the high anomaly density areas
  - Only MD and debris were identified
- No explosive hazards were identified

- No MC source was identified during the Remedial Investigation
  - No evidence that the site-related chemicals originated from munitions or munitions-related activities
- Evaluation in an FS was recommended

US Army Corps of Engineers

# Feasibility Study

- The project team further evaluated the RI results; concluding there are no explosive hazards from MEC and no unacceptable risk due to MC-related contamination.
- The No Further Action Alternative was evaluated using the nine criteria listed below

| | |
|---|---|
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |

US Army Corps of Engineers.

# Feasibility Study



There are no hazards associated with exposure to DoD military munitions and no potential for MC risks to human or environmental receptors at the MRS. The Army concluded the Fuze and Booster Quarry MRS be recommended for NFA.

The No Further Action Alternative is

- Technically and administratively implementable
- No costs associated with implementation
- Protective of human health and the environment since no explosive hazards or unacceptable risks exist

US Army Corps of Engineers.

# Proposed Plan Recommendations



**The preferred remedy must be protective of the receptors associated with current and future land use.**

Current and future receptors: Industrial receptors

Current and future land use: Military training, maintenance, natural resource management, hunting and fishing activities, and restoration activities (e.g., groundwater monitoring)

**The results of the Remedial Investigation fieldwork and Feasibility Study evaluation for the Fuze and Booster Quarry MRS support the determination that NFA is the preferred remedy and is also protective of a potential future residential receptor.**

Note: The NFA determination is protective of potential future human receptors (such as residential receptors). Though there are no current plans for the MRS to change from an industrial land use to a residential land use, there are no unacceptable risks to a potential future residential receptor from explosive hazards and no potential source of MC exists at the MRS.

US Army Corps of Engineers.

# 40mm Firing Range MRS

# Historical Background

- The MRS is approximately 5.17 acres located in the south-central portion of the facility
  - The former 40mm firing range operated between 1969 and 1971
  - The MRS consists of the former firing range and the overshot area
  - Munitions fired at the range include M407A1-series 40mm practice grenades and M406-series high explosive 40mm grenades
  - According to a 1978 report, each of the 2,500 rounds fired on the ranges has been accounted for

- The target impact area was well-defined with a berm located 350 meters from the firing point

- Remnants of the firing point remain and include a wooden structure (storage), gun mount foundation, and chronograph foundation

# Historical Investigations

- **2007, Historical Records Review**
  - Identified the 5.17 acre MRS
  - Documented reports from facility personnel identified unexploded ordnance
- **2008, Site Inspection**
  - An investigation was completed along a meandering path at the down-range target impact area, overshot area, and firing point
    - MD (40mm grenade nose caps and casings) was identified on the ground surface at the suspected impact area and 100-feet beyond
    - No DoD military munitions confirmed to be MEC were observed
  - Environmental sampling was not conducted during the SI
- **2015, Remedial Investigation**
- **2018, Feasibility Study**

# 40mm Firing Range MRS Features


US Army Corps of Engineers.

# Current Conditions

- The 40mm Firing Range MRS is 8.55 acres
  - Forested with this vegetation and ground cover
  - 1.5 acre open area with tall grasses is located near the former firing point
  - The MRS slopes down to the west towards the Fuze and Booster Quarry MRS

- No structures exist within the MRS except for the remnants of the wooden storage shed

- Once on the facility, access to the MRS is unrestricted

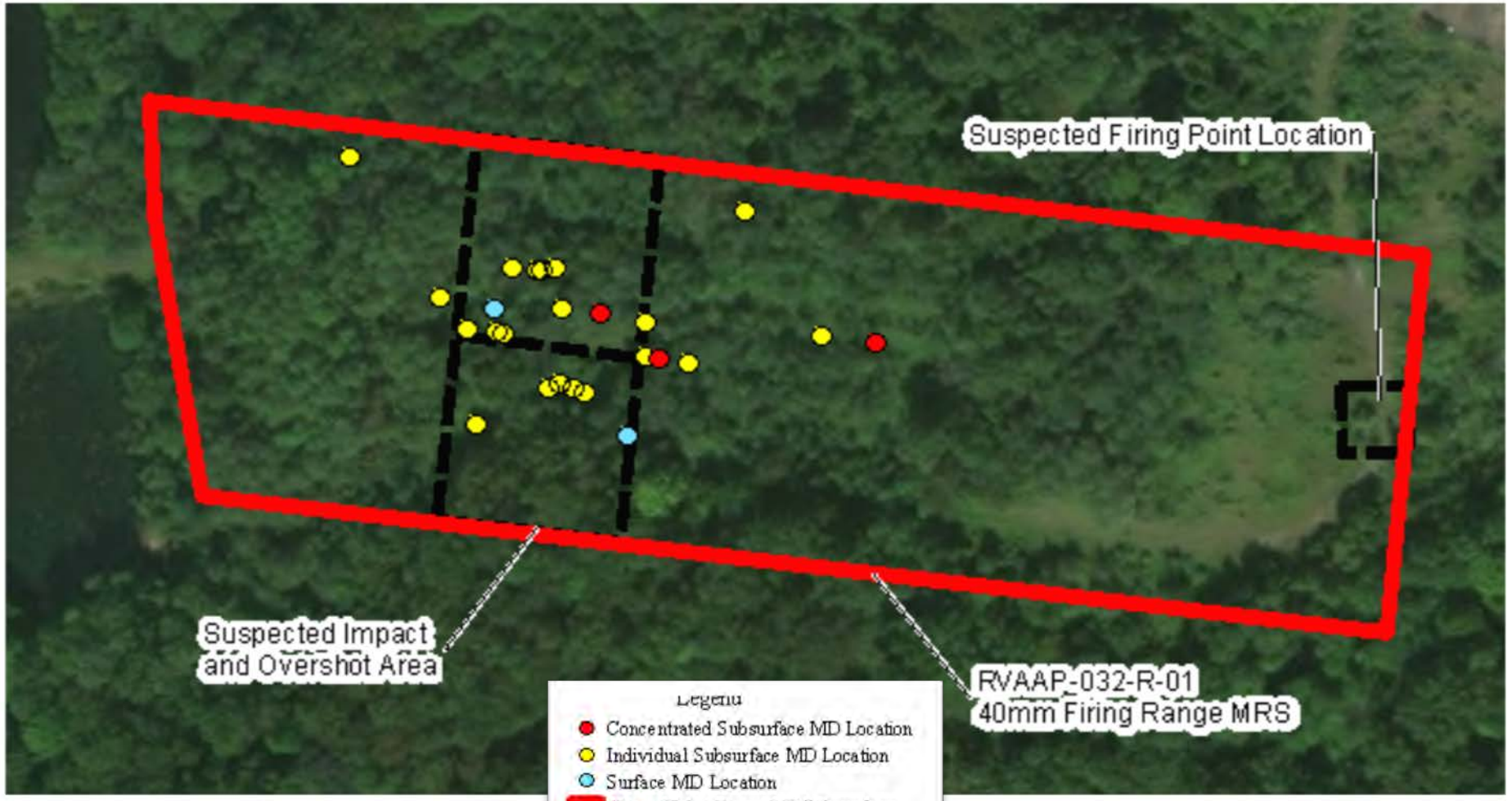
# Remedial Investigation

- Field activities were conducted in two phases:
  - Geophysical  investigation - November and December 2011
  - Intrusive Investigation and environmental sampling – December 2011

- Activities included:
  - Numerous MD items associated with 40mm grenade were recovered from the ground surface and subsurface
  - No MEC items were recovered
  - Environmental sampling:
    - Three ISM surface soil samples were collected
      - Two were 0.63 acres in size collected from the impact area
      - One was 0.05-acres in size from the firing point

US Army Corps of Engineers.

# Remedial Investigation Results




US Army Corps of Engineers.

# Remedial Investigation Results

- No MEC items have been identified at the MRS to date
- Only small quantities of MD have been identified at the MRS
- Explosive hazards are not expected at the 40mm Firing Range MRS

- Analytes detected consisted of nitroguanidine at the firing point and aluminum and lead at the former down range impact area.
  - Nitroguanidine is not associated with the munitions used at this site
  - Aluminum and lead concentrations were determined to be consistent with background concentrations
- No MC-related contamination was identified – human health and ecological risk assessments were not warranted

# Feasibility Study



- The project team further evaluated the RI results; concluding there are no explosive hazards from MEC and no unacceptable risk due to MC-related contamination.
- The No Further Action Alternative was evaluated using the nine criteria listed below

| | |
|---|---|
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |

US Army Corps of Engineers.

# Feasibility Study



There are no hazards associated with exposure to DoD military munitions and no potential for MC risks to human or ecological receptors at the MRS. The Army concluded the 40mm Firing Range MRS be recommended for NFA.

The No Further Action Alternative is

- Technically and administratively implementable
- No costs associated with implementation
- Protective of human health and the environment since no explosive hazards or unacceptable risks exist

US Army Corps of Engineers.

# Proposed Plan Recommendations



**The preferred remedy must be protective of the receptors associated with current and future land use.**

Current and future receptors: Industrial receptors

Current and future land use: Maintenance and natural resource activities and military training

**The results of the Remedial Investigation fieldwork and Feasibility Study evaluation for the 40mm Firing Range MRS support the determination that NFA is the preferred remedy and is also protective of a potential future residential receptor.**

Note: The NFA determination is protective of other potential future human receptors (such as residential receptors). Though there are no current plans for the MRS to change from an industrial land use to a residential land use, there are no unacceptable risks to a potential future residential receptor from explosive hazards and no potential source of MC exists at the MRS.

US Army Corps of Engineers.

# Questions?

Questions can be submitted several ways:

- In writing on the public comment forms provided for you
- By email (email address shown on the public comment forms)

  kathryn.s.tait.nfg@mail.mil

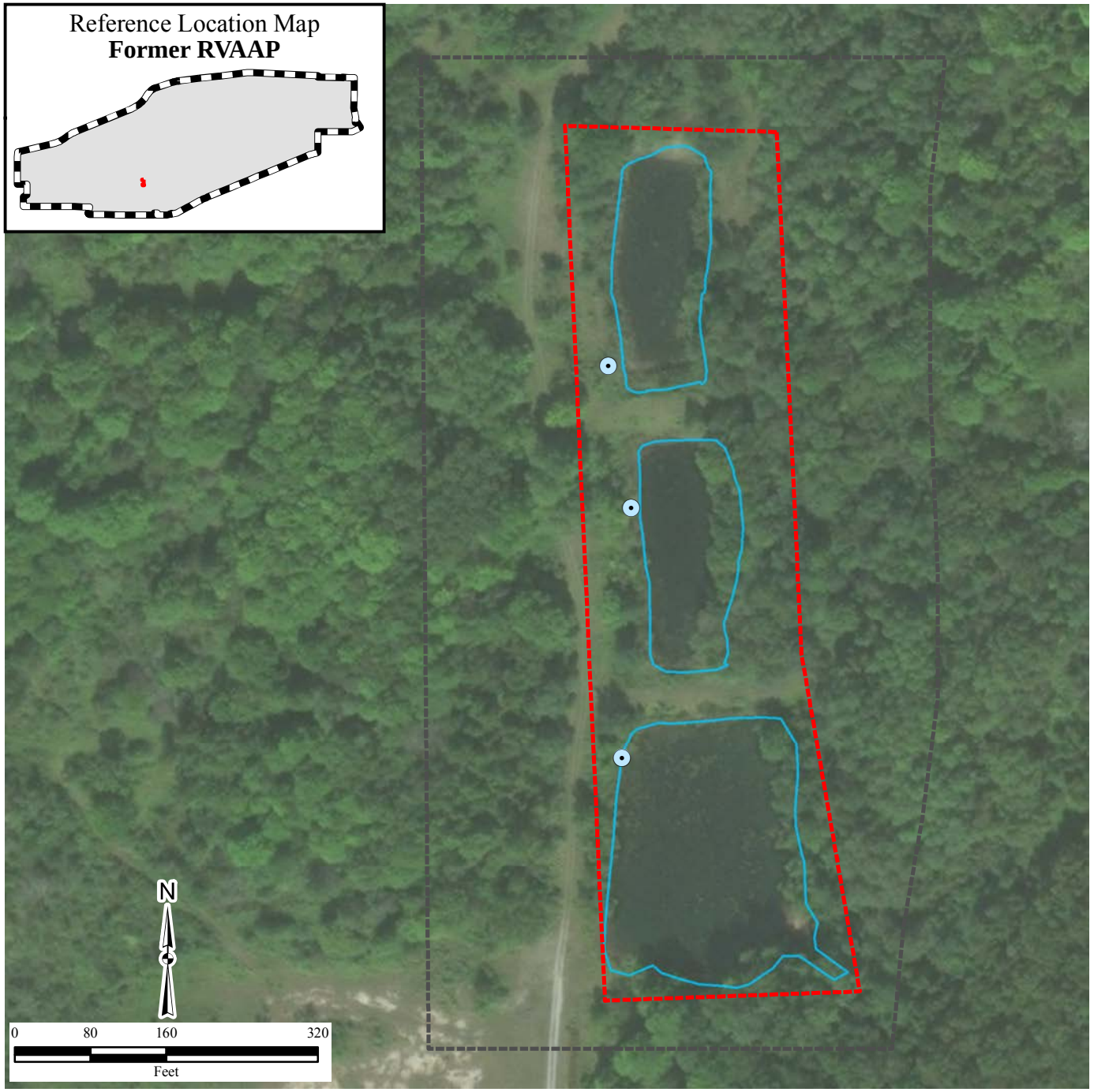
- By mail (mailing address shown on the public comment forms)

  Ms. Kathryn Tait
  Camp Ravenna Environmental Office
  1438 State Route 534 SW
  Newton Falls, Ohio 44444

- Asked in person at the public meeting

The public comment period began October 25, 2018 and continues through December 1, 2018.

US Army Corps of Engineers.




# Figure 3
# Fuze and Booster Quarry MRS Boundary and Site Features Camp Ravenna/Former RVAAP Portage and Trumbull Counties, Ohio

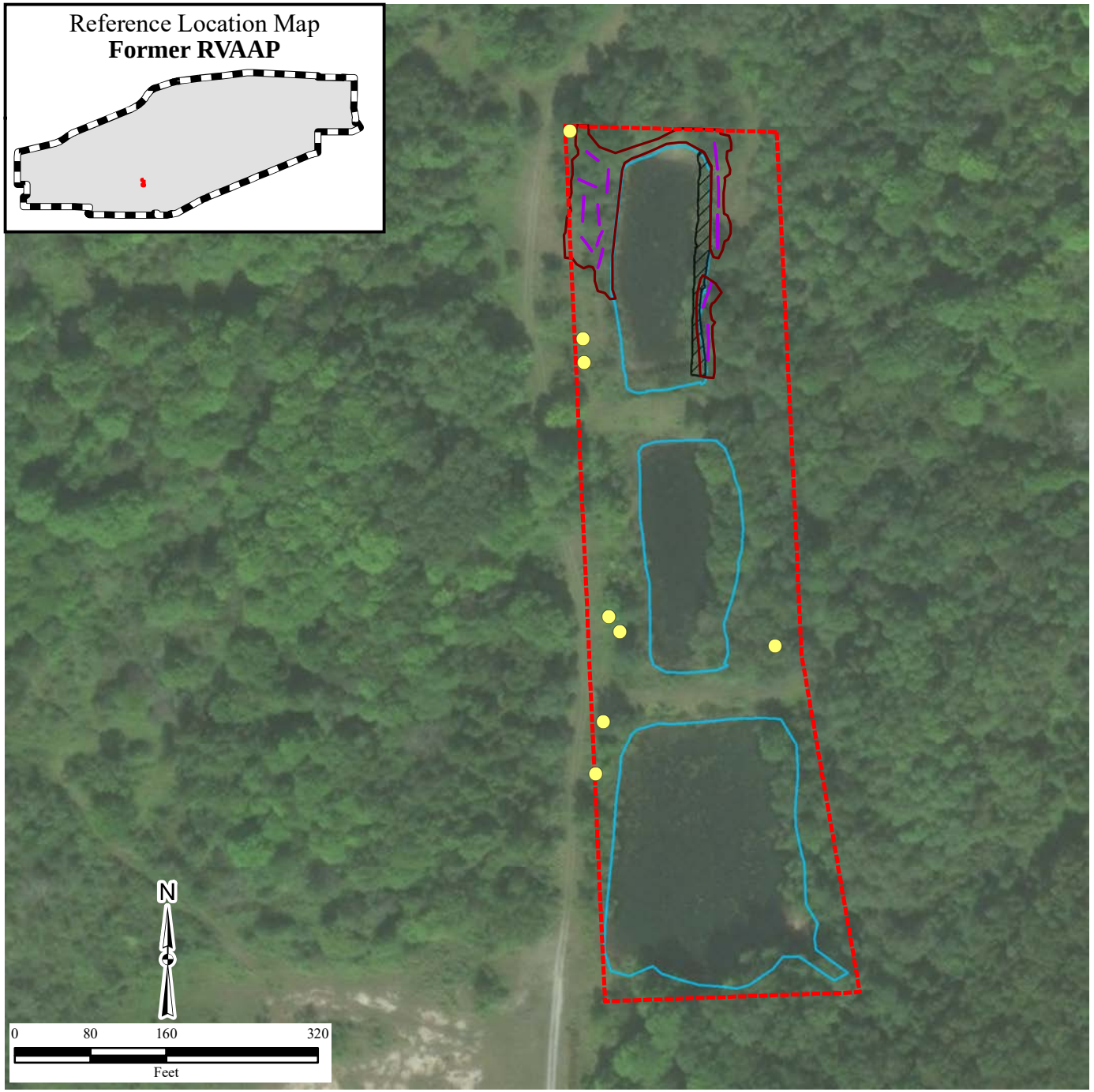
Legend

- Former Water Control Intake
- Surface Water
- MRS
- 2007 HRR MRS Boundary
- Installation Boundary

Notes:
MRS=munitions response site
RVAAP=Ravenna Army Ammuntion Plant

*\\Gst-srv-01\hglgis\Ravenna_AAP\FuzeBoosterQuarry\PP\(03)FBQ_MRSBoundary.mxd*
*2/5/2018 JAR*
*Source: HGL,CB&I, USACE, e²M ArcGIS Online Imagery*

HGL HydroGeoLogic, Inc




# Figure 5
# 2015 Remedial Investigation Results
# Camp Ravenna/Former RVAAP
# Portage and Trumbull Counties, Ohio

Legend

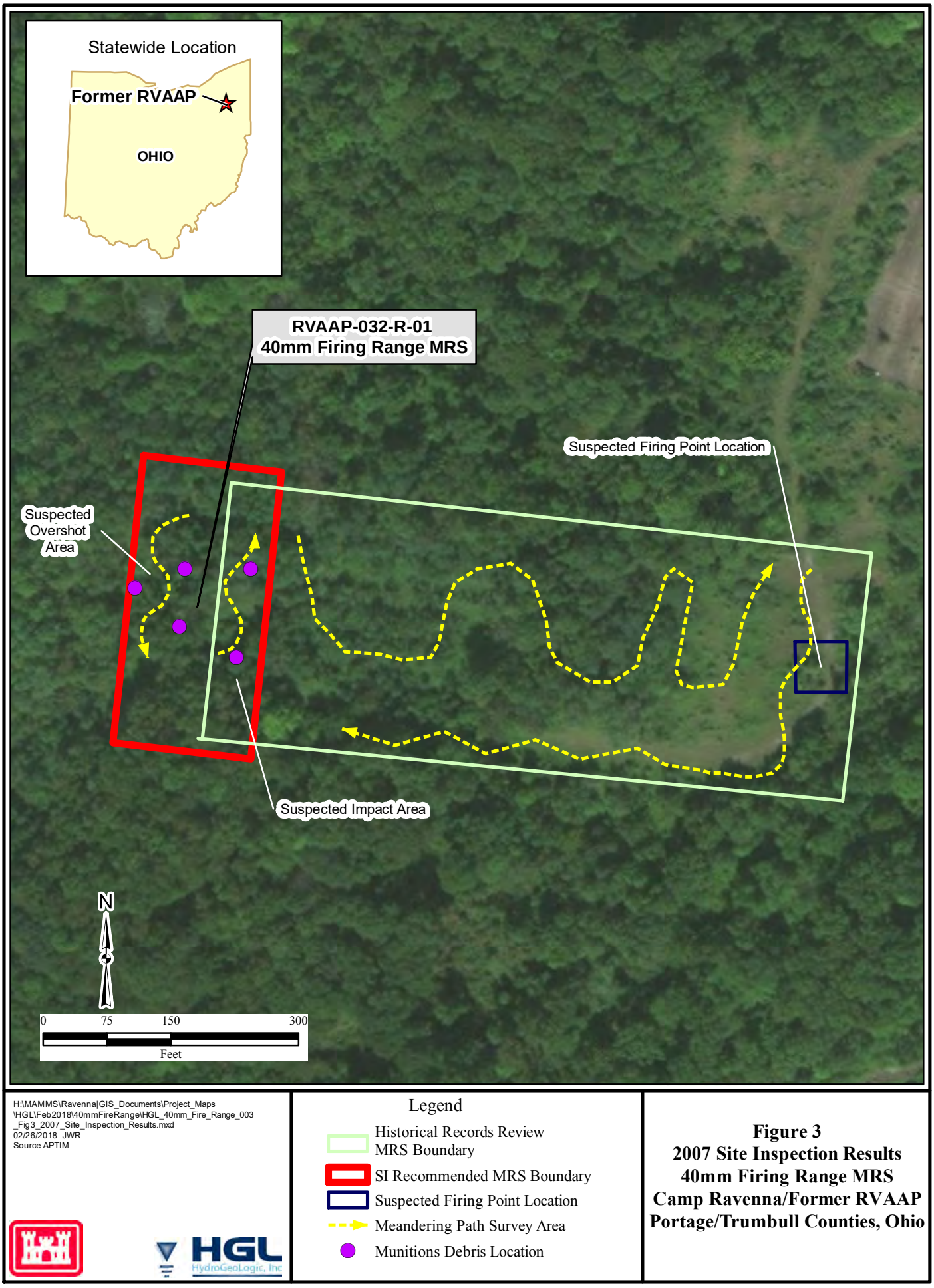
Single Anomaly Results:

- MDAS
- Exploratory Trench
- Area of Pond Not Accessible for Diving Operations
- Surface Water
- High Anomaly Density Area
- MRS
- Installation Boundary

Notes:
MDAS=material documented as safe
MRS=munitions response site
RVAAP=Ravenna Army Ammuntion Plant

*\\Gst-srv-01\hglgis\Ravenna_AAP\FuzeBoosterQuarry\PP\(05)FBQ_Intrusive_Results.mxd*
*2/5/2018 JAR*
*Source: HGL,CB&I, USACE, e²M ArcGIS Online Imagery*

HydroGeoLogic, Inc

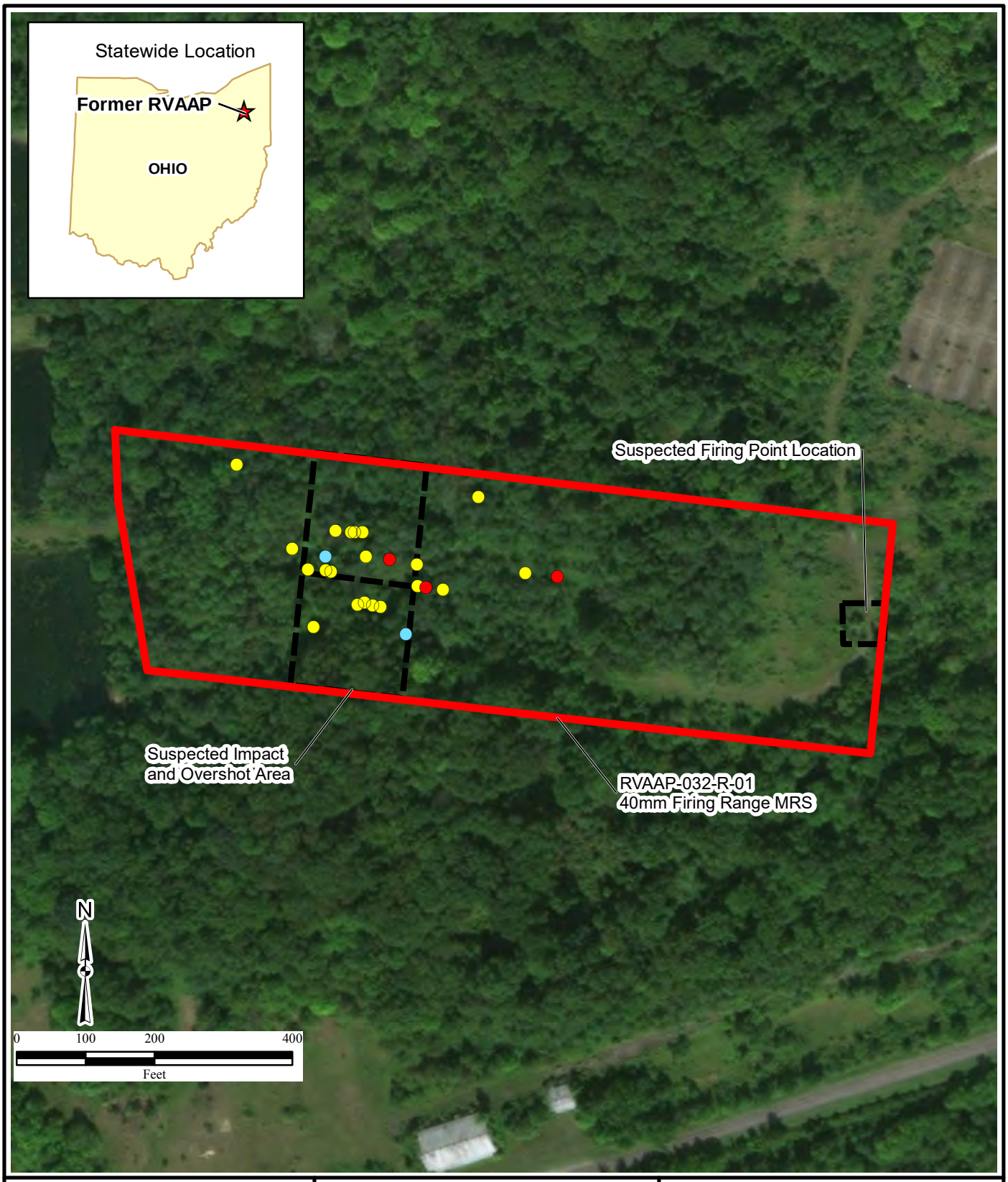



H:\MAMMS\Ravenna|GIS_Documents\Project_Maps\HGL\Feb2018\40mmFireRange\HGL_40mm_Fire_Range_003_Fig3_2007_Site_Inspection_Results.mxd
02/26/2018 JWR
Source APTIM

Legend

- Historical Records Review MRS Boundary
- SI Recommended MRS Boundary
- Suspected Firing Point Location
- Meandering Path Survey Area
- Munitions Debris Location

**Figure 3**
**2007 Site Inspection Results**
**40mm Firing Range MRS**
**Camp Ravenna/Former RVAAP**
**Portage/Trumbull Counties, Ohio**




H:\MAMMS\Ravenna|GIS_Documents\Project_Maps\HGL\Feb2018\40mmFireRange\HGL_40mm_Fire_Range_004_Fig4_2011_Remedial_Investigation_Results.mxd
02/26/2018 JWR
Source APTIM

Legend

- Concentrated Subsurface MD Location
- Individual Subsurface MD Location
- Surface MD Location
- 40mm Firing Range MRS Boundary
- MC Sample Location

MD denotes Munitions Debris
MC denotes Munitions Constituents

**Figure 4**
**2011 Remedial Investigation Results**
**40mm Firing Range MRS**
**Camp Ravenna/Former RVAAP**
**Portage/Trumbull Counties, Ohio**

# Public Meeting Transcripts

PUBLIC MEETING

---

IN RE: NO FURTHER ACTION PROPOSED PLANS
FOR TWO MUNITIONS RESPONSE SITES

FUSE AND BOOSTER QUARRY

AND

40MM FIRING RANGE

Presented by:

Army National Guard

November 1, 2018
6:30 p.m.

Location:

Shearer Community Center
9355 Newton Falls Road
Ravenna, Ohio

Grace M. Hilpert-Roach, RPR

APPEARANCES:

On behalf of HydroGeoLogic, Inc.:

KIMBERLY S. VAUGHN
Senior Section Manager 2
4835 University Square, Suite 15
Huntsville, Alabama 35816
(254) 228-5616
kvaughn@hgl.com

ALSO PRESENT:

Emily Justice, APTIM
Kevin Sedlak, Army National Guard
Nick Roope, Ohio EPA
Mark Johnson, Ohio EPA
Kathryn Tait, Army National Guard
Kim Gross, US Army Corps of Engineers

- - - - -

MR. SEDLAK: Good evening, everybody. We're going to get started. I appreciate you all coming out on a nice, rainy night to see our presentation. We're going to do two sites today so it's pretty interesting.

My name is Kevin Sedlak. I'm the restoration project manager for the Army National Guard at Camp James A. Garfield. We did change the name. I'm sure you all picked up on that.

And we've got -- sitting at the front table we've got Nick Roope with the Ohio EPA, we've got Mark Johnson with the Ohio EPA, Katie Tait with the Ohio Army National Guard, and Kim Gross with the Corps of Engineers out of Baltimore, and they're the project manager for the contractor, which is HGL and APTIM. It's a joint venture contract. They've been doing all the work out here for us and have written all the reports.

We have a court reporter, so everything we say will be transcribed. We'll have that in a final and it will be up on our website, like most everything always is.

We've got all the copies over there of

all the documents. Make sure you grab one. We have packets of stuff. And we have refreshments.

We'll have questions at the end. I believe that's how we're going to do it, so enjoy yourself and we'll be done in a little while.

MS. VAUGHN: Thanks, Kevin.

Yes. Welcome. Thanks, everyone, for coming out with bad weather. We really appreciate your time and your interest in the facility here, to come and learn more about, with our presentation.

Just some of the information for the room, we do have women and men's restroom right over here to the back. Exits, for safety, two here clearly marked. Watch out for these cords, folks, who are walking back and forth up front.

I'm Kimberly Vaughn, and I work for HydroGeoLogic. I work along with Emily Justice, who's also going to present tonight on a couple of the sites that we're talking about, from APTIM.

We both are working for the U.S. Army Corps of Engineers and the Army National Guard

to give you the summary of the Proposed Plans for these two sites that are being presented tonight.

There was an agenda in some of the information materials and in the slide packet that you may have. It's just summarizing what we'll go through formally here tonight and the site conditions, the results of all the investigations that have been done over the years.

Hold questions, as Kevin said, until the end, if you don't mind. As part of the program that we're working under, we are required to take note of all public comments that we receive on these Proposed Plans, and that's why the court reporter is necessary for that task.

So we have some pens and some blank pages. If you would like to note any questions, we'll formally take those questions toward the end.

We'll try not to -- in the program that we're working under, of course, there are acronyms and there are some terms that we commonly use in what we do. I will try not to

slip into too many of those. But for your familiarity, there's a page in the slides here that show some of the terms we commonly use in the work that we're doing at the facility.

The most common words that you'll hear me slip into, if I don't remember, will be MEC, munitions and explosives of concern. Those are items that are still explosively hazardous. And we will shorten that sometimes and we'll say MEC for M-E-C right here, munitions and explosives of concern.

Or sometimes we'll speak of munitions constituents or we'll shorten it to MC. Those are two of the most common acronyms that I may forget and tend to slip into use of. And the munitions constituents are the components, the chemical components that might have been in the soil from munitions present at a site.

I spoke briefly about the program that we're working under. It is the Military Munitions Response Program. It's applied under CERCLA. You may have heard CERCLA commonly referred to as Superfund. It's the way that Department of Defense military munitions are addressed under CERCLA. So that's the program

that we're working under in the investigations we've done on the sites here.

Working under the Military Munitions Response Program, each site flows through various phases. We've got early investigations, maybe historical records searches, some actual field work that is done, you know, the workers are out on the site physically collecting samples and gathering data. And then the Proposed Plan phase that we're at tonight is highlighted.

In general, just where we all are this evening, the location of the facility, the former Ravenna Army Ammunition Plant is shown here, just to get us oriented. And then where the two sites that we're talking about tonight, the two munitions response sites, are shown on the next slide for your general orientation to see where -- our community center is over here sort of on the south side and the two MRSs, munitions response sites, that we'll talk about are shown in red there.

And this is slide 7, so you can see that maybe closer up in the handout and see where the two sites are that we'll be talking

about tonight.

The first of the two that I'll run through, and then Ms. Emily will take over for the other site, the 40-millimeter firing range. But the first one that I'll be speaking about is the Fuze and Booster Quarry Munitions Response Site.

So briefly for each site we'll go through the history, the background, the current site conditions that are known, and then the investigations performed, and what the recommended path forward is for the future. It's kind of what we'll run through for each site.

So this is a lot of terms here, words here on this slide, but we also have some maps available. But it was originally a quarry, the Fuze and Booster Quarry, that was then used for open burning activities.

It does have three ponds that are present on the site. They were used as settling ponds. And there's a lot of detail in the report. You may have picked up a copy of it in the Proposed Plan. There is a longer rundown of the history of the Fuze and Booster Quarry.

One item to note is there was a change in the size over time. Originally, when it was investigated, it was about the 12 and a half acres listed here. And as part of the investigation process, that size did change to about five acres in size. So I wanted to point that out.

After the overview of the history we've got, you remember on the slide that had all of the phases of a Military Munitions Response Program, these are some of the documents, some of the reports that are written during each of those phases. And each of these here are available on the administrative record website, that is that website for folks to look at each of these reports if you would like to.

So in summary, we had a historical records review where available records were searched to see what the history at the Fuze and Booster Quarry may have been, what next steps may need to have been done. Then a site inspection was done.

There is a figure that we'll look at on the next slide showing the results of that site inspection. And then we'll talk in a few slides

about the remedial investigation and the feasibility study that were also done.

So the next slide is showing what is Figure 3 from the Proposed Plan, and we also have, at the very back of the stapled package of your copy of the slides, some of these maps are at the very back in case they don't show up very well here. We turned off some of the lights trying to get the brightness, and that was the best solution we had found there.

But this is Figure 3 from the Proposed Plan. If you have that available, and it's also at the very back right after page 30 in your slides, it's a larger copy of this figure. So after -- again, after the site inspection, it had resulted in the 4.92 acres in size. So this red boundary is that acreage.

We're looking at just what are the current site conditions at the site over there on the facility right now today. We do have the ponds that we talked about, and there are some gravel roads running along the western boundary there, some roads for crossing through.

The next slide is, again, just kind of restating what I just summarized. And what's

shown on the map is kind of those current site conditions. It's got the pond. Around the ponds there are some thick vegetation. They do have water in them that fluctuates, and there are some slopes around each of those ponds.

And we all know that access to the facility is controlled, but this particular Fuze and Booster Quarry site, once inside the facility, is unrestricted access to this site. So that kind of shows, you know, what are the conditions on the site right now in time.

And then now we're going to talk about the remedial investigation. That's another one of those phases of the Military Munitions Response Program that we were talking about. Each of these phases has documents and reports that are done at each of those relevant points in the process.

So the remedial investigation, this is kind of a rundown on slide 13 of all of the data collected at the remedial investigation phase. So we do geophysical surveying. That is surveying to see if there is buried metal, if there's metal in the subsurface of the area.

And then after that the anomalies -- we

may use that word, anomalies, that is a location, a point location where we go and actually dig the item up. The geophysical surveying showed us it was there. Then we go and dig it up to see what it is.

There's also sampling that's done. So we did some incremental sampling, methodology sampling of the bottom of the three ponds. So all of this data was gathered during the remedial investigation. And, again, it is also summarized in more text in the Proposed Plan that you have a copy of.

The next slide, slide 14, again, shows on a figure, you know, everything that was kind of written on slide 13, the slide before. So this is actually those results that I briefly discussed that are listed on the slide.

It's also included on the next page, page 31, in that packet of stapled slides that you've got, if you would like to look at it in more detail.

So some of the things I wanted to point out here is, you can see the areas around the pond where the yellow circles are the points, those anomaly points. That's one location where

buried metal was indicated, and then we went and dug it up to see what it was.

And those were all materials documented as safe. That was munitions debris that did not have any explosive hazards. So nothing with explosive hazard was identified where the yellow circles are shown.

And then the areas that are shown with the blue rectangles, there was enough of the buried metal in one place where one point was not dug, an actual trench was dug. There was enough metal in the ground that an exploratory trench was dug to see what it was. There was more clutter. There was more of the subsurface metal present, and a trench was done to explore that and see what that was.

Nothing with any explosive hazard was found in any of the locations shown where trenches are marked on that figure. And if you're looking at a copy of the Proposed Plan instead of the slides, this is Figure 5 in the Proposed Plan. So that's available to you there as well.

Again, the next slide is summarizing for the figure results shown on slide 14, the

results that came out of all that remedial investigation data that was gathered. Only munitions debris again. As I said, nothing with an explosive hazard was identified. And the places -- a lot of the places had other debris. It was non-munitions related metal.

There were 227 different single points that were hand dug with hand tools, and then all of those rectangular trenches that are shown on that figure were also dug.

Also, I wanted to point out that from the sampling that was collected in the three ponds, there was no evidence that any release of those munitions constituents had occurred to the sediment in the ponds. If there's anything else to point out on the remedial investigation results, because those three slides were a really quick summary of a lot of data that's gathered together for you in that entire RI report, that's also available to you.

Moving to the next phase that we looked at in the overview slide of all of the work that goes into a Military Munitions Response Program, CERCLA investigation, the next three slides will be talking about that feasibility study. That

study comes after the remedial investigation, and it's really taking all that known data, you know, that we've summarized briefly here tonight, all that history, the current site conditions, what we know about the site, and all the data that was gathered, and evaluating it for the appropriate next step and path forward.

And as part of the CERCLA process, whatever alternative is being developed that's appropriate is evaluated against those nine criteria that are summarized there. Anything that's proposed, you know, as the future alternative for the site is looked at against each of those criteria to evaluate how well it will address the site conditions.

So as part of that feasibility study, this is kind of an overview. The entire project team looked again at all that historical data, all the new data gathered in the remedial investigation, and established that there are no hazards associated with exposure to munitions at this Fuze and Booster Quarry MRS, and there's no potential for any munitions constituents risk either. Neither one; there's no hazard, explosive hazards, and no risk from the MC.

So the Army, you know, is now presenting in the Proposed Plan that No Further Action is required at the Fuze and Booster Munitions Response Site. And that's what's being presented to the public for public comment as part of our meeting here tonight.

And, again, I had talked about the criteria that are applied. You know, at the bottom there it's kind of showing that that No Further Action Alternative met all of those criteria that it needed to meet. It's technically and administratively implementable and it's protective of the humans and the environment.

So, again, that was a really quick run-through of a lot of data. So I apologize in advance on that. But for the Proposed Plan, that is what we're here tonight soliciting comments from the public on the Proposed Plan document, this is a rundown of the recommendations being made in that Proposed Plan.

So we're looking at the remedy, the No Further Action that's proposed. We want to present it to you tonight. And it has to be

protective of the current and future receptors. When we say receptors, we're talking about the humans that are accessing the site, the humans that are working on that site.

So we know that it's used for military training, natural resource management, hunting and fishing, you know, all of the things the facility is normally doing on that five-acre site.

And we did want to note as well that, based on everything known about this site, for a theoretical future residential receptor as well, there are no hazards on that Fuze and Booster Quarry site.

So, again, this is just kind of a formal statement of everything that is presented in that Proposed Plan for community comment in this 30-day period.

I believe we're moving now to the 40-millimeter firing range site, the second of the two sites that we're talking about tonight. And that is Ms. Emily Justice.

MS. JUSTICE: Hi, everyone.

So we're going to talk about the 40-millimeter firing range. And the second to

last page in your packet, there's a figure of this site if you want to look at that.

So this site was a former firing range built five acres in size located in the south central portion of the facility. And it was a firing range that was used from about 1969 to 1971.

The MRS, or Munitions Response Site, it consists of that former firing range and also an overshot area. And the munitions that have been used at this site are 40-millimeter grenades. And both practice versions of the 40-millimeter grenade and 40-millimeter grenades with an explosive element were used historically at this site.

And according to a 1978 report, each of the 2,500 rounds that had been fired at the range had been accounted for. There's a target impact area with a well-defined berm about 350 meters from the firing point.

And if you were to go out there today, all that you would see was a few remnants near the former firing point. There's an old wooden structure there that was used for storage during the firing range when it was in use. There's a

gun mount foundation, and there's a chronograph foundation.

So this is a figure of the 40-millimeter firing range. There's a blue dot here, a blue square, that's the former firing point. This black rectangle, that's the suspected impact area and overshot area.

And this site is right adjacent to the Fuze and Booster Quarry that we were just talking about. So there's a steep slope down to the west here and right here you would find the Fuze and Booster Quarry.

So the red outline on the last slide, that shows 8.55 acres. It's a forested area near the firing point. There's tall grasses. Again, MRS, the Munitions Response Site, slopes down in the western part where it goes towards the Fuze and Booster Quarry.

There's no structures within the site except for the remnants of that old wooden storage shed near the firing point. And once you're on the facility, access to the 40-millimeter firing range is unrestricted.

So do you guys have a slide in there that says, "Historical investigations" in your

printout packet?

MS. GROSS: I think you skipped over it. It was right before the map.

MS. JUSTICE: Okay. Good. Thank you.

This mouse space bar on here is a little bit sticky. I'm pressing it too many times.

I did want to talk about historical investigations that have been done at this site. In 2007, there was a historical records review, and it documented reports from facility personnel that identified potential for military munitions at the site.

And then in 2008 there was a site inspection. And that second to last figure that I pointed out earlier in your packet there, that shows the site investigation results.

So some meandering paths were done to look around to see what military munitions were on the ground. Those are the yellow lines on that figure. They walked around in the target impact area, the overshot area and near the firing point. And they found MD, or munitions debris, and it was related to the 40-millimeter grenades. They found nose caps and casings, but

they did not find anything with an explosive hazard during the SI. So they did not find any MEC, munitions of explosive concern.

And then they conducted a remedial investigation and feasibility study, which now I can flip forward to. We're back on track now.

So at this site we went out and we did some geophysical mapping, looking for metal in the ground. And we did some intrusive investigations where we dug the locations where the metal was located. And then we also performed environmental sampling.

Numerous munitions debris was found, so pieces of 40-millimeter grenades, but nothing with an explosive hazard was identified. No MEC was identified. Environmental sampling was also conducted near the firing point and in the impact area.

And on this next slide, this next slide shows a picture of what the remedial investigation found. So all these dots on here are locations where they found munitions debris or pieces of 40-millimeter grenades.

The red dots were concentrated subsurface munitions debris. The yellow dots

are individual places where they found subsurface munitions debris. And there's a couple blue dots on there where they found some munitions debris on the ground surface.

So, again, there was no MEC or items with explosive concern identified during the remedial investigation and only a relatively small quantity of munitions debris was identified. So there's no explosive hazard expected with this site.

As for the environmental sampling, nitroguanidine, aluminum, and lead were all detected, but nitroguanidine is not associated with the 40-millimeter grenade. And the metals that were found, the aluminum and lead, they were consistent with what you would find throughout the facility. They were consistent with background concentrations.

These were not considered munitions related contaminants, so there's no risk from MC or munitions constituents at the site.

After the remedial investigation, we prepared a feasibility study. And this looks at different ways we could address the site moving forward.

So No Further Action was evaluated as an alternative, and we used the nine CERCLA criteria to evaluate the No Further Action Alternative. So we looked at how protective is it, the cost, the feasibility, and all of that information is summarized in the feasibility study.

So there's no hazard associated with exposure to military munitions and no explosive hazard, and there's no potential for munitions constituents, MC, from that environmental sampling that we did.

No Further Action was selected as a preferred alternative in the feasibility study to be protective of the site, since there was no risk identified.

So next up we prepared the Proposed Plan, which we have that on that table and why we're all here tonight. The Proposed Plan looks at the preferred remedy and makes sure it's protective of any receptors at the site, so any humans that might interact with the site.

And, again, No Further Action was selected as the preferred alternative to be protective of anyone who uses the site currently

and even a hypothetical future resident. No Further Action would be protective of any and all of those receptors. That's it.

MS. VAUGHN: Thanks, Emily.

One more note we would like to make before we move into the questions is, we do have all of the members of the project team here that Kevin Sedlak had introduced earlier.

And as part of all those phases in our investigation and all the documents prepared for each of the phases is the Ohio EPA reviews and comments on each of those documents.

So we have Mr. Nick Roope here today to present to the public that Ohio EPA concurs with these recommendations in the Proposed Plan that are being asked for public comment.

So I don't know if -- Mr. Roope, anything to add?

MR. ROOPE: Ohio EPA does concur with the preferred alternatives and No Further Action for both the Fuze and Booster Quarry Munitions Response Site as well as the 40-millimeter Munitions Response Site presented this evening.

MS. VAUGHN: Thank you.

And then we do have a comment period

that started October 25th when the Proposed Plans were put into the administrative record and at the information repositories, the libraries. And it will go from October 25th through December 1st. And so we're definitely asking for public feedback on the path forward that's been summarized for you tonight.

And then there's other ways besides -- if you ask any question tonight, we need to know your name and have the court reporter take down your questions. That's a requirement under the program we're working under.

But then you can also e-mail in your comments, write them down on one of the forms that we have over on the table over there, hand it in, and your comment will be responded to.

If we have any questions, I'll just need to get your name first, please.

MR. RUPPERT: What range is the 40 millimeter, what range do you have for it?

MS. VAUGHN: What range, like how far?

MR. RUPPERT: No.

MS. VAUGHN: It's Mr. Ruppert; is that correct?

MR. RUPPERT: Yes.

MS. VAUGHN: This is Mr. Ruppert. I'll get you the spelling.

MR. RUPPERT: Can we reach Russia from here?

MS. JUSTICE: Not quite.

MR. RUPPERT: They tell me in the north part they could reach Russia.

MS. JUSTICE: Not with a 40-millimeter grenade.

MR. RUPPERT: I know that. But I'm just saying if you have to hit there, what are you going to do for it?

MS. VAUGHN: That might be outside the scope of the Proposed Plans here tonight. Yeah. Thank you, Mr. Ruppert.

MR. RUPPERT: I've been through all this.

MS. VAUGHN: Yes, sir. I understand.

MS. JUSTICE: Anyone else with any questions or comments?

MS. VAUGHN: Well, we do have more time allotted this evening so we can --

MS. JUSTICE: We'll all be here if you want to come up and ask anyone a question. But if you would like to formally submit a comment,

please go ahead and grab one of those comment sheets so we can add it to the feedback.

MR. RUPPERT: It will be good for each part of the Ravenna Camp. I grew up doing this. I moved here in 1938 when the arsenal was built.

MS. VAUGHN: That's great.

MR. RUPPERT: And I was privileged to be out there, but not in the arsenal, only because my wife was good friends with the person that ran it. And so we got on the bus and took out there to see what it was like.

MS. VAUGHN: Wow.

MR. RUPPERT: But that's because her parents were involved in it.

Ravenna was a boom town. Newton Falls was a boom town. You couldn't walk downtown on Friday night and Saturday in Ravenna. The bars were filled. We had one building that had rooms at every eight hours they changed --

MS. VAUGHN: We may come and sit right over there, Mr. Ruppert, and visit for a minute.

But I think we'll go ahead and conclude the formal part of the presentation. And then we'll be around for any questions you may have as well though.

MS. JUSTICE: Thank you all for coming out tonight.

(Public meeting concluded.)

CERTIFICATE

I, Grace M. Hilpert-Roach, do hereby certify that as such Reporter I took down in Stenotypy all of the proceedings had in the foregoing transcript; that I have transcribed my said Stenotype notes into typewritten form as appears in the foregoing transcript; that said transcript is the complete form of the proceedings had in said cause and constitutes a true and correct transcript therein.


Grace M. Hilpert-Roach

Grace M. Hilpert-Roach, Notary Public within and for the State of Ohio

My commission expires 7-11-2021