

#### WELCOME TO OUR VIRTUAL PUBLIC MEETING



- If you did not have your computer call you to connect to the audio portion of the meeting, please
  reconnect to the meeting using the "Call Me" function. Type in the phone number you would like to
  use to listen to this presentation. If it asks for a phone code it will be 0401#
- If you are hearing feedback on your phone line, turn the sound down on your computer and move your phone further away from your computer.
- This meeting is being recorded and a court recorder is on the line to capture your comments on the proposed plan
- The meeting transcript, including anything in the chat, will be posted to the project website
- · Please refrain from using the chat during the presentation, the chat will be monitored for questions
- The project website will periodically be updated with responses to questions regarding the proposed plan before the comment period closes on December 5, 2020
- Those that registered to provide comments on the proposed plan will be called during the comment portion of the meeting in the order that the registrations were received
- If you did not register to comment, but you would like to, at the designated time, please type your name in the chat

Good evening. This meeting is being recorded. A court recorder is also on the line to prepare an official transcript of the meeting. Please keep your phones on mute during the presentation portion of this meeting. During the public comment portion of the meeting, you will be called in the order that you signed up to speak.

I now introduce \_\_\_\_\_, Chief of the Special Projects Branch at the U.S. Army Corps of Engineers Buffalo District.



Good evening everyone! My name is from the U.S. Army Corps of Engineers Buffalo District and on behalf of commander of the Buffalo District welcome and thank you for attending our virtual public meeting this evening! I have a few brief opening remarks before Jeff Rowley, our Project Manager, leads us through tonight's discussion.

regrets not being able to meet you in person tonight – he was unable to attend due to a training event with other district commanders in Washington. took command in June of this year and is eager to visit with community members at all our project sites. I would like to take this time to thank those from the Tuscarora Nation and the federal, state, and local elected officials and agency representatives who are joining us tonight.

The Buffalo District serves the people in the watersheds of the lower Great Lakes from Massena, New York, in the east to the Indiana state line in the west, and we've done so since 1857. We have many projects within this area of responsibility, but this one is close to home. Most of our nearly 300 district employees live in this community, and we deeply care about serving and safeguarding our neighbors and fellow community members. As we investigate and remediate sites like the Niagara Falls Storage Site and others sites in Western New York, our number one priority and decision making criteria is protecting human health and the environment.



## **WELCOME!**



# **Agenda**

- Introduction
- · Background Information
- · Feasibility Study Information
- Evaluation of Remedial Alternatives
- Preferred Remedial Alternative
- Comments

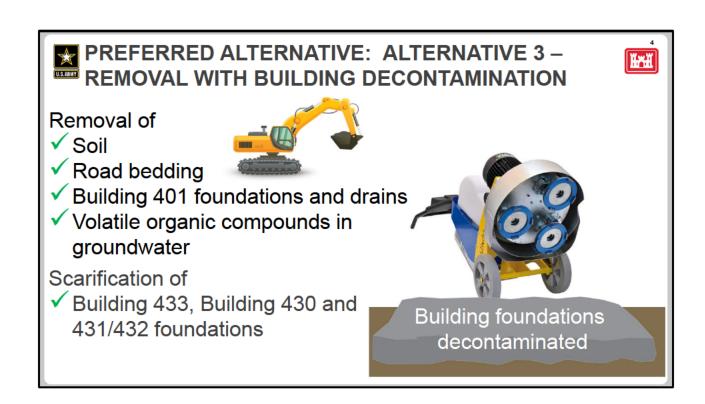


Tonight's focus is: Balance of Plant and Groundwater Operable Units

Tonight's agenda is on this slide. We are here to discuss the Niagara Falls Storage Site which is being addressed under the Formerly Utilized Sites Remedial Action Program, or FUSRAP. Our priority when implementing the program is to ensure we are protective of human health and the environment. We implement FUSRAP following the established federal law for environmental cleanup – the Comprehensive Environmental Response, Compensation, and Liability Act, or CERCLA. The CERCLA process requires that we conduct a public meeting to receive your comments on our preferred alternative, which is the most important part of tonight's public meeting. We are here tonight to receive your comments!

To frame tonight's discussion I'll reinforce a recent major milestone at the site. In March 2019 the Corps of Engineers signed a record of decision to completely remove and ship out of state for permanent disposal the entire Interim Waste Containment Structure. Removing the Interim Waste Containment Structure permanently removes 99% of the radioactivity from the site and community. Additionally, the high activity residues buried inside the Interim Waste Containment Structure represent only 1% of the total material to be removed from the site. Since we signed the record of decision, we have made good progress in the development and procurement of the design contract to perform the detailed engineering to remediate the site. We expect to award this design contract in 2021 and our efforts have not been delayed or impacted by the ongoing COVID-19 pandemic.

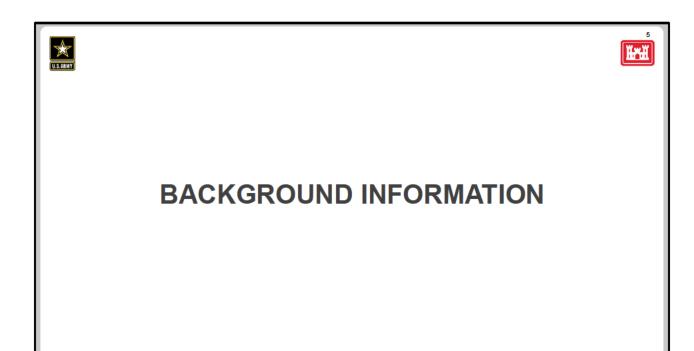
Tonight our focus is on selecting a remedy for the remainder of the site outside of the Interim Waste Containment Structure. Specifically, the proposed plan and preferred alternative for what are called the Balance of Plant and Groundwater Operable Units. Releasing this proposed plan brings us one step closer to the site's remediation.



Our preferred alternative, which is shown on this slide, proposes a remedy for addressing contaminated soils, buildings and building foundations, utilities, roads and roadbeds, and contaminated groundwater. The Corps preferred alternative will be protective of human health and the environment; complies with applicable or relevant and appropriate requirements; is cost-effective; and utilizes permanent solutions that will preclude any future environmental impact.

Thank you again for being with us virtually tonight and I appreciate your willingness to participate virtually under our current COVID-19 restrictions! This is our first virtual public meeting and we think we've worked out some minor kinks but please bear with us if we experience any technical difficulties!

I will now turn this meeting over to Niagara Falls Storage Site Project Manager, to provide an update on the progress we have made in planning for the cleanup of the site and to talk about our preferred alternative for the site's Balance of Plant and Groundwater Operable Units.



Thank you



# **ACRONYMS**



**BOP** Balance of plant

CERCLA Comprehensive Environmental Response,

Compensation, and Liability Act

CFR Code of Federal Regulations

FUSRAP Formerly Utilized Sites Remedial Action Program

**IWCS** Interim Waste Containment Structure

NFSS Niagara Falls Storage Site
O&M Operations and maintenance

**OU** Operable unit

PAHs Polycyclic aromatic hydrocarbons

PCBs Polychlorinated biphenylsVOCs Volatile organic compounds

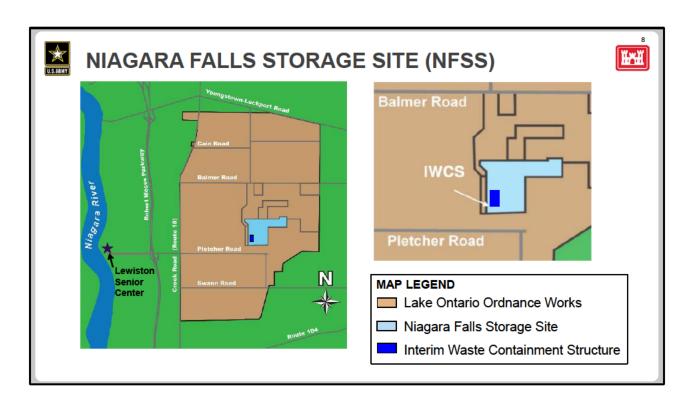
We tried to keep our use of acronyms to a minimum in this presentation. Some of our more frequently used acronyms in regard to Niagara Falls Storage Site are on this slide. We will explain these terms as we come across them in the presentation. Further information about these terms is available in the fact sheets on the project website. The web address will be on the final slide of the presentation.



The work we are doing at Niagara Falls Storage Site is authorized under the Formerly Utilized Sites Remedial Action Program or FUSRAP. The program was initiated in 1974 to identify, investigate, and, if necessary, clean up or control sites throughout the United States contaminated as a result of Manhattan Engineer District or early Atomic Energy Commission activities.

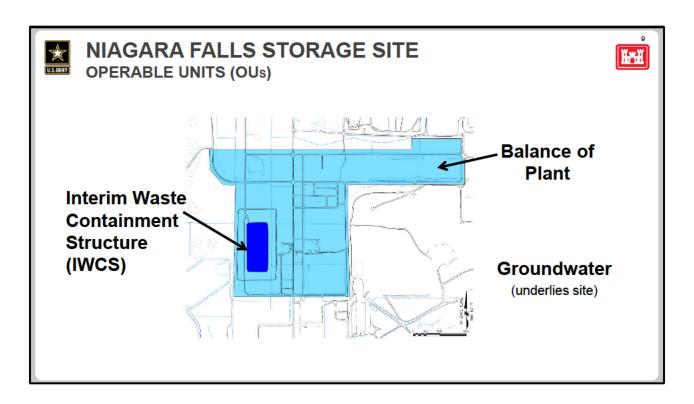
The objectives for FUSRAP are identified on this slide.

Our number one priority while performing activities at the site is the protection of human health and the environment and the safety of the community, and site workers during the cleanup.

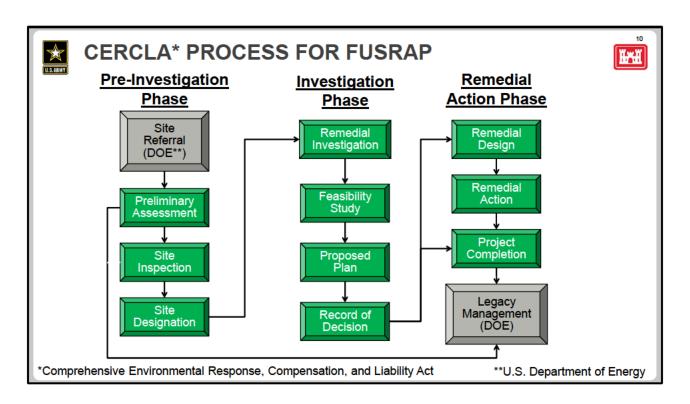


Niagara Falls Storage Site is located in Lewiston, New York, situated within what was the Lake Ontario Ordnance Works. The Lake Ontario Ordnance Works was a trinitrotoluene, or TNT, facility that came online in the early 1940's; it was decommissioned in 1943. The United States had a surplus of TNT during the World War II effort, so the country no longer needed the operation of that facility. The Atomic Energy program started in the same timeframe, and residues and waste materials being generated as a result of their work found its way to Niagara Falls Storage Site where they were stored for a considerable length of time.

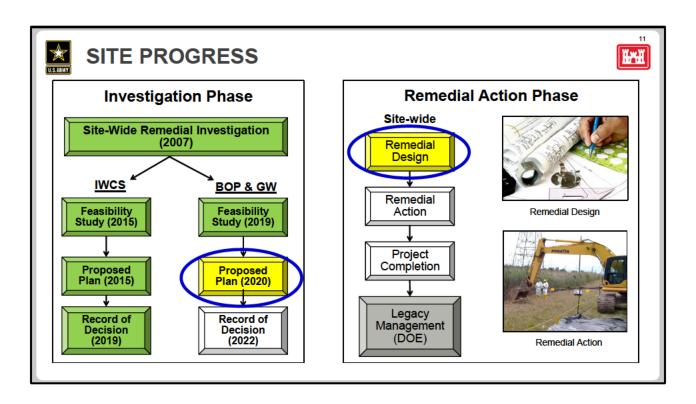
If you focus on the right-hand side of your screen, you can see the smaller Niagara Falls Storage Site. During the early 1980s, the Department of Energy consolidated the contaminated materials at the site and its vicinity properties into the Interim Waste Containment Structure or IWCS, which is the dark blue area. The site is currently owned by the federal government. The Buffalo District maintains the site and performs environmental surveillance to ensure the protectiveness of the Interim Waste Containment Structure.



For purposes of the feasibility study, the site was divided into three operable units or OUs. The Interim Waste Containment Structure OU is the engineered landfill within the diked area of the NFSS and applies to all of the material within the IWCS. We have a record of decision for the IWCS. Tonight we will focus on the remaining operable units. The Balance of Plant or BOP OU includes all of the material at the NFSS not in the IWCS (soils, buildings and building foundations, utilities, roads, and roadbeds). The Groundwater OU refers to contaminated groundwater.



We follow the processes outlined in the Comprehensive Environmental Response, Compensation, and Liability Act, or CERCLA, as amended, and the National Oil and Hazardous Substances Pollution Contingency Plan. That process is outlined on the screen.



This slide shows where the Niagara Falls Storage Site Operable Units are in the CERCLA process. The record of decision for the Interim Waste Containment Structure was signed in March 2019, with complete removal of the contents of the IWCS as the selected remedy. Last fall we released the feasibility study for the Balance of Plant and Groundwater Operable Units. Tonight we will be discussing the proposed plan for those operable units and describing the Corps' preferred alternative to mitigate risks presented by small areas of remaining contamination on the site.

The site-wide remedial action phase is also outlined on the right of this slide. During fiscal year 2021, we will award an architect-engineer services remedial design and construction oversight contract and begin the work to ultimately clean up the site.

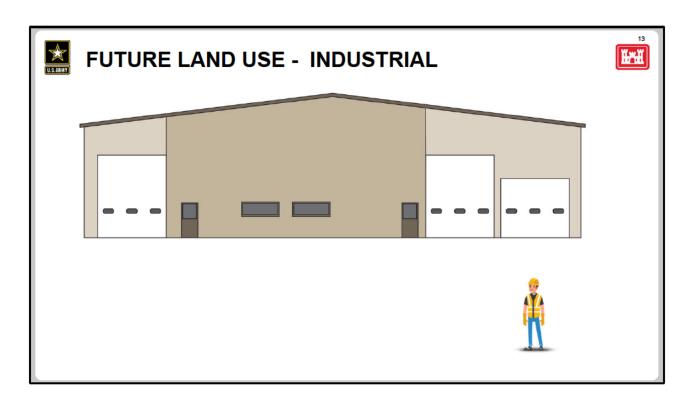
Tonight, after the presentation we will receive your comments on the proposed plan. The comment period ends on December 5, 2020, so please provide your comments tonight, email fusrap@usace.army.mil or mail them to the district. The district's email and mailing address will be provided at the end of the presentation. The preferred alternative may be modified based on any new information acquired during the designated public comment period. Responses to comments received will be provided in the record of decision, which will identify the selected remedy to be implemented.





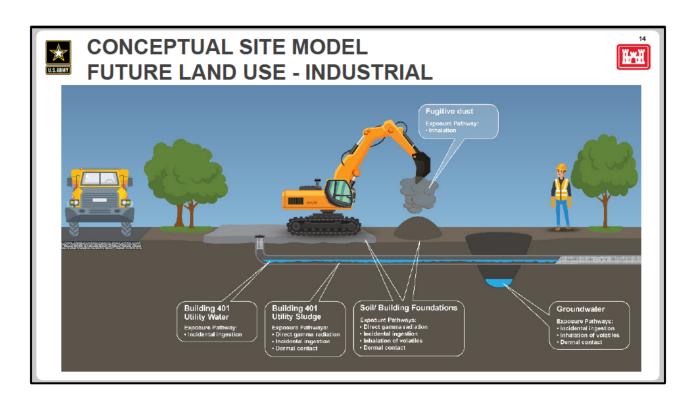
# **FEASIBILITY STUDY INFORMATION**

We discussed the feasibility study and went over the remedial alternatives with you during our information session last fall. The presentation and posters from that meeting are available on the project website. The following slides give an overview of what was covered.

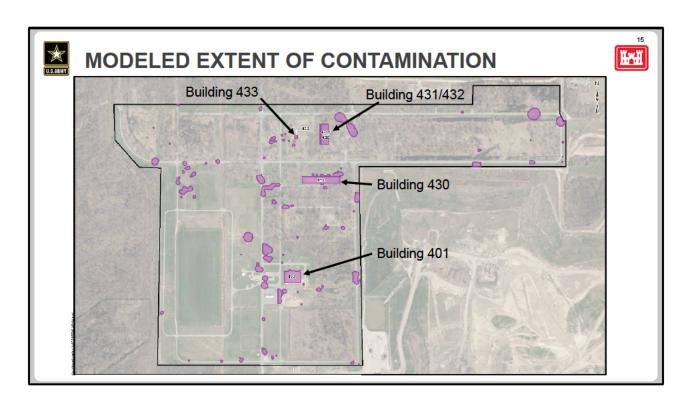


The Niagara Falls Storage Site is currently zoned for light industrial use, which is intended as a transition zone between residential and heavy industrial areas. The land uses for the properties immediately surrounding the site are either heavy industrial or industrial. Light industrial use includes manufacturing, processing, and wholesale/warehousing.

At NFSS with an industrial land use, the construction worker is the type of worker with the greatest potential exposure to contaminated media. Preliminary remediation goals or preliminary cleanup goals were developed based on risks to the construction worker, and would be considered protective for all types of worker exposure.



This graphic shows the construction worker's potential exposure pathways when working at the site in it's current conditions. The site media are soil, groundwater, building foundations, and road bedding. These site media exhibit radionuclides of concern and/or chemicals of concern at levels that are greater than the preliminary remediation goals for the construction worker.



The light purple areas indicate areas of contaminated media with concentrations above preliminary remediation goals that warrant cleanup. A more detailed map of the areas with contamination is available in the fact sheet on the project website.

Radionuclides of concern for which preliminary remediation goals were developed for soil, Building 433, and the foundations of former Buildings 430 and 431/432 are: uranium-238, thorium-230, and radium-226. The preliminary remediation goals for these radionuclides of concern also cover their long-lived daughter products.

Chemicals of concern for which preliminary remediation goals were developed are: volatile organic compounds in soil and groundwater, polychlorinated biphenyls in pipeline sediments, water in drains for Building 401 and the concrete foundation of Building 401; and polycyclic aromatic hydrocarbons in surface and near surface soil and building foundations.

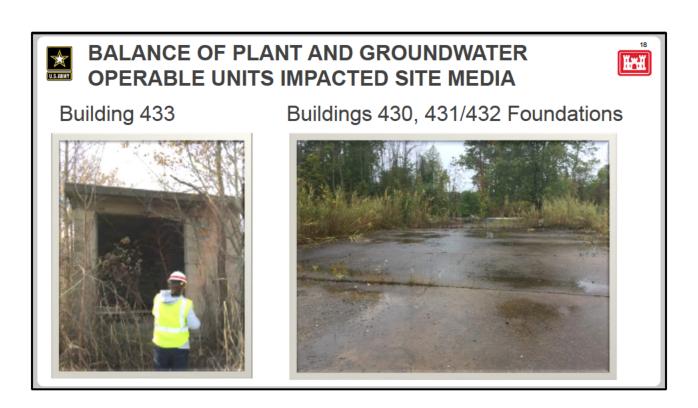


Based on the information gathered from numerous investigations, monitoring events, and studies of the site, the next couple of slides discuss the impacted media at the site.

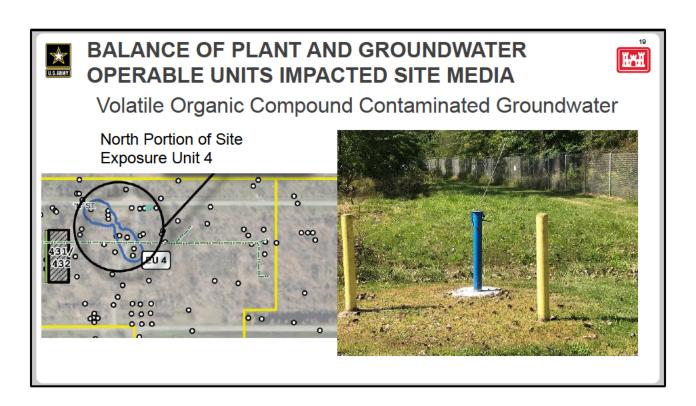
There is an estimated 5,400 cubic yards of impacted soil and road bedding, and there is a trench along the side of the Building 431/432 foundations that is estimated to contain 1,000 cubic yards of contaminated soil and concrete.



The Building 401 foundation and utilities (drain system) are estimated to contain 727 cubic yards of impacted material. As shown in the photo, the building drains in former Building 401 have been plugged.



Building 433 and the foundations of former Buildings 430, 431/432 are estimated to contain 1,482 cubic yards of contaminated material.



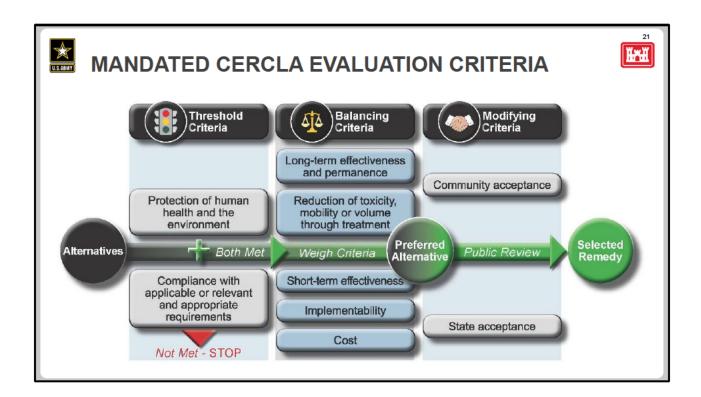
The estimated volume of impacted site groundwater is 3,302 gallons.





# EVALUATION OF REMEDIAL ALTERNATIVES

We will now discuss the process for evaluating the alternatives developed in the feasibility study.



The feasibility study identifies, develops, and evaluates remedial alternatives, analyzing in detail each remedial alternative for its:

- Overall protection of human health and the environment
- Compliance with applicable or relevant and appropriate requirements
- Long-term effectiveness and permanence
- Reduction of toxicity, mobility, or volume through treatment
- Short-term effectiveness
- Implementability, and
- Cost



# APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS (ARARS)



Radionuclides of concern in soil, road bedding, Building 433, and Buildings 430 and 431/432 foundations: Appendix A of Title 10 of the Code of Federal Regulations (CFR), Part 40, Criterion 6(6)

Polycyclic aromatic hydrocarbons (PAHs) in soil and building foundations: Title 6 New York Codes, Rules, and Regulations Part 375-6.8(b) for restricted industrial use

Polychlorinated biphenyls (PCBs) in the former Building 401 foundation and utility sediment: Toxic Substances Control Act, codified under Title 40 CFR 761

This slide identifies the applicable or relevant and appropriate requirements that all of the developed alternatives had to meet. Note that no state or federally promulgated chemical-specific regulations were identified that were either applicable, or relevant and appropriate for protection of construction worker exposure to VOC-contaminated soil and groundwater and to PCBs in Building 401 utility water. Therefore, the Corps relied on the CERCLA baseline risk assessment it conducted for the site to calculate risk-based cleanup goals for these contaminants that are protective of the construction worker exposure to groundwater and utility water.



#### REMEDIAL ALTERNATIVES



Alternative 1 No Action (Required for comparison purposes, but not protective)

Alternative 2 – Complete Removal

Alternative 3 – Removal with Building Decontamination

Alternative 4 – Removal with Building Decontamination and *In Situ* Remediation

Alternative 5 – Removal with Building Decontamination and Ex Situ Remediation





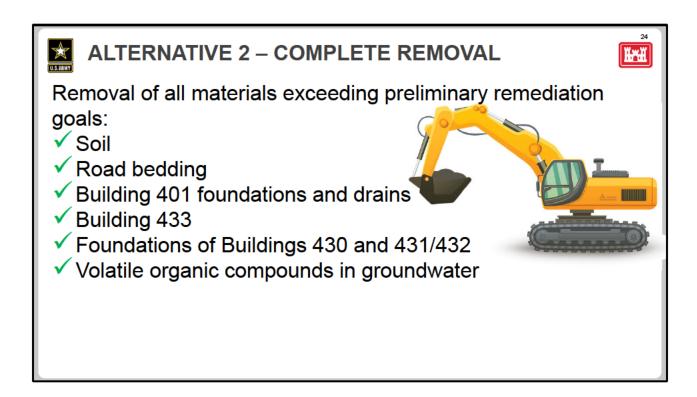




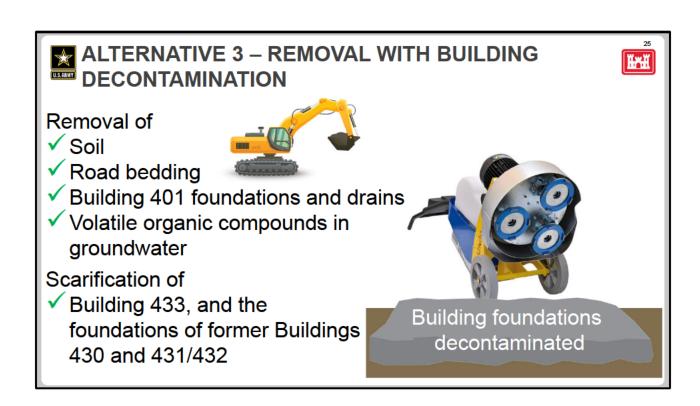


These are the alternatives outlined in the feasibility study. Since Alternative 1 is No Action and it is not protective of human health and the environment and does not meet the applicable or relevant and appropriate requirements, the alternative is removed from consideration and is used only for comparison purposes. The remaining alternatives are discussed on the next few slides. For Alternatives 2 through 5, following removal of all materials exceeding the feasibility study preliminary remediation goals, the excavated areas would be backfilled, the site would be restored and would be suitable for industrial land use.

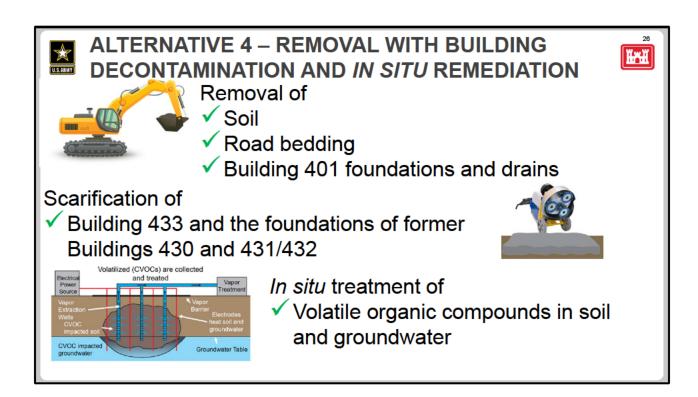
Alternative 3 is our preferred alternative.



In Alternative 2 all impacted soil, contaminated building foundations, and the Building 401 foundation and impacted drains that exceed the preliminary remediation goals would be removed and disposed at a permitted off-site facility. Volatile organic compound-contaminated soil and groundwater in the plume in the north area of the site would be removed and backfilled. Prior to backfilling, an amendment would be added to promote degradation of residual, dissolved-phase impacts. An estimated 8,600 yd³ of *in situ* contaminated soil and concrete including buildings and building foundations, and 3,300 gallons of impacted groundwater would be excavated/recovered for off-site disposal under Alternative 2.



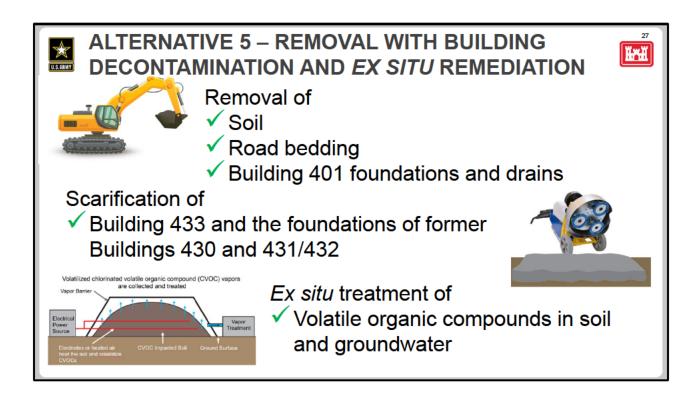
Alternative 3, is the same as Alternative 2 except in this alternative, Building 433 and the foundations of former Buildings 430, 431/432 would be left in place, and would be decontaminated (scarified) to remove the risk associated with these media. An estimated 7,000 yd³ of *in situ* contaminated soil and Building 401 foundation concrete, and 3,000 gallons of impacted groundwater would be excavated/recovered for off-site disposal under Alternative 3. A nominal amount of impacted concrete dust from scarification (80 yd³) would also require disposal.



Alternative 4 is similar to Alternative 3 in that soil and road bedding that exceeds the feasibility study preliminary remediation goals and the Building 401 foundation and drains will be removed. Building 433 and Building 430, 431/432 foundations would be left in place, but would be decontaminated (scarified) to remove the risk associated with these media.

In this alternative the volatile organic compound contaminated soil and groundwater in the north portion of the site would be treated via *in situ* thermal treatment methods. An estimated 3,700 yd³ of *in situ* contaminated soil, and Building 401 foundation concrete would be excavated for off-site disposal under Alternative 4. This total does not include the VOC plume soil. A nominal amount of impacted concrete dust from scarification (80 yd³) would also require disposal.

There is a poster on our website from our feasibility study information session last year that shows *in situ* treatment in more detail.



Alternative 5 is similar to Alternative 3 in that soil and road bedding that exceeds the feasibility study preliminary remediation goals and the Building 401 foundation and drains will be removed. Building 433 and the foundations of Building 430, 431/432 would be left in place, but would be decontaminated (scarified) to remove the risk associated with these media.

In this alternative the volatile organic compound contaminated soil and groundwater in the north area of the site would be treated via *ex situ* thermal treatment methods. Under Alternative 5, an estimated 3,700 yd³ of *in situ* contaminated soil and Building 401 foundation concrete and 3,300 gallons of impacted groundwater would be excavated/recovered for off-site treatment and disposal, and an estimated 3,400 yd³ of CVOC-impacted soil would be excavated for on-site treatment. A nominal amount of impacted concrete dust from scarification (80 yd3) would also require disposal.

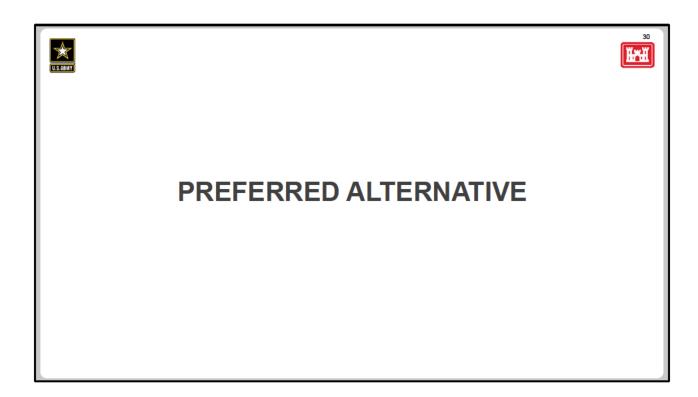
There is a poster on our website from our feasibility study information session last year that shows *ex situ* treatment in more detail.

#### **COMPARATIVE ANALYSIS** HAH. CERCLA Alt 3 Alt 2 Alt 4 Alt 5 **Balancing Criteria** Long-term Effectiveness & High High High High Permanence Reduction of Toxicity, Mobility or Low Low Moderate Moderate Volume through Treatment Short-term Low Low Low Low Effectiveness Implementability Moderate Moderate High High

Each alternative in the feasibility study is evaluated against the balancing criteria for comparison purposes. This slide shows the first four balancing criteria. You can see that Alternatives 2 and 3 have the same rankings and Alternatives 4 and 5 have the same rankings. Alternative 3, Removal with building decontamination, is highlighted because it is our preferred alternative.

OMPARATIVE ANALYSIS				
CERCLA Balancing Criteria	Alt 2	Alt 3	Alt 4	Alt 5
Cost Capital	\$23.8M	\$17.6M	\$17.2M	\$19.8M
Cost O&M*	\$414K	\$414K	\$414K	\$414K
Contingency Costs	\$11.4M	\$6.6M	\$5.3M	\$7.1M
Total Cost	\$35.7M	\$24.5M	\$22.9M	\$27.3M
O&M - Operations and	maintenan	ce		
	Alt 2	Alt 3	Alt 4	Alt 5
Time to Complete (Months)	29	29	37	34

A comparison of the cost estimates shows that the alternatives range in cost from approximately \$23 million to \$36 million and the times to complete each alternative vary. You can see from the analysis on the last chart and this chart that Alternative 3 achieves the same level of protectiveness for less money and in the same amount of time as Alternative 2.





#### REMEDIAL ALTERNATIVES



Alternative 1 No Action (Required for comparison purposes, but not protective)

Alternative 2 – Complete Removal

Alternative 3 – Removal with Building Decontamination

Alternative 4 – Removal with Building Decontamination and *In Situ* Remediation

Alternative 5 – Removal with Building Decontamination and Ex Situ Remediation



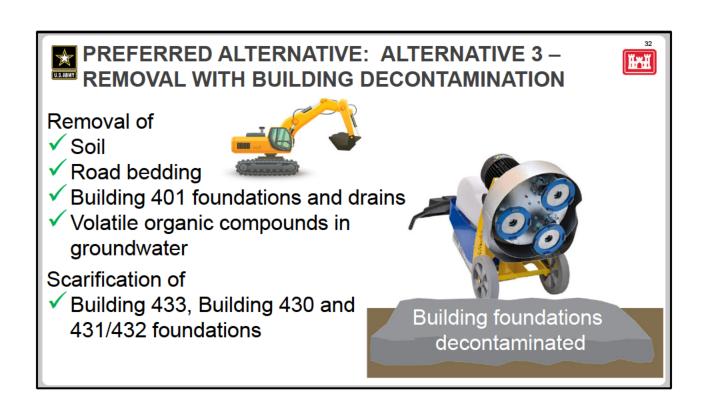




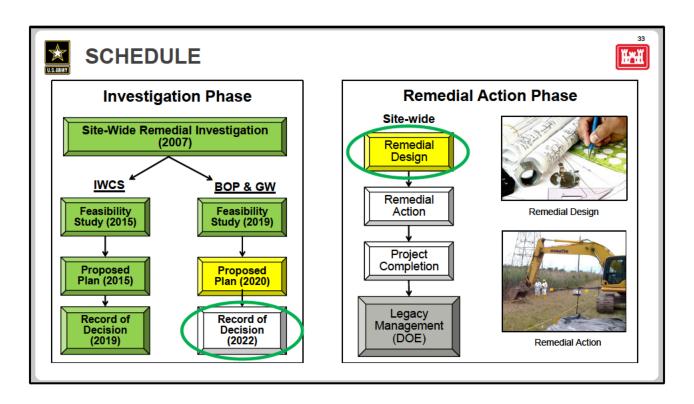




To recap, Alternative 3 is the preferred alternative outlined in the Balance of Plant and Groundwater Operable Units proposed plan. The Corps of Engineers expects the preferred alternative to satisfy the following statutory requirements of CERCLA Section 121(b): (1) be protective of human health and the environment; (2) comply with applicable or relevant and appropriate requirements; (3) be cost-effective; and (4) utilize permanent solutions that will preclude any future environmental impact.



Under Alternative 3, impacted soil, road bedding, and groundwater are removed; the Building 401 foundation and utilities are removed; and Building 433 and the foundations of Buildings 430, 431/432 are decontaminated by scarifying. FUSRAP-related material that is removed will be transported off-site for disposal at an appropriately permitted or licensed disposal facility. Following completion of Alternative 3, the site would be remediated to levels suitable for industrial use (i.e., protective of both construction and industrial workers).



Once the comment period closes, we will consider the comments received and develop a record of decision. The preferred alternative may be modified based on any new information acquired during the designated public comment period. Responses to comments received will be provided in the record of decision, which will identify the selected remedy to be implemented. This is scheduled to be released in 2022.

During fiscal year 2021, we will award an architect-engineer services remedial design and construction oversight contract and begin the work to ultimately clean up the site.





#### **OPERATING PRINCIPLES FOR COMMENTING**



- Stenographer will be recording proceedings
- We will call one person at a time to provide their comments in order signed up
- Unmute your line when your name is called -



- Please state your name and affiliation or town of residence
- Speakers are limited to three minutes to allow everyone an opportunity to speak
- Indicate you are finished speaking and return your line to mute
- Limit comments to the proposed plan
- If you would like to provide a comment and did not register, please type your name in the chat box when asked to do so
- Responses to questions received tonight in the chat will be provided on the project website before the end of the public comment period December 5, 2020
- Responses provided to verbal questions received tonight will be included in the transcript, which will be posted to the project website
- We will leave the meeting open for 15 minutes after the closing comments for those that want to chat in questions or additional comments

The following operating principles will be in place during the comment portion of the meeting.

To receive your comments on the proposed plan, we will be calling one person at a time in the order that you signed up to comment. Please state your name and affiliation or town of residence.

Please keep your phone line muted until your name has been called.

Please keep the subject of your comments to the proposed plan and limit your comment to under three minutes.

Please indicate when you are finished with your comment.

Questions placed in the chat box will be responded to on the project website before the end of the public comment period.

If you did not sign up early to provide comments tonight and you would like to provide a comment, please use the chat feature when asked to do so to type in your name and indicate that you would like to comment.

We will leave the meeting open for 15 minutes after the closing comments for those that want to chat in questions or additional comments.



## **WRITTEN COMMENTS**



Email your comments by close of business December 5, 2020 to:

fusrap@usace.army.mil

Written comments should be postmarked by December 5, 2020, and mailed to:

U.S. Army Corps of Engineers, Buffalo District Environmental Project Management Section 1776 Niagara Street Buffalo, NY 14207-3199

Please include "Niagara Falls Storage Site" in the subject line.

If you did not provide your comments tonight and you still would like to provide comments, please either email fusrap@usace.army.mil or submit written comments through the mail by December 5, 2020.



# FOR MORE INFORMATION



Phone: 800-833-6390 (Option 4) E-mail: fusrap@usace.army.mil

Web:

https://www.lrb.usace.army.mil/Missions/HTRW/FUSRAP/Niagara-

Falls-Storage-Site/

The full Administrative Record is available on the project website

These are the ways and places you can receive additional information about the site. This presentation is available on the web. Thank you, again everyone for participating in tonight's meeting. Please enjoy the remainder of your evening.