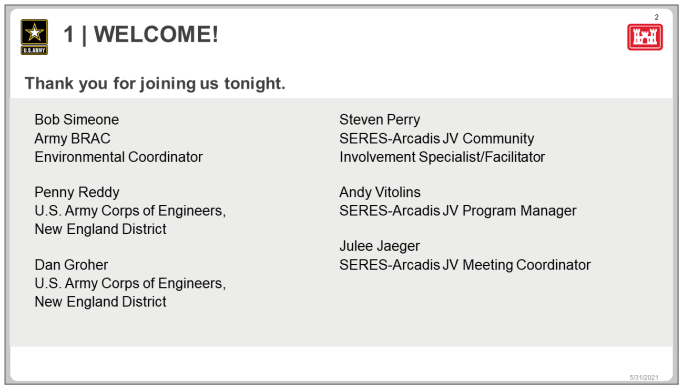
RAB MEETING MINUTES

Date/Time:	Thursday, May 20, 2021, 6:30 p.m. to 8:10 p.m.
Location:	Virtual meeting via Zoom
Attendees:	Bob Simeone, Thomas Lineer (U.S. Army) Penny Reddy, **Daniel Groher,** Yixian Zhang (USACE) Carol Keating, **Anni Loughlin** (USEPA) David Chaffin, Diane Baxter, MaryJude Pigsley (MassDEP) Roy Herzig, Jessica Strunkin (MassDevelopment) Laurie Nehring, Julie Corenzwit, Richard Doherty (PACE) Libby Levison, Chris Mitchell (Harvard Board of Health) Mark Wetzel (Ayer DPW) Jim Ropp (KGS) Andy Vitolins, Steven Perry, Julee Jaeger, **Heather Levesque,** Whitney Plasket, Ian Martz, Brian Therriault, Sue Tauro (SERES/Arcadis JV) John Kastrinos, Chris Turner (Haley & Aldrich) Neil Angus (Devens Enterprise Commission) Jacob Vitali (Nashoba Valley Voice) Margaret Leshen, Irving Rockwood, Jim Murphy, Martha Morgan, Katherine Thomas, Bill Duston, Cole Worthy, Barbara Kemp, Robert Ford, Kelsey Dumville, Zachary Gavel, and other attendees participating by phone or otherwise unidentified (Citizens and Guests)
Slides and Recording:	Meeting slides are available on the project website at: https://www.nae.usace.army.mil/missions/projects-topics/former-fort-devens-environmental-cleanup/.
Please Note:	Discussions described in these minutes have been paraphrased as needed for clarity. The invitation for this meeting is provided for reference at the end of these meeting minutes.

WELCOME & OPENING COMMENTS

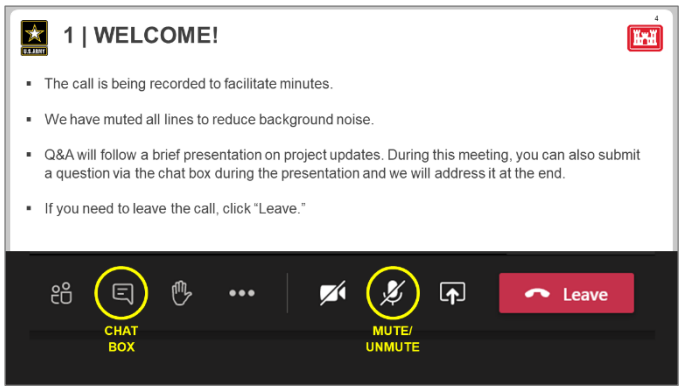
Steven Perry (SERES/Arcadis JV/Meeting Facilitator) opened the meeting and welcomed the attendees to the meeting.



Steven Perry (Community Involvement Specialist/Facilitator for SERES/Arcadis) introduced project representatives and presenters for the evening - Bob Simeone, Army BRAC Environmental Coordinator; Penny Reddy, U.S. Army Corps of Engineers, New England District; Dan Groher, U.S. Army Corps of Engineers, New England District; Steven Perry SERES-Arcadis JV Community Involvement Specialist/Facilitator; Andy Vitolins, SERES-Arcadis JV Program Manager; and Julee Jaeger, SERES-Arcadis JV Meeting Coordinator. Steven Perry indicated that the meeting was being recorded for generating minutes, which will be available after the meeting.

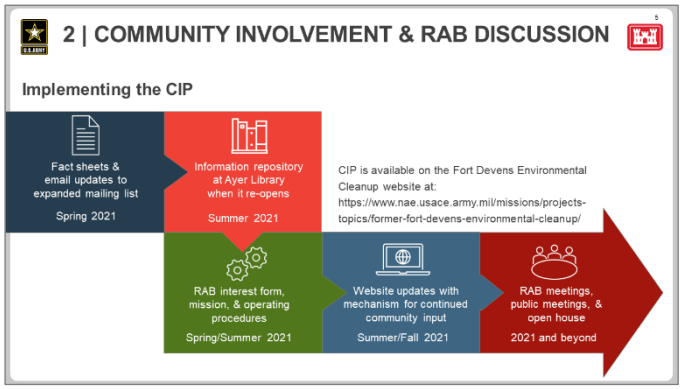
Steven Perry summarized the topics to be covered:

- Community Involvement Plan & RAB Discussion: A set of slides to update on this topic.
- Project Updates & Upcoming Work: Updates on ongoing projects. Questions welcomed in the chat and highlighted during the Questions & Answers (Q&A) session.
- Q&A: Emphasis of the meeting is dialogue and Q&A, with at least 1 hour allotted for Q&A and no specific time limit.
- Next Steps & Meeting: Next steps coming up.



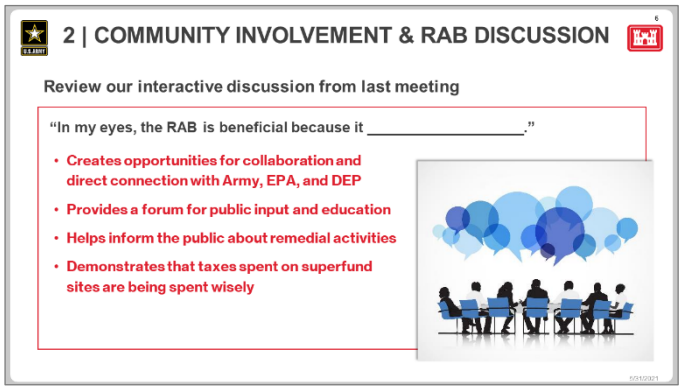
Attendees were notified that this call was being recorded and were oriented to the virtual meeting tools in Microsoft Teams, such as adding messages into the chat, keeping microphones on mute, and raising their hands as needed. Questions from stakeholders would be addressed during the extended Q&A session.

COMMUNITY INVOLVEMENT & RAB DISCUSSION

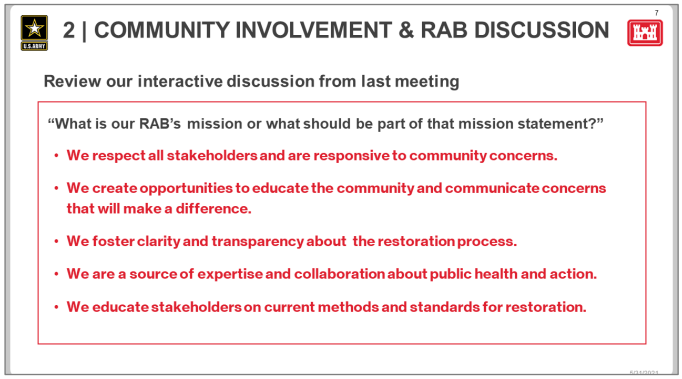


Steven Perry continued to give an update on community involvement and the RAB, recalling from the last meeting that the Community involvement Plan (CIP) was finalized in November 2020 and is available on the project website: https://www.nae.usace.army.mil/missions/projects-topics/former-fort-devens-environmental-cleanup/. Steven Perry encouraged the RAB meeting attendees to read the CIP and look around the website. The Army, USACE, and SERES/Arcadis JV team are working on implementing the provisions of the CIP, including:

- Community fact sheet about what is a RAB and its role – fact sheets are planned to be distributed quarterly, starting in June 2021.
- Email project updates to provide brief progress reports along the way to keep information flowing – those will start in the near term.
- Public information repository at the Ayer Public Library – this is planned for the library's reopening on July 1st.
- RAB interest form – as part of the formal process to refresh the RAB following the guidance, we are finalizing an interest form which is an invitation to serve on the board and is asking for your interest in what level of participation you want to have on the RAB.
- RAB mission and operating procedures – based on Army/USACE/USEPA guidelines and RAB input, we are refreshing the RAB mission statement and starting to draft operating procedures for RAB members to review and comment.
- Website – we are making enhancements to the website, which are planned to go live sometime this summer.

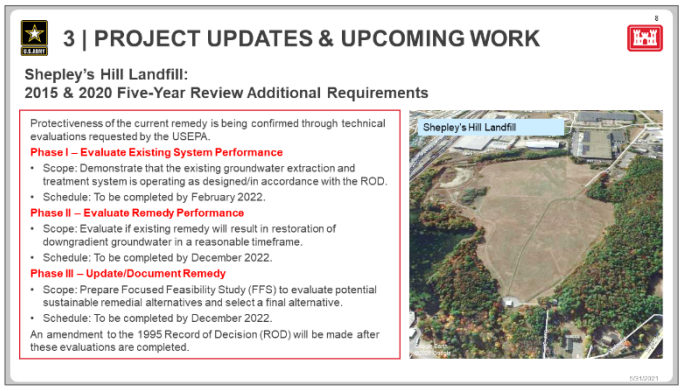


Steven Perry briefly reviewed participant input from the meeting in February, where we asked the RAB meeting attendees for words, phrases, and elements that represent the role and benefits of the RAB and that will go into a refreshed RAB mission statement.



Steven Perry briefly reviewed additional input from the February meeting. That input was summarized here and offered as a starting point for a refreshed mission statement. He also mentioned development of draft updated RAB operating procedures based on Army/USACE/USEPA guidance, which will be discussed at an upcoming meeting.

PROJECT UPDATES & UPCOMING WORK

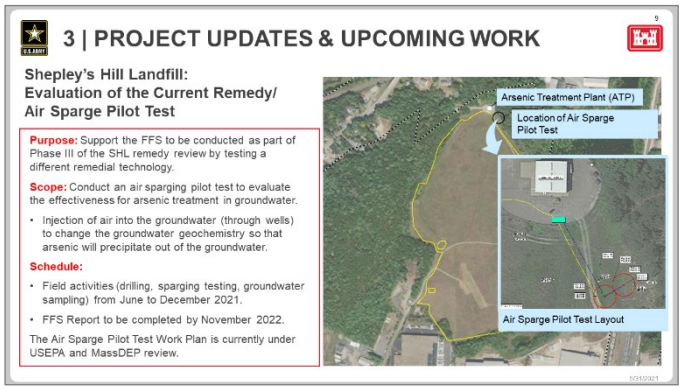


Andy Vitolins (Program Manager for SERES/Arcadis JV) briefly discussed project updates. The first project update is Shepley's Hill Landfill (SHL) work as part of the Five-Year Reviews for Remedy Protectiveness in 2015 and 2020. Andy Vitolins summarized the three phases for which the Army is going to be evaluating the protectiveness of the remedy at SHL. He clarified the term "remedial system" as the groundwater extraction and treatment system. The "overall remedy" is everything that comprises the remedy, which includes the groundwater extraction system, along with the landfill cap and barrier, monitoring, and administrative controls.

Phase I: Evaluate the existing system performance to demonstrate that the existing groundwater extraction and treatment system is operating as designed and in accordance with the Record of Decision (ROD). Phase I involves mini studies and reports/memoranda to evaluate the system performance; one report has been finalized, two draft reports have been submitted, and there are two more to be submitted. The current completion schedule for this is estimated to be February 2022.

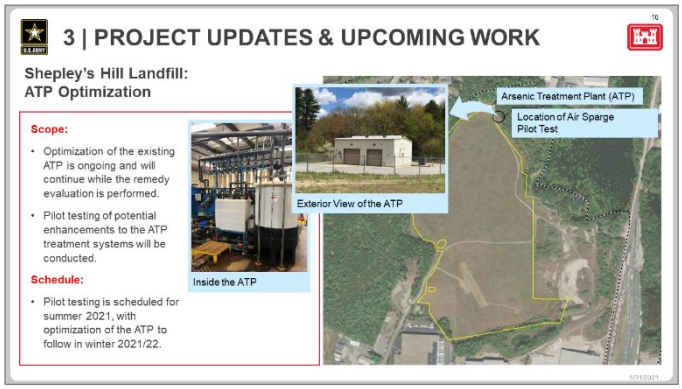
Phase II: Evaluate the remedy performance to see if the remedy will result in restoration of downgradient groundwater in a reasonable timeframe. This phase is currently scheduled to be completed by December 2022.

Phase III: Update and document the remedy, based on evaluations in Phases I and II. The scope will involve preparing a Focused Feasibility Study (FFS) to evaluate potential sustainable remedial alternatives and select a final alternative, according to a process under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). One of the updates as part of that process is a pilot test for a remedial technology to evaluate applicability for the site. This phase is scheduled to be completed by December 2022. If necessary, an amendment to the 1995 Record of Decision (ROD) will be made after these evaluations are completed.

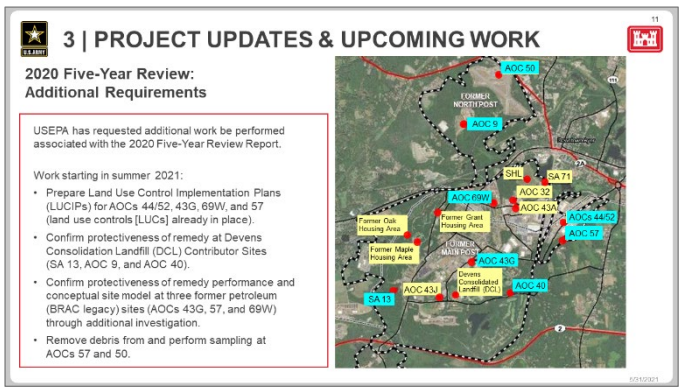


Dan Groher (Remedial Engineer for the U.S. Army Corps of Engineers, New England District) discussed project updates for SHL, namely the evaluation of the current remedy and the air sparge pilot test. The first update is a potential alternate remedy that may be as effective and more sustainable, as this technology would require fewer truckloads of hazardous waste/materials off site. This technology is in-situ air sparging, where air is injected via wells into the ground to deliver oxygen to the subsurface and facilitate a controlled change in groundwater chemistry so that dissolved iron and arsenic precipitate out of the groundwater and become part of the soil matrix to stop them from migrating.

This technology has been used successfully at some locations, so it will be tested in a small portion of the site to see the results of the test and its applicability at full scale. Implementation of this technology would involve a line of air sparge wells installed across the top of the landfill and perhaps along the pond. Conclusions about the technology's applicability are anticipated at the end of 2021. We will be evaluating the process to see if it is controllable in a way that allows effective arsenic remediation over a broad area.



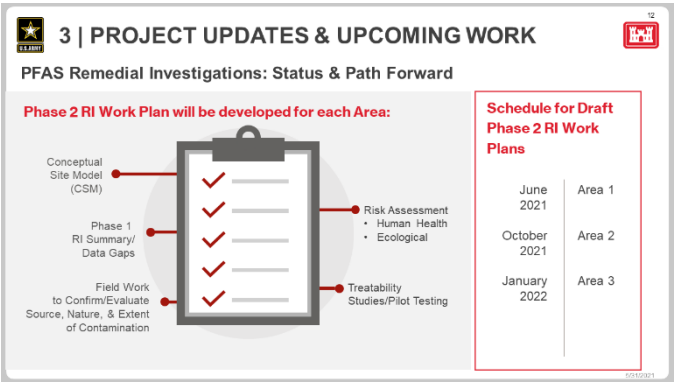
Dan Groher continued to present on the optimization of the existing arsenic treatment plant (ATP), which is ongoing and will continue while the remedy evaluation is performed. Operation of the ATP at SHL results in the production of iron and small amounts of arsenic in the precipitated iron, which is trucked to a landfill. The current system is aging and has some risks associated with it, so pilot testing of potential enhancements to the ATP will be conducted. While we continue to evaluate the entire pump and treat system, we will be reviewing this optimization.



Andy Vitolins discussed the USEPA request for additional work to be performed associated with the 2020 Five-Year Review Report. Work starting in summer 2021 to confirm the protectiveness of existing remedies, includes:

- Preparing Land Use Control Implementation Plans (LUCIPs) for AOCs 44/52, 43G, 69W, and 57, which summarize the land use controls in place during or after remedial activities. There are administrative controls in place, but there is no unified document that summarizes all the controls. The document will discuss how controls will be maintained, monitored, and enforced in the future. After a work plan is developed and approved, then the LUCIPs will be prepared.
- Confirming the protectiveness of the remedy at the Devens Consolidation Landfill (DCL) contributor sites (SA 13, AOC 9, and AOC 40). These are sites where soil was removed and taken to the DCL, which was constructed as part of the overall remedy for the site. At the time that soil was removed, there was no further action required and the Army placed a deed restriction on each of those properties relative to residential use. These desktop studies will evaluate whether or not land use controls, including residential deed restrictions, need to be continued going forward, or if reuse of these locations can continue with no further action and no restrictions.
- Confirming the protectiveness of the remedy and the performance of the remedy at three former petroleum sites (AOCs 43G, 57, and 69W). This study will involve additional investigation to evaluate whether there are remaining sources for constituents of concern (such as metals) and then look at the time frame for groundwater restoration to determine if this is acceptable and achievable given the current remedy. Data that are collected during this study will be used to evaluate whether or not there are other remedial alternatives or processes that could be applied to each of these locations, which will entail the preparation of a focused feasibility study.

- Removing debris from and sampling at AOCs 57 and 50. These areas had residual material (e.g., non-hazardous rusted metal) associated with past uses of these AOCs. The debris was identified and disturbed during redevelopment activities, so it is going to be removed. After removal, soil samples will be collected and conditions of those areas further documented.

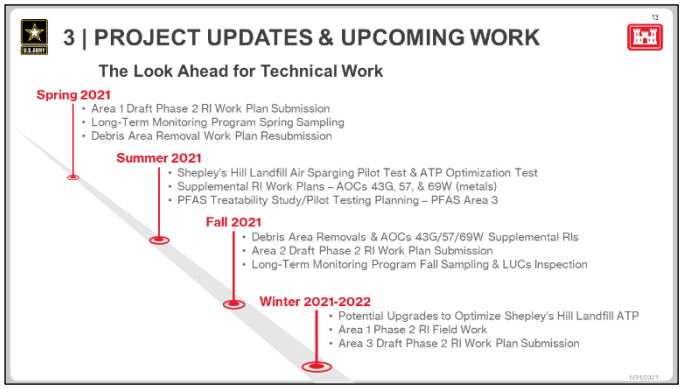


Andy Vitolins provided an update about the PFAS RIs at the site. The Phase 2 RI Work Plan will include a conceptual site model (CSM), Phase 1 RI summary of data gaps and field work, plus risk assessments for both human health and ecological risks, and applicable summaries of treatability studies or pilot testing. The Draft Phase 2 RI Work Plans are planned for:

Area 1 – June 2021

Area 2 – October 2021

Area 3 – January 2022



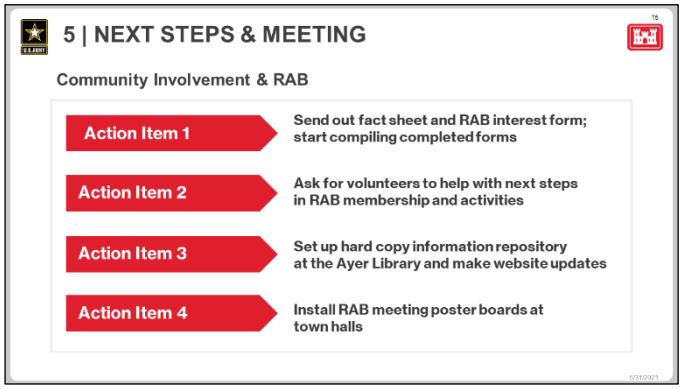
Andy Vitolins continued with the look ahead for technical work:

- Underway this spring are the Area 1 Draft Phase 2 RI Work Plan submission, Long-Term Monitoring Program Spring sampling, and the Debris Area Removal Work Plan resubmission. The annual spring monitoring is occurring now.
- This summer, the SHL Air Sparging Pilot Test and ATP Optimization Test will be conducted, the Supplemental RI Work Plans for AOCs 43G, 57, and 69W (metals) will be prepared, and the PFAS Treatability Study/Pilot Testing Planning for PFAS Area 3 will be planned.
- This fall, debris area removals will be conducted and the Supplemental RIs for AOCs 43G, 57, and 69W will be prepared. The Area 2 Draft Phase 2 RI Work Plan will be submitted, the long-term monitoring program for the fall sampling will be performed, and the LUC inspections will be conducted.
- Work for the upcoming winter includes potential upgrades to optimize Shepley's Hill Landfill ATP, Area 1 Phase 2 RI Field Work, and the Area 3 Draft Phase 2 RI Work Plan submission.

QUESTIONS & ANSWERS

Please see the list of questions and answers attached at the end of these meeting minutes.

NEXT STEPS & CLOSING



The presentation portion of the meeting came to a close, with the next four action items coming out of the CIP and RAB.

- Send out fact sheet and RAB interest form; start compiling completed forms.
- Ask for volunteers to help with next steps in RAB membership and activities.
- Set up hard copy information repository at the Ayer Library and make website updates.
- Install RAB meeting poster boards at town halls.

After the Q&A, Steven Perry closed the meeting, indicating that we hope to find the right balance between providing lots of information but also plenty of time for Q&A. He wished all a wonderful upcoming Memorial Day holiday when we remember our fallen heroes and thanked everyone again for taking time to join in the meeting.

The next RAB will be on Thursday, August 19, 2021. The meeting was adjourned at 8:10 PM.

QUESTIONS AND ANSWERS

Question	Answer
From Laurie Nehring (PACE) – Please let people know these slides were available earlier today if they want to make a printout in advance.	Steven Perry (SERES/Arcadis) affirmed that the slides were sent out as a PDF to the email list about 3 hours before the meeting. We're going to plan on doing that going forward, so there's time for you to review the slides, see what's coming up, and prepare some questions. Related to this point is the mailing list. Anyone who is interested and did not get the email earlier this afternoon, please send us your name and email address.
From Laurie Nehring (PACE) – Have you actually talked to Ayer librarian?	Steven Perry (SERES/Arcadis) affirmed that yes we are in contact with the Ayer library for updating the information repository.
From Laurie Nehring (PACE) – When will progress reports and fact sheets begin?	Steven Perry (SERES/Arcadis) indicated that these communications enhancements will begin in June. We have prepared a fact sheet about the RAB, which will be coming out soon. That will also be put on the website. As stated in the CIP, the concept here is to increase the frequency of information flow. Project updates in the form of emails will coming out soon as well, beginning this summer. Penny Reddy (USACE, New England District) answered that there are also three factsheets on the website, one regarding the CERCLA process and two on PFAS. Julee Jaeger (SERES/Arcadis) posted the website link in the chat box: https://www.nae.usace.army.mil/missions/projects-topics/former-fort-devens-environmental-cleanup/.

Question	Answer
From Laurie Nehring (PACE) – Factsheets posted on somebody's website are helpful if you know about the website and you're following this closely, but in today's world social media is really quite a bit more effective. If we can have them in a format that we can re-post, that would be helpful. Facebook is another resource, so I wanted to specifically ask if whatever you're doing to post or share in hard copy or printed copy could be converted into a format that can be shared easily.	Steven Perry (SERES/Arcadis) replied that this is a good point in today's world, especially for use of social media. The comment will be considered to figure out if there's a way to make it make it easier for factsheets and announcements can be shared online by PACE, local townships, and other organizations.
From Libby Levison (Harvard Board of Health) – When we reviewed the CIP, we asked if you would also consider making the fact sheets available at the Harvard Public Library. Was that suggestion evaluated?	Steven Perry (SERES/Arcadis) replied that this would be a good idea to have a handful of hard copy factsheets available on the counter at libraries, town halls, community centers, and similar. We will work to get the information out there, whether it is digital means or hard copy. Susan Tauro (SERES/Arcadis) added in the chat box that we will look into providing hard copies to local venues.
From Carol Keating (USEPA) – Can the Admin Record be uploaded to/made available on the project website? I think at a minimum what I was looking for was at least some of the final documents sucha s proposed plans, RODs, and LUCIPs for the sites. So, if those could be readily available on the site.	Andy Vitolins (SERES/Arcadis) mentioned that we are looking to update that administrative record and make it available on the website. There have been several discussions about ways to make it better, including making it available on the website. We are working on this enhancement.
From Laurie Nehring (PACE) – What are current arsenic levels?	Andy Vitolins (SERES/Arcadis) replied that the current arsenic levels haven't changed appreciably, at least in the last couple of years. Penny Reddy (USACE, New England District) looked up the numbers and conveyed that recent data included measurements of 3,300 to 6,800 micrograms per liter.
From Laurie Nehring (PACE) – Can you tell people where those locations are and also maybe share what the cleanup goal is so they get an idea of that scale? Where are the highest numbers, and what is migrated offsite?	The presentation moved to the aerial photo of the SHL. Andy Vitolins (SERES/Arcadis) mentioned that the ATP on the figure is the white building and then talked about the general vicinity of the extraction wells. Dan Groher (USACE, New England District) pointed out the landfill and mentioned that it has been mostly capped. Groundwater flows northward, and the extraction well is just beyond the footprint of the landfill. Those wells tend to have the highest concentrations, and those haven't changed appreciatively in years. There are many dozens of monitoring wells, some within the landfill, some south and north of the landfill, some on the bedrock side, and some on the pond side.
From Laurie Nehring (PACE) – What is the cleanup level that we would ideally like to reach? You said 3,300 milligrams per liter and 6,800 milligrams per liter for concentrations.	Dan Groher (USACE, New England District) replied that the Maximum Contaminant Level (MCL) is 10 micrograms per liter.
From Laurie Nehring (PACE) – I would like to request that next time we have a RAB, we talk more specifically about what's going on here and have a detailed map that shows where these problems are and you'll have started the air sparging pilot by then, so maybe we can hear about how that's going as well.	Steven Perry replied that the request is noted and that there's going to be lots of activity around this topic.

Question	Answer
From Laurie Nehring (PACE) – Won't this clog up over time? (short time?)	Dan Groher (USACE, New England District) replied that this is one of the questions that comes up with in injection process like this. It will not clog up the aquifer if done correctly. It can however clog up the injection wells, so we are evaluating whether or not the process is controllable in a way that allows the precipitation to happen over a really broad area. Dan also replied that the dissolved arsenic and dissolved iron are in the same places. There's more iron than there is arsenic, which is common in New England. When you see high arsenic, you almost always see high dissolved iron as well. Iron things rust. When it precipitates out of the groundwater, it traps a lot of water. When we perform these treatment processes, we are trying to remove iron, and when we do that we remove arsenic as well.
From Laurie Nehring (PACE) – Please elaborate on how it's done "correctly."	Dan Groher (USACE, New England District) explained that when we add air to the ground water via the air sparging approach, it is complicated chemistry. If the pH is correct, then the rate at which iron precipitates out of the water takes a short amount of time or a long amount of time. If it takes a short amount of time, then all the iron precipitates in the same spot, and if it takes a longer amount of time, it travels farther away from the well and away from where the oxygen has been injected before the iron (and arsenic with it) precipitate. The goal is to try to make sure that we do not change the chemistry such that the pH goes down and then when the pH goes down, the iron precipitates too fast. Andy Vitolins (SERES/Arcadis) added information on how air sparging is done and how to control the pH. He explained that air sparging is a balancing act, meaning it's imperative that we need to balance the airflow and the pressure of what is being injected. There has to be enough pressure, but not so much air flow that drastic changes are made to the chemistry around the wells. Also, physically doing that can lead sometimes to a kind of short circuiting. There are different ways to control the air sparging blower to adjust the flow rate rather than the pressure, such as pulsing so that air is not always being blown in, but air is blown in and then not, with the goal to make sure treatment is still occurring based on travel times. These items will be looked at as part of the pilot test.
From Laurie Nehring (PACE) – Would you envision having multiple air sparging? If this works, would multiple air sparging wells be all over the place? Or would it be one or two big ones?	Dan Groher (USACE, New England District) replied that it probably will be a series of air sparge wells near the ATP that cut across the groundwater flow direction. Perhaps this would require a dozen air sparge wells.
From Laurie Nehring (PACE) – And that would be permanent, right? If it works, it would be permanent?	Dan Groher (USACE, New England District) replied that it would be permanent.
From John Kastrinos (Haley & Aldrich) – Is the cleanup driven by risk to ecological receptors and those wetlands or something else?	Bob Simeone (Devens BRAC) replied that it is driven by the MCL. Dan Groher (USACE, New England District) added that it's a well-known technology that has been used in many places, but not strictly for this purpose. This technology is typically used to remediate gas stations or fuel spills. It's not been used as often to try to remediate dissolved arsenic plums. That's a little more innovative.

Question	Answer
From Laurie Nehring (PACE) – I agree a better system may be available but could you define "small' amount of arsenic that is removed with ATP? Is there a number representing the amount of arsenic that's actively being removed? I want people to appreciate that the money that the Army is putting into this really is doing some large removals of arsenic and it's not wasted money or wasted effort. Does anybody have the pounds?	Dan Groher (USACE, New England District) replied that about one pound of arsenic is removed each day.
From Chris Mitchell (Harvard Board of Health) – For the next meeting, it would be helpful to just provide some context for the numbers. I know they sound very high, but I also know that background levels in this area are quite high and so maybe the 10 ppb (parts per billion) is not attainable and so we ought to just put the numbers in context.	Andy Vitolins (SERES/Arcadis) replied that we can do that. Steven Perry (SERES/Arcadis) added that understanding the natural background level is an important concept for all kinds of environmental work.
From Julie Corenzwit (PACE) – Was air sparging considered before the original ROD?	Dan Groher (USACE, New England District) replied that air sparging was considered, but it did not get carried all the way to the end, in depth. There is a USEPA site in New Jersey where the Army and USEPA have implemented a long-term air sparging pilot test that has been successful using the same technology. Part of the reason it has been successful is an advanced understanding of the chemistry pH issue.
From Laurie Nehring (PACE) – What metals are at 43G, 57, and 69W. And at what levels?	Andy Vitolins (SERES/Arcadis) answered that he would have to look up the specific levels. Not surprisingly, iron and arsenic are two of them. And manganese is the other one. This is more of a geochemistry question of the conditions in the aquifer at the current time, in the future, and beyond.
From Richard Doherty (PACE) – What is the location of the debris that will be removed at AOC 50? And what is the status of evaluating removal of PFAS-impacted soil at AOC 50 as a TCRA (time-critical removal action)?	Penny Reddy (USACE, New England District) replied that there were two debris piles identified at the airfield, one Northeast of the runway and one southwest of the runway; they're both on steep gradients. Andy Vitolins (SERES/Arcadis) indicated that those are primarily very old paint cans at AOC 50, and Penny Reddy (USACE, New England District) added that there are some metal drums and paint cans. The locations are highlighted on the map in the presentation. Andy Vitolins also mentioned that technologies are being looked at to prevent PFAS from leaving the source area, which is the former fire training area. The pilot studies will look at ways to prevent that PFAS from leaching to groundwater, so most likely that would be an in-situ process such as a stabilization or immobilization process to lock it up and prevent it from moving into groundwater. The approach is in the planning stages and the first step is going to be soil sampling to better define where the PFAS is in the soil. At that same time, technologies will be reviewed, and a work plan will be prepared to present the approach for that pilot study, which will probably include some bench-scale testing to evaluate what kind of mixtures are going to be used in the former fire training area.
From Laurie Nehring (PACE) – Can you give us a rough idea of how long that entire process you just described will take?	Andy Vitolins (SERES/Arcadis) indicated that we anticipate the soil sampling to be done this summer and the work plan to follow in the fall. Depending on the status of that work plan and reviews, the pilot tests could be conducted sometime in 2022.

Question	Answer
From Laurie Nehring (PACE) – I appreciate that. I just want to add that I appreciate that we're trying to contain it. It's really important. The levels are extremely high. It's been brought to my attention recently from our PACE meetings that we oftentimes say that nobody is drinking that water, so maybe there's not high pressure on it, but we've learned that not far upstream on the Nashua River there are number of farms and other facilities that are actively irrigating their human crops with the Nashua River water. So, we would like to just encourage whatever can happen to speed that process along. The sooner we get to it, the less costly it will be in the long run. Trying to deal with these forever chemicals is very challenging and this of course is something that we've been focusing on. Thank you for putting this forward as soon as this summer, and if there's anything that can be done to speed it up, we would clearly support that.	Dan Groher (USACE, New England District) replied that the question meant to say "downstream" on the Nashua River. There is some data from relatively shallow soils from down to 15 feet. We have only one sample from the unsaturated soil. The technologies being discussed might not be applicable, so we have to evaluate that.
From Martha Morgan (Nashua River Watershed Association) – I was just going to correct that we're talking about downstream in the Nashua River where water is being used by farmers to irrigate food crops. Not very far down in Groton in other places. We're very concerned about the levels in the Nashua River and what does also get down into the Merrimack. I am the Water Programs Director for the Nashua River Watershed Association. We wrote a letter asking for more immediate action to remediate the high levels, so I'm glad this is happening.	Steven Perry (SERES/Arcadis) thanked Martha for clarifying and for joining in the RAB and discussions this evening.
From Libby Levison (Harvard Board of Health) – There was discussion a year and a half ago about AOC 50 and doing some sediment testing in the Nashua River to see whether PFAS was already in those soils. I don't remember hearing an update about that or whether that's still future work and whether that's still planned.	Penny Reddy (USACE, New England District) replied that we have collected sediment samples in the Nashua River for PFAS and we can forward the data and post it on the website under the Area 3 Site Characterization Summary Report.
From Laurie Nehring (PACE) – Can you please share that with everybody. That would be great.	Penny Reddy (USACE, New England District) replied that we can get that information to you and or share it next time.
From Laurie Nehring (PACE) – Will you share results of pilot test as they come out?	Dan Groher (USACE, New England District) replied that pilot test results will be shared to the extent that we understand them. The results will help see if there's something useful we can do for PFAS.
From Laurie Nehring (PACE) – What about hot spots at MAF?	Dan Groher (USACE, New England District) replied that the answer is yes. We will do the pilot test for arsenic and come up with a strategy.
From Bill Duston – In Area 69W, I don't see any metal debris near Grant Road. Where is it?	Andy Vitolins (SERES/Arcadis) replied that metal debris was identified at AOC 57 and AOC 50. AOC 69W was a #2 fuel oil release associated with the former elementary school, so it was not a gas station or refueling station like AOC 43G. Dan Groher (USACE, New England District) also replied that at locations like gas stations with fuel releases, the bacteria eat the fuel that gets released and they cause reducing conditions, which causes dissolution of metals that are naturally occurring in the soil.

Question	Answer
From Laurie Nehring (PACE) – I think we'll get confused because you use the term metal when you're referring to arsenic, and I think that confuses people.	Andy Vitolins (SERES/Arcadis) acknowledged the comment and apologized for any confusion.
From Bill Duston – Also, what petroleum source was on Grant Road in 69W?	Andy Vitolins (SERES/Arcadis) clarified that AOC 69W was a #2 fuel oil release associated with the former elementary school, so it was not a gas station or refueling station like AOC 43G.
From Richard Doherty (PACE) – What are the plans for addressing USEPA's concerns expressed during the 5-year review for other sites (e.g., AOC 43G, 69W, 57, etc.)?	Andy Vitolins (SERES/Arcadis) replied that this work has just been awarded. The next step is work plans for the investigation, which will look at groundwater conditions, the extent of reducing conditions, and see if there is anything that reasonably can be done to address those conditions and mitigate the metals that are dissolved. There will be field work and then data collection associated with this effort.
From Richard Doherty (PACE) – Are there any new PFAS data from Ayer's and Deven's water supply wells?	Andy Vitolins (SERES/Arcadis) replied that there is new data, and that that data collection is now being done by the towns. MaryJude Pigsley (MassDEP) replied that the water suppliers are sampling for PFAS monthly, and that data are available through the Executive Office of Energy and Environmental Affairs data portal. People can search by the name of the public water supplier and for the contaminant which, in this case, would be PFAS. It is going to be an electronic filing system that is not live yet but will have an upload of the data available in real time.
From Richard Doherty (PACE) – What is the alternative precipitation technology that will be evaluated for the Arsenic Treatment Plant?	Dan Groher (USACE, New England District) replied that the alternative precipitation technology is the WesTech SuperSettler™ which is a conventional technology that involves an inclined plate clarifier and maybe with a ferric chloride addition to help precipitate out the iron.
From Richard Doherty (PACE) – Is the arsenic background study still in progress?	Andy Vitolins (SERES/Arcadis) replied that in terms of the background study, there was a slide there that showed the three phases of the additional work as part of the 2015 and 2020 Five-Year Reviews. The background study, at least the continuation of it, is part of the Phase 2 additional work.
From Bill Duston – Where does the arsenic go?	Dan Groher (USACE, New England District) replied that the arsenic that is not being captured eventually precipitates out downgradient in the subsurface. I am still looking at how much gets trucked off to a hazardous waste landfill. Bob Simeone (Devens BRAC) added that it's not hazardous waste, and that it gets trucked to a non-hazardous waste landfill.
From Laurie Nehring (PACE) – Why is it not hazardous?	Bob Simeone (Devens BRAC) replied that because the waste is tested before it is transported to the landfill and the levels of arsenic are not defined as a hazardous waste. Clean Harbors picks it up and takes it to their facilities. It may eventually end up being used in a landfill somewhere. Clean Harbors may bring it to another facility for processing. Andy Vitolins (SERES/Arcadis) added that once the arsenic is oxidized, it goes into a non-soluble form so it doesn't leach. It doesn't fail the leaching tests that are required to establish it as a hazardous waste.
From Chris Mitchell (Harvard Board of Health) – I have a point about putting the arsenic in context. From Harvard BOH, we are interested in the details of the Phase 2 bedrock investigation proximal to our residents.	Andy Vitolins (SERES/Arcadis) indicated that this is going to be part of the Area 1 Phase 2 Work Plan.

Question	Answer
From Bill Duston – Where does it (arsenic) go when it is air sparged?	Andy Vitolins (SERES/Arcadis) replied that air sparging, in its most common use, is used for volatile contaminants, either to actively remove them from the groundwater through volatilization or to provide oxygen for biodegradation. In this case, it's all about oxidizing the arsenic so it precipitates out of the groundwater, which means there isn't any release of the arsenic or the metals that you're treating as part of the process.
From Libby Levison (Harvard Board of Health) – Going back to AOC 50. I seem to remember that site is right above the Nashua River, and there was discussion of sediment sampling in the river. Is that activity still planned?	Steven Perry (SERES/Arcadis) mentioned that there was a discussion of sediment sampling in the river and that earlier discussion covered this question. Libby agreed that it was covered.
From John Kastrinos (Haley & Aldrich) – Are there sites you know of where in-situ immobilization of PFAS has been implemented successfully?	Andy Vitolins (SERES/Arcadis) indicated that there have been pilot studies performed that are relatively new. Overseas (in Europe and Australia specifically) have been a little ahead of the United States with PFAS investigation and treatment. As far as we know, there aren't any final remedies for PFAS sites yet, but it's been demonstrated and the scale varies. Dan Groher (USACE, New England District) added that remediation of PFAS is cutting edge. There are no tried and true technologies that are used everywhere. But in-situ immobilization is looking promising at a number of locations both in bench scale, pilot scale, and small full scale. But not there's not a lot of track record associated with it.
From Libby Levison (Harvard Board of Health) – To clarify my question: I was asking about sampling sediment for PFAS. Thanks.	Penny Reddy (USACE, New England District) answered this by posting a website to the chat box: https://www.mass.gov/municipal-vulnerability-preparedness-mvp-program. Corrected website: https://www.nae.usace.army.mil/Portals/74/docs/Topics/FTDevens/Data/Area3PFASRI/Area3_SW_SED.pdf
From Roy Herzig (MassDevelopment) -- MassDevelopment would appreciate early coordination regarding any in situ pilot work at/near the airfield in order for us to ensure that the current and potential future use of this land is compatible with Army's cleanup plans. Thank you.	Andy Vitolins (SERES/Arcadis) answered that when we get to that point we will share information and coordinate. The process is now at the point of considering and figuring out the technologies.
From Laurie Nehring (PACE) – What is the timing for the next meeting?	Steven Perry (SERES/Arcadis) replied that the date of the next RAB meeting is August 19th, as shown on the last slide.
From Laurie Nehring (PACE) – I wanted to mention that there are several people who are doing double duty tonight. It turns out that the third Thursday of every month is also the meeting for the Nashua River Watershed Association. Is it possible to change it (the RAB meetings) to a different Thursday or different day of the week? Not for the August 19th meeting, but if we could consider something different, that would enable people who want to be here in the RAB meetings.	Steven Perry (SERES/Arcadis) answered that we will take that comment back and look at potential conflicts and dates. Martha Morgan (Nashua River Watershed Association) replied that the Nashua River Wild and Scenic River Stewardship Council meetings are held the third Thursday of every month. Steven Perry (SERES/Arcadis) added that there is a lot of coordination in making a date that works. He also replied that he was glad that the issue was raised because we do want people to participate who have a keen interest to do so.

Question	Answer
From Laurie Nehring (PACE) – I've heard several times tonight comments about how the arsenic that we're finding in a number of sites at Devens and that it's natural arsenic. I agree that natural arsenic is in the soils in this area. I know Harvard has a lot of problems with it as well. However, the conditions that the Army has inadvertently created are what's causing the problem. I don't want people to think that we can disregard it because it's naturally there anyhow. Like in the case of Shepherds Hill, there may be arsenic dumped in that landfill over previous historical times. We don't really know if it's the conditions that were created by the landfill that are causing the liberation of the arsenic. I just wanted to put that in perspective.	Steven Perry (SERES/Arcadis) replied that these are complex issues and added that understanding the concept and use of "background" is important, as we discussed earlier in the meeting. We do all need to be thoughtful in how the term background is used relative to arsenic and the overall site.
From (unidentified) Guest – Can we look at option of providing boards at the libraries as well?	Steven Perry (SERES/Arcadis) replied that we can look at that option, but for now we are focusing on posting information at town halls. We are also taking a fresh look at the information repository at the Ayer Library and the digital version on the website. We've also been in contact with towns about placing RAB informational poster boards to provide information about the RAB and announce RAB meetings.
Jim Murphy (Guest) – I worked for USEPA on Devens for over 20 years. This seemed like a very good meeting, but the only comment I wanted to make was over my 20 years there was probably about three different times where things took a dive because community involvement was not taken seriously. There were a number of times where the Army said that PACE does not need to see all the documents, they can just see the final document then comment. But it's really very key about transparency and I just thought I'd make that comment and hopefully I can tune into another Devens meeting and it was good to see all the people that I used to see.	Steven Perry (SERES/Arcadis) replied that we are taking community involvement and outreach seriously, and we hope that we are demonstrating that we're doing that. The note about documents is a question that's being considered. Also, the CIP activities are being implemented to get better and more frequent access to information. We want to find the right balance at the RAB meetings with providing lots of information but also plenty of time for Q&A. He also reminded meeting participants that additional communications are coming out soon. For example, a factsheet is ready to be distributed soon and in June we also intend to send out a RAB interest form with a letter explaining what it is. It's primarily an invitation to voice your interest in being involved, and especially more formally involved, in the structure of a Board. Everyone is certainly welcome to participate and yet we do note there is a bit of a difference between being a Board member and a meeting participant. We're seeking volunteers who want to step into a more formal role. Many of you are already active volunteers, staying on top of all the issues. The RAB interest form is an invite as to your willingness or interest for more formal membership.

RAB MEETING INVITE

Former Fort Devens Army Installation
Notification

Please join us for the next Former Fort Devens RAB Meeting, Thursday, May 20, 2021, 6:30 to 8 pm

Our next RAB meeting will be held via Microsoft Teams. Please join by clicking this link:

Click here to join the meeting

Or you can call in to hear the audio only:
+1 213-379-9608,,599758929# (Phone Conference ID: 599 758 929#)

We hope you will join us to actively discuss the following topics and share your ideas:

Welcome | To existing members and new participants!
Community Involvement & RAB | Updates and moving forward with the RAB
Project Updates | Summary of recent project work
Upcoming Work | What to expect for upcoming technical work
Questions & Answers | Bring your questions for this 1-hour Q&A session
Next Steps & Meeting | The look ahead

Bring your thoughts about the RAB and questions about the project. This meeting will be recorded and a meeting summary will be posted on the project website at: https://www.nae.usace.army.mil/missions/projects-topics/former-fort-devens-environmental-cleanup/

If you have any questions, please contact the Army BRAC Environmental Coordinator, Bob Simeone, at robert.j.simeone.civ@mail.mil or 978.615.6090.
We look forward to hearing from you at this meeting.