# SPRING VALLEY FORMERLY USED DEFENSE SITE PROJECT
## RAB Meeting

**September 10, 2019**
**7:00 – 8:30 p.m.**

**UNDERCROFT MEETING ROOM**
**ST. DAVID'S EPISCOPAL CHURCH**
**5150 MACOMB ST. NW, WASHINGTON, DC**

## Agenda

**7:00 p.m.** **I.** **Administrative Items**

Co-Chair Updates
- Introductions, Announcements

Task Group Updates
- TAPP Contractor

**7:15 p.m.** **II.** **USACE Program Updates**

Site-Wide Remedial Action
Glenbrook Road
Groundwater Study

**8:05 p.m.** **III.** **Community Items**

**8:10 p.m.** **IV.** **Open Discussion & Future RAB Agenda Development**

Upcoming Meeting Topics:
- (Suggestions?)

*Next meeting: November 12, 2019 (Last meeting of 2019)

**8:20 p.m.** **V.** **Public Comments**

**8:30 p.m.** **VI.** **Adjourn**

***Note: The RAB meets every odd month.***

# SPRING VALLEY FORMERLY USED DEFENSE SITE

## Restoration Advisory Board Meeting
## 10 September 2019

U.S.ARMY

US Army Corps of Engineers®

# AGENDA REVIEW

## Co-Chair Updates

- Introduction, Announcements

## Task Group Updates

- TAPP Contractor

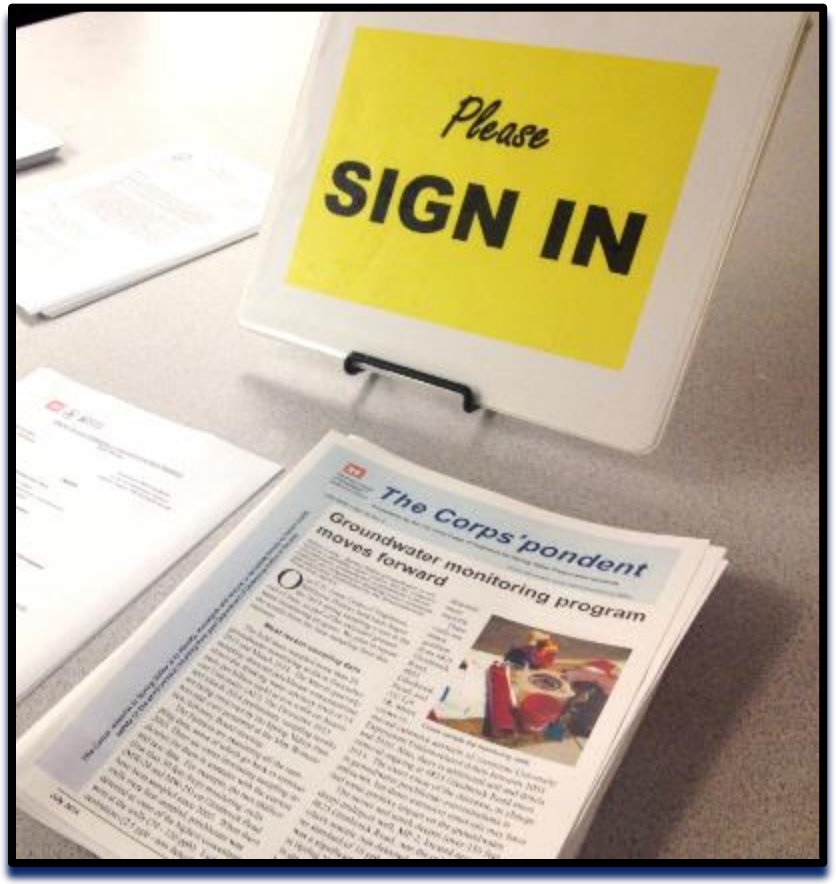
## USACE Updates

- Site-Wide Remedial Action
- Glenbrook Road
- Groundwater Study

## Community Items

Open Discussion & Future RAB Agenda Development

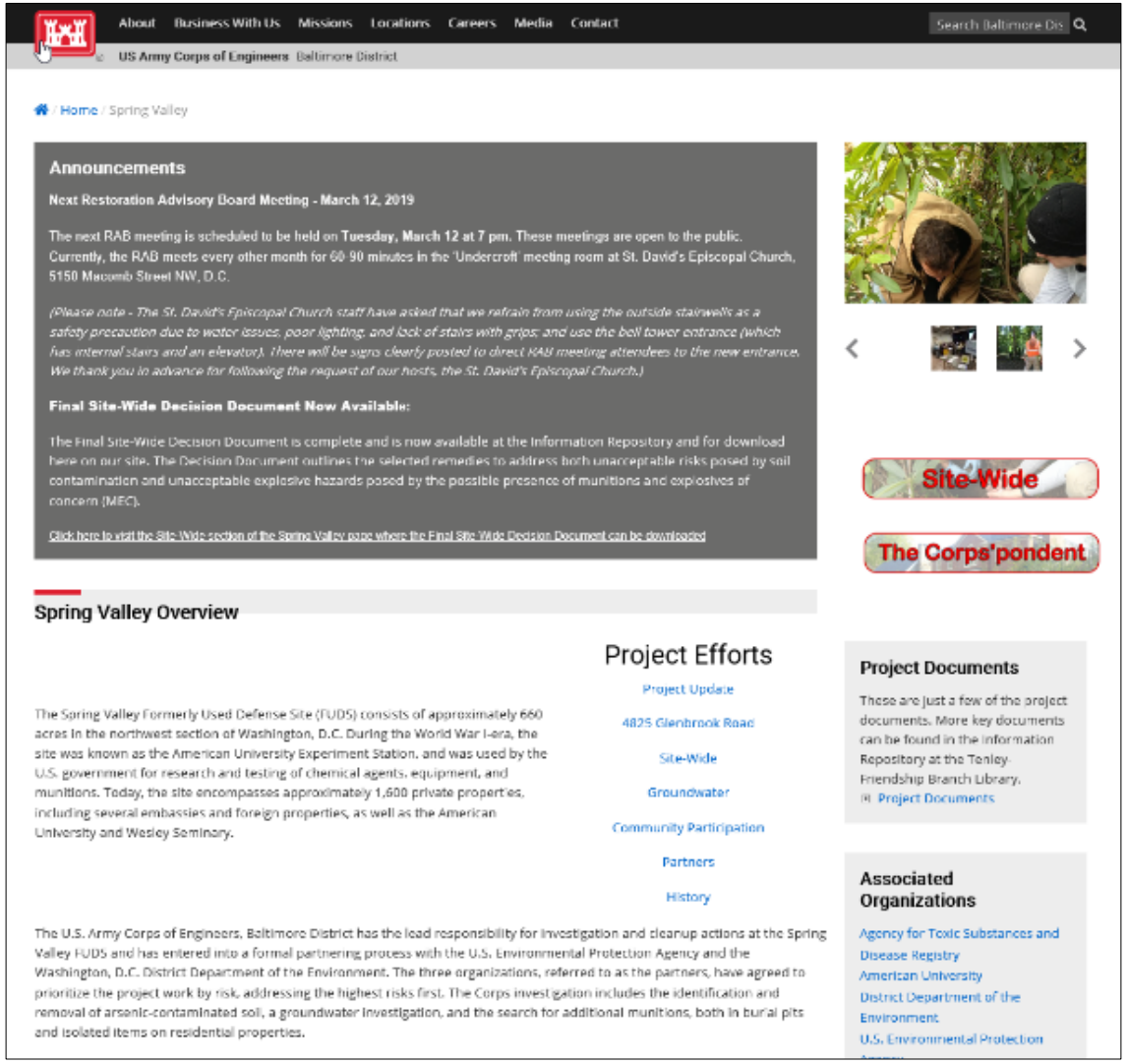
Public Comments



# CO-CHAIR UPDATES

Introductions

# CO-CHAIR UPDATES




## Announcements

Website Updates

- July and August Monthly Site-Wide Project Update
- Weekly 4825 Glenbrook Rd Project Updates with photos
- June Partners meeting minutes
- Next Partners meeting date: *October 17th*
- July RAB Meeting Minutes
- August Corps'pondent

# TASK GROUP UPDATES

New TAPP Contractor

# TASK GROUP UPDATES

**New RAB Technical Assistance for Public Participation (TAPP) advisor**

- Through database and website research, the team assembled a list of 18 potential contractors.
- Further research narrowed the list to a potential of 4 likely candidates. The other 14 firms were more focused on environmental expertise as it relates to indoor air quality in commercial buildings and in other areas of industrial hygiene; subject areas that don't relate very well to a CERCLA regulated clean-up and restoration project like the Spring Valley FUDS.
- The Army Corps contacted these four firms, and spoke to individuals in management at these companies.
  - One firm is not taking on new projects at this time.
  - Another firm informed us that they had recently graduated from the government's 8(a) set aside program
  - The **remaining two firms** appear qualified and expressed interest in supporting the RAB.
- Two packets of information were sent to the RAB on August 7th introducing these companies. The two potential companies are **ATI, Inc.** and **Nspiregreen, LLC.**

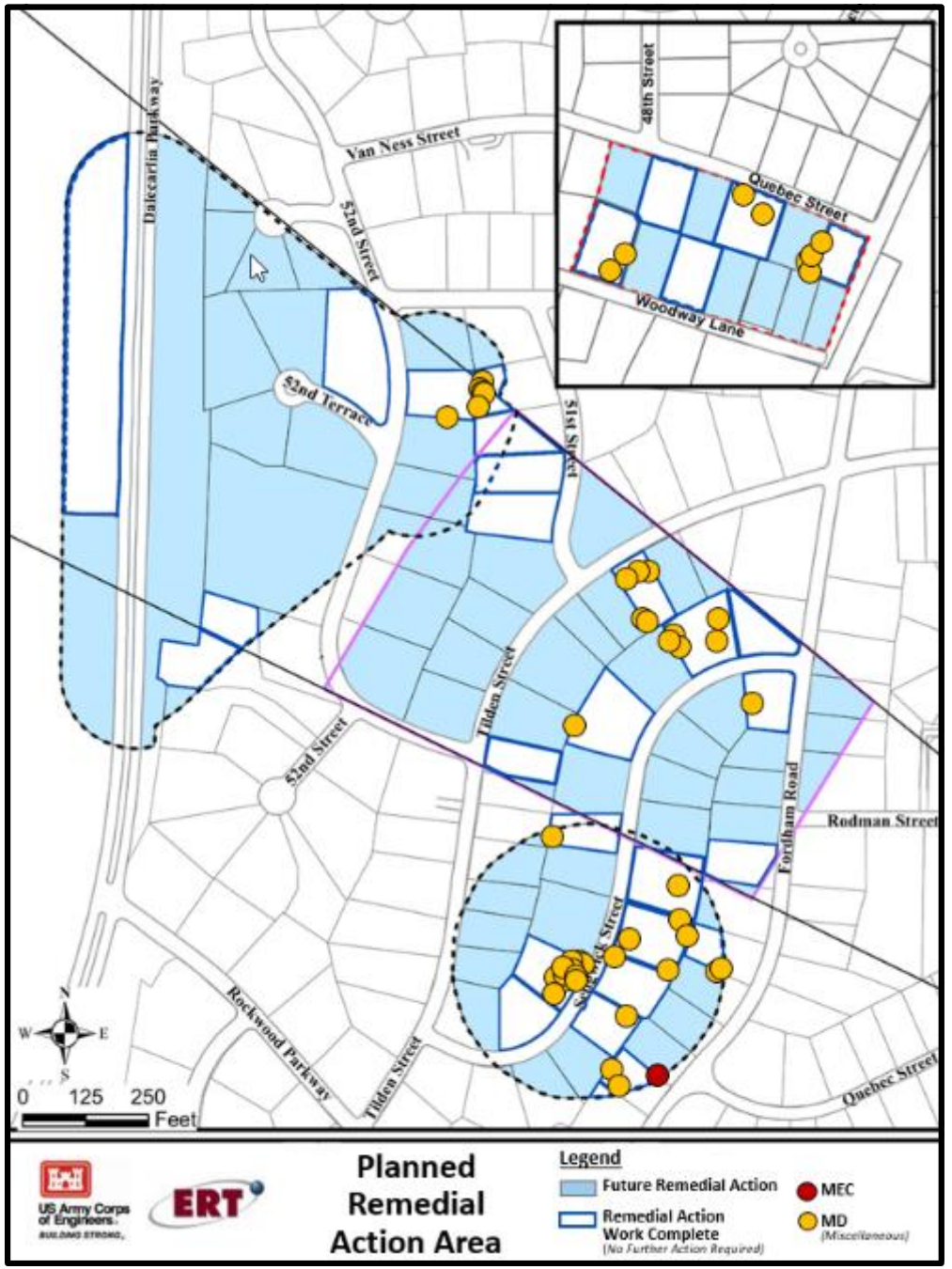
# SITE-WIDE REMEDIAL ACTION (RA)

USACE Updates

# SITE-WIDE REMEDIAL ACTION

## Final survey effort at 92 residential properties and 13 Federal/City Lots:

- Working with 79 residential properties.
- 70 civil surveys and 61 arborist surveys have been completed.
- Geophysical clearing walkthroughs completed at 55 properties.
- Vegetation removed from 33 private properties and 9 City/Fed lots.
- Geophysical surveys completed at 32 private properties and 4 City/Fed lots off Dalecarlia Parkway.
- Initial anomaly removal at 26 private properties and 4 City/Fed lots off Dalecarlia Parkway.
- Awaiting Regulatory Partner approval to issue assurance letters.

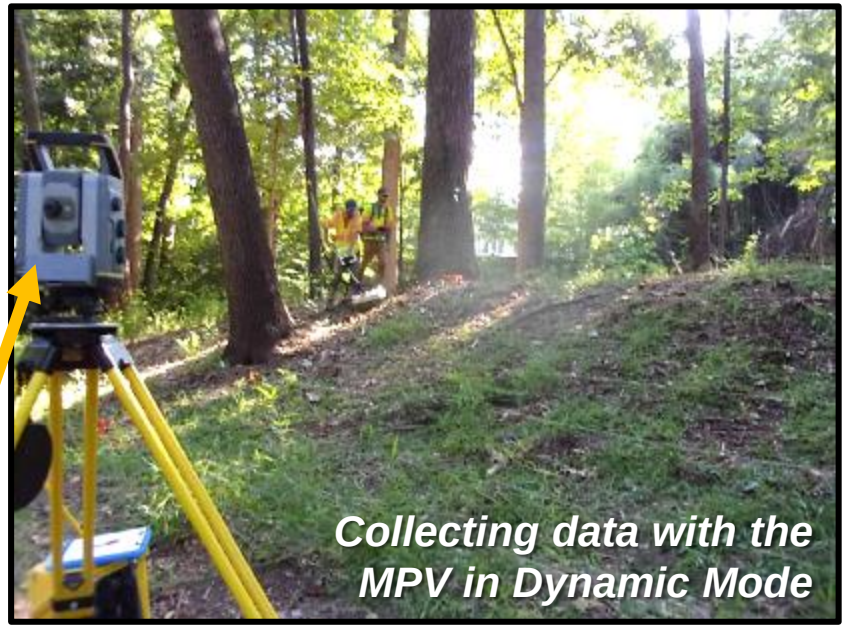


# SITE-WIDE REMEDIAL ACTION

## Dalecarlia Pkwy vegetation removal and surveying

***Removing low underbrush and plants to achieve a clear line of sight between the robotic totaling station (RTS) and the survey equipment.***

***(RTS)***



***Collecting data with the MPV in Dynamic Mode***

***Responding to community concern, the team met with the DC Urban Forestry Division to begin discussing the restoration of the sound and privacy barrier along the Dalecarlia Parkway.***

# SITE-WIDE REMEDIAL ACTION

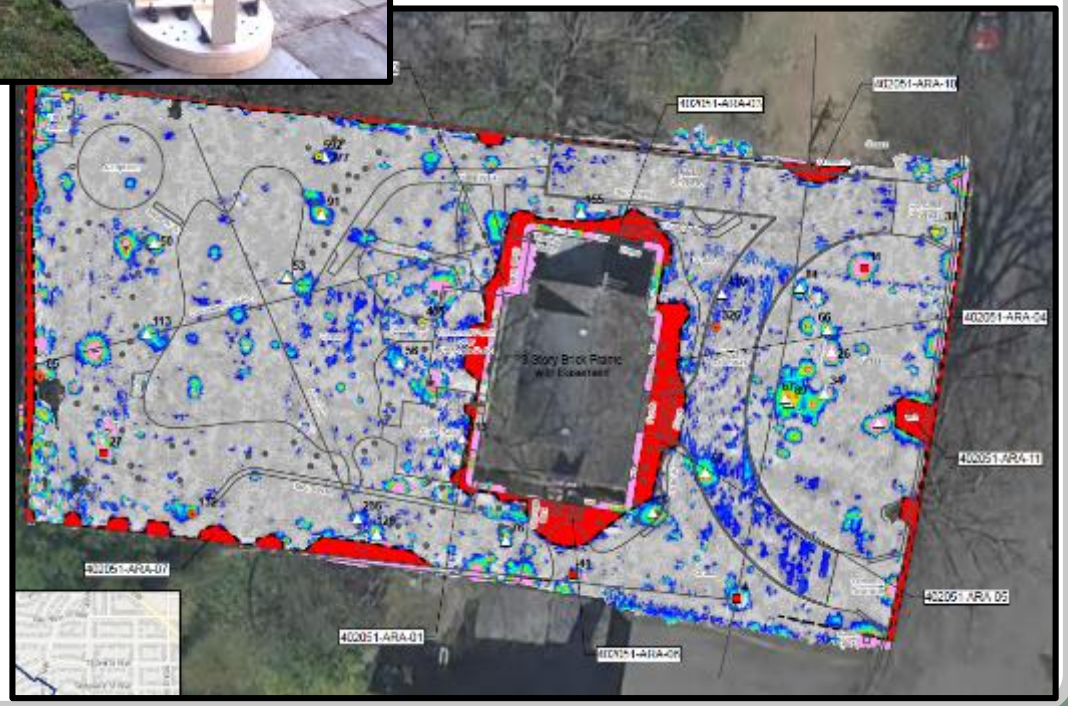
## Geophysicists conducting surveys at private properties

*Collecting data with the G-858*

*Collecting data in Cued Survey mode*

*Collecting data with the MPV in Dynamic Survey mode*

*Map view of processed survey data*



# SITE-WIDE REMEDIAL ACTION

## Anomaly Investigations

***In order to investigate an anomaly around a large tree root, an air spade was used to remove soil from around the root to avoid causing damage to the tree.***

***Location of anomaly (old irrigation line)***


***An arborist was present during the entire effort. No large tree roots were damaged during the anomaly investigation.***

# SITE-WIDE REMEDIAL ACTION

## Hardscape Digs & Restoration


Some selected anomalies were detected underneath hardscape. Several of anomalies underneath hardscape areas are within DC public space. The team received their first batch of DC permits for this work, which was completed in early September. The homeowners and neighboring properties were informed of this work.


Once the dig team recovered the anomaly, a professional hardscape company completed the restoration.


# SITE-WIDE REMEDIAL ACTION

## *Tentative Schedule*

| | |
|---|---|
| **Fall 2019** | • Continue to finalize plant removal plans and conduct plant removal in Dalecarlia Woods and private properties<br>• Continue geophysical surveys and anomaly removal.<br>• Obtain Rights-of-Entry from the next group of homeowners.<br>• Conduct sampling to delineate the soil removal area in the southern AU campus exposure unit. |
| **Winter 2019** | • Continue finalizing plant removal plans with subsequent groups in preparation for geophysical surveys. |

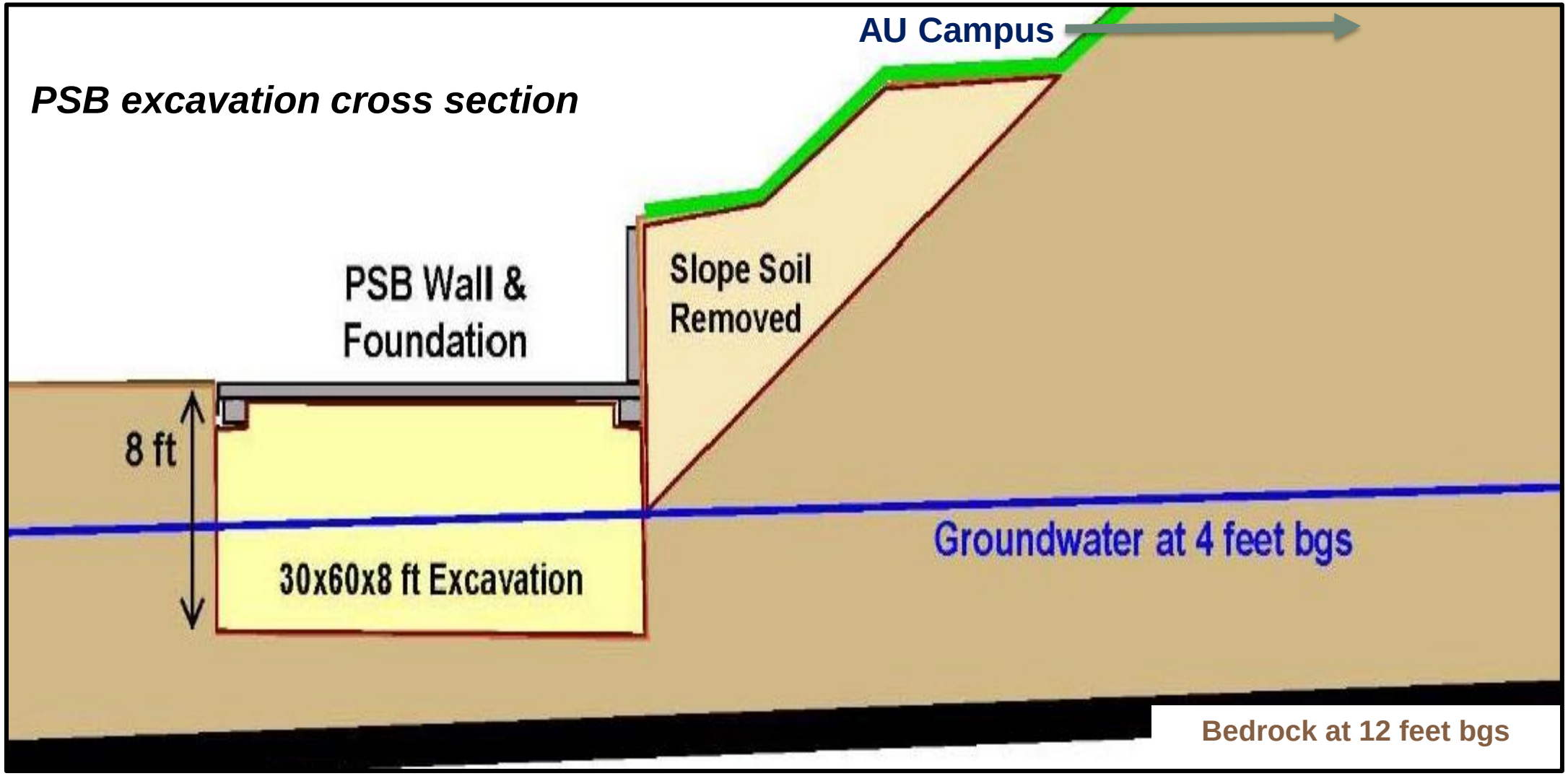
# SITE-WIDE REMEDIAL ACTION

## AU's Former Public Safety Building

- **Completed mobilization and training.**
- Conducted pot holing to verify utility location and depths.
- **Cut and capped waterline to Jack Child Hall which crossed the slope above the former PSB.**
- The team evaluated the slope are required to safely excavate the PSB foundation below.
  - **As a result, the team removed a fourth tree from the area;**
  - **And updated the erosion and sediment control plan, which requires revision and approval by DOEE.**
- Concrete piers and sidewalk on the slope above the PSB were broken up and removed from the site.
- **Once the team has DOEE's approval on the updated plans, the team will begin excavating the slope.**
- The excavation work is anticipated to take 2-4 months to complete.

# SITE-WIDE REMEDIAL ACTION

## AU's Former Public Safety Building



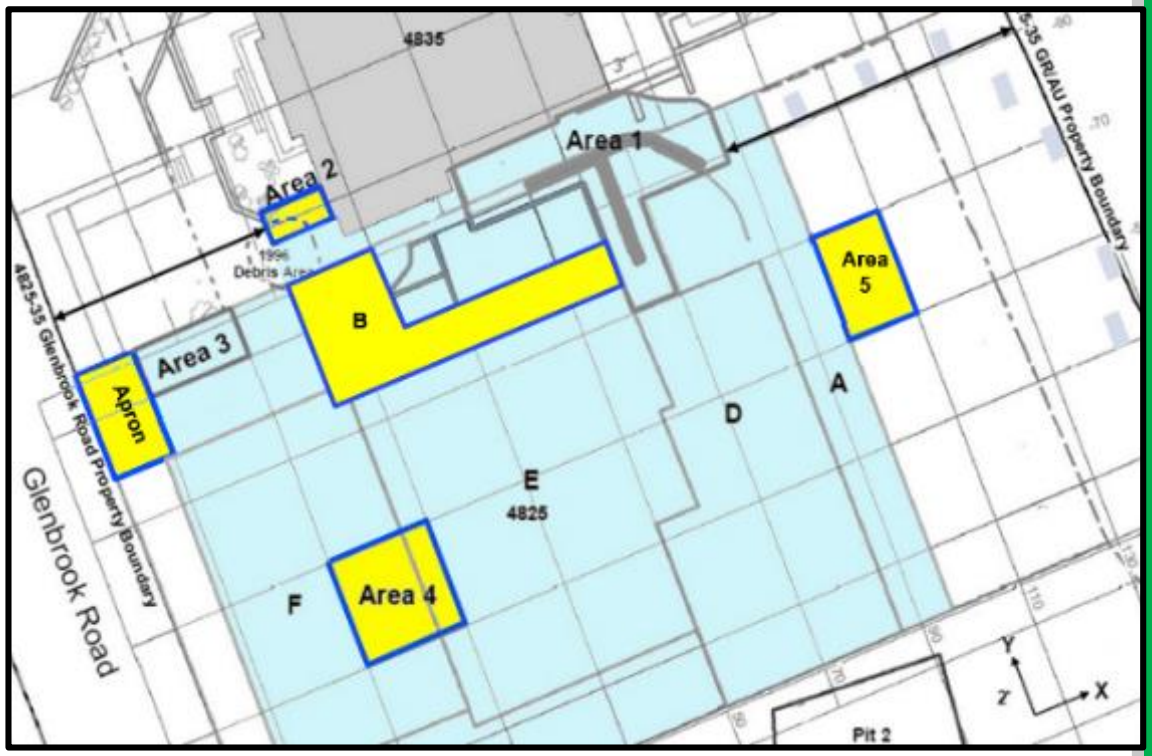
# GLENBROOK ROAD

USACE Updates

# GLENBROOK ROAD

## Recent efforts:

- Continued low probability work removing HTW/arsenic contaminated soil.
- Developing a path forward for further excavation near the property line where a glass bottle was recovered, as well as any remaining small dig areas overall in Areas 2 and 4, when the cooler fall weather returns.
- Developing a Risk Assessment (RA) for Area 4 to determine if additional excavation is required. This RA will be discussed with the regulatory Partners in October.
- Surveyors took elevation measurements around the property, determining how much back fill dirt we will need during restoration.
- Worked at the Federal Property on a variety of tasks including preparing for upcoming waste shipments next week, performing trailer and site repairs, and carrying out equipment inventory and inspections.



# GLENBROOK ROAD

## Glassware finds:

– **On July 22nd, the crew encountered a small amount of potential WWI related glassware while digging. Later in the week, a team recovered the intact glass bottle.**

- The crew collected soil samples where the container was found.
- This location was covered with a plastic liner and additional soil while we wait for the soil sample results.
- The container was determined to be empty when it was received at Edgewood.
- Low Level Agent and Agent Breakdown Product came back negative for both.
- The soil samples and soil gas (from head space analysis) were analyzed and came back clear of chemical agent.

# GLENBROOK ROAD

**Upcoming efforts:**

- Complete arsenic removals.
- Continue to calculate exposure point concentrations (EPCs) for aluminum, antimony, arsenic, cobalt, total cyanide, manganese, mercury, nickel, thallium, vanadium.
- Excavate “hot spots” to reduce unacceptable EPCs.
- Excavate Area 2 (begin in the Fall).
- As part of the final restoration efforts, the team will being compacting clean soil in completed areas.
- Begin the vapor monitoring in 4835 basement at the end of September.


*Clean backfill along 4825-4835 property boundary to avoid water pooling near the foundation*

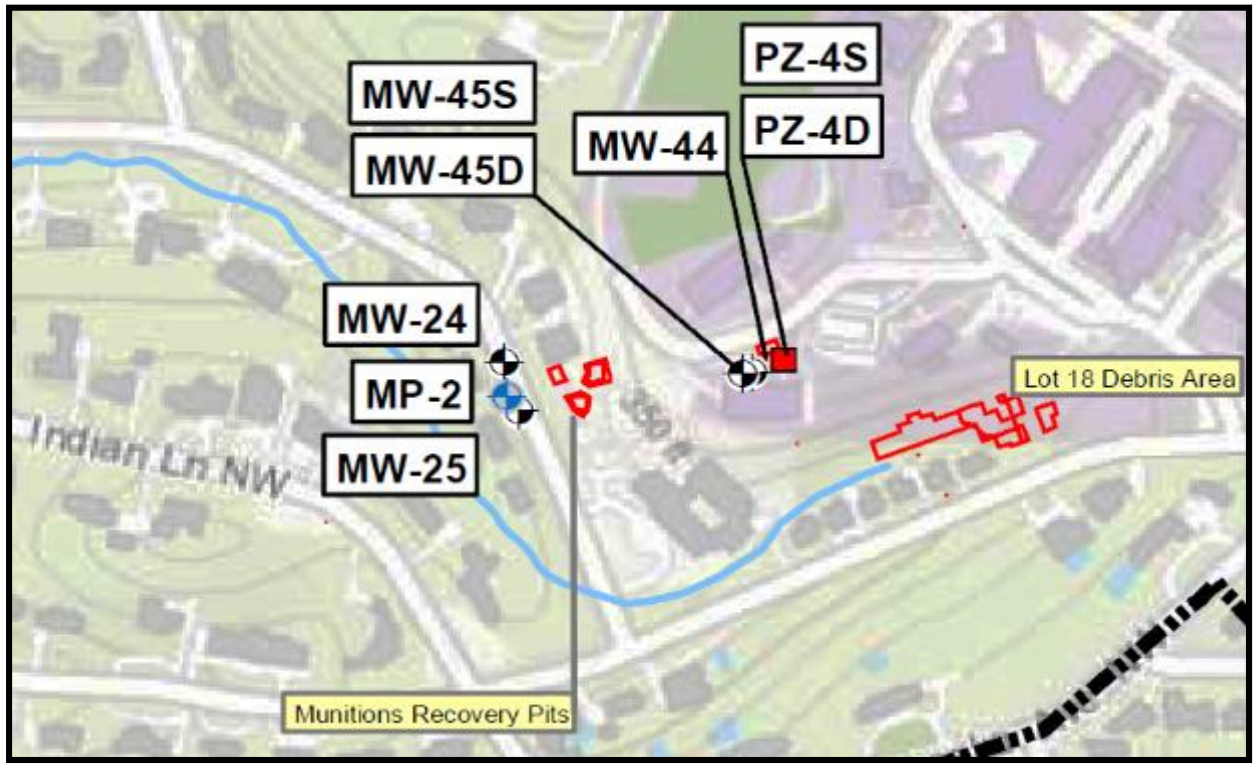
# GLENBROOK ROAD

## *Tentative Schedule*

| | |
|---|---|
| **Late Fall 2019** | **Completion of low probability operations at 4825/4835 Glenbrook Road.**<br><br>***Working hours:*** **Monday - Thursday from 6:30 am to 5:00 pm. Heavy equipment operations do not begin until after 7:00 am.** |
| **Winter 2020** | **Potential completion of intrusive activities at 4825 Glenbrook Road.**<br><br>**Start of site restoration for Glenbrook Road sites – 4825 & 4835.** |
| **Summer 2020** | **Anticipated project completion.** |

# GROUNDWATER STUDY

USACE Updates



# GROUNDWATER STUDY

## Purpose

– Summarize the groundwater remedial investigation (RI) findings.

– Summarize current sampling effort and future activities.

## Agenda

– Remedial Investigation Objectives

– Groundwater conceptual site model (CSM) and monitoring network

– Groundwater Chemistry

– Risk assessment results

– Conclusions / Next steps

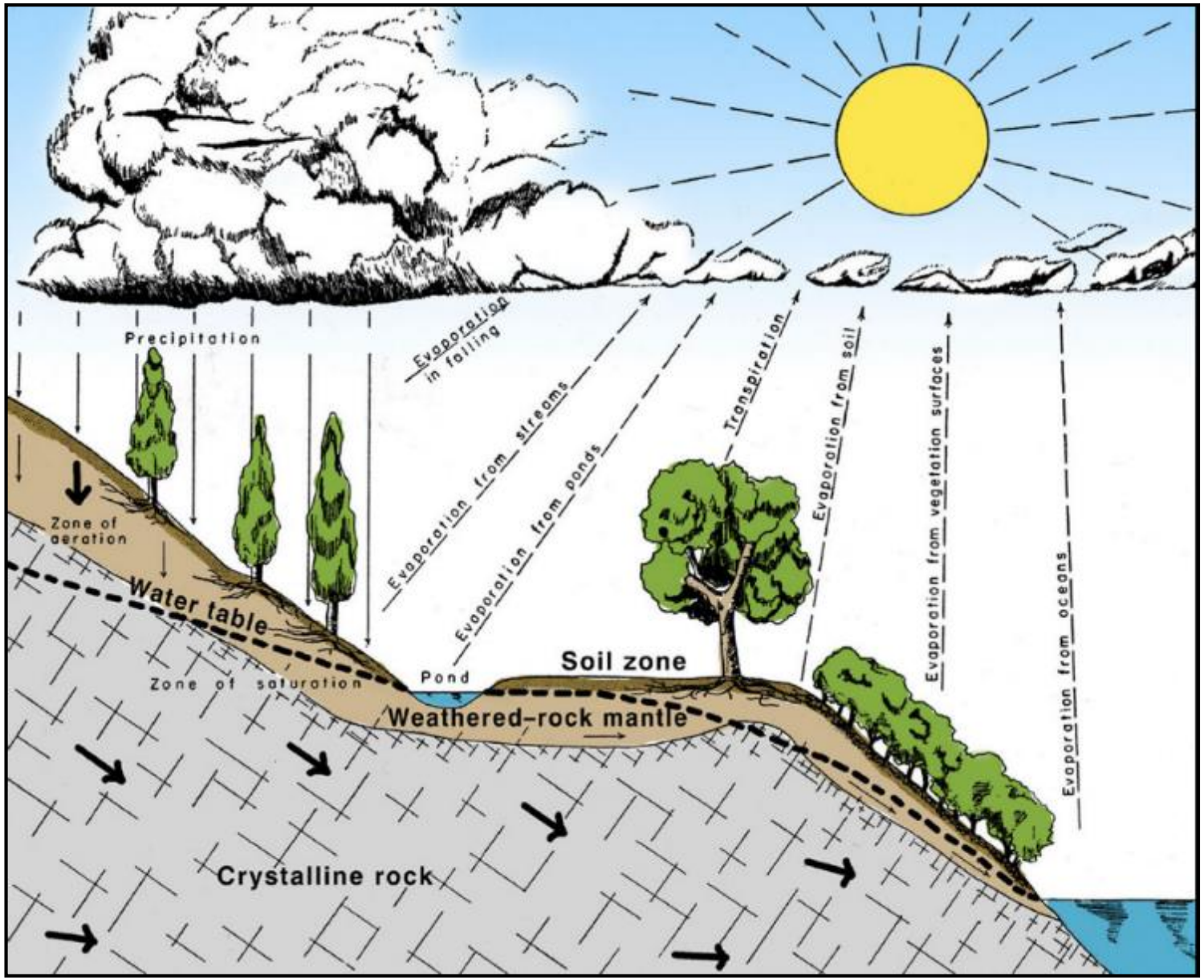
*Installation of MP-5 on Rockwood Pkwy*

# GROUNDWATER STUDY

**Groundwater Remedial Investigation Main Objectives:**

- Determine groundwater and surface water occurrence, flow, and chemistry.
- Determine if AUES activities impacted local groundwater quality.
- Determine nature and extent of any detected contamination.
- Assessment of potential human health risks posed by chemicals detected in groundwater and surface water.

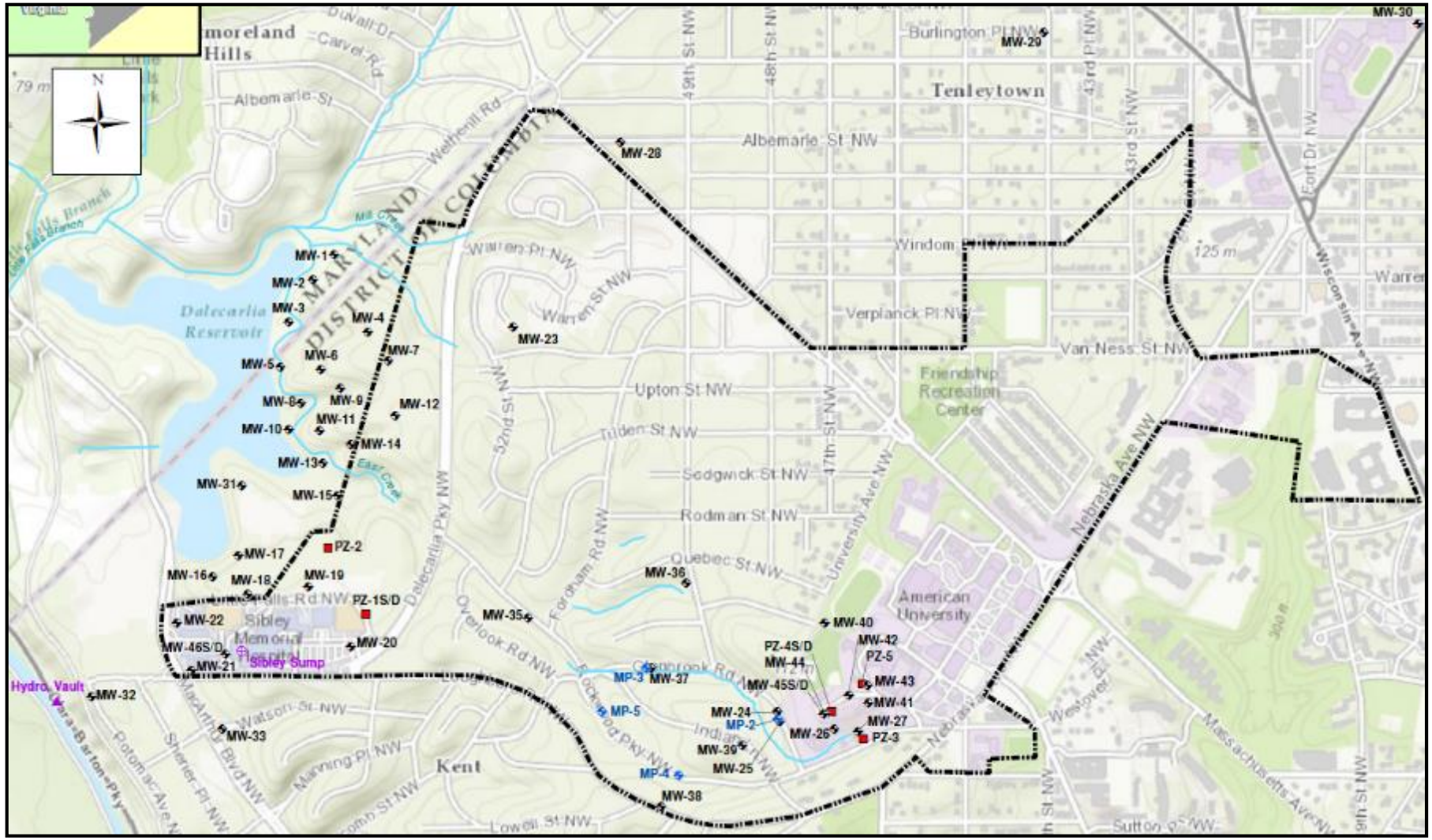
# CONCEPTUAL GROUNDWATER FLOW MODEL



# GROUNDWATER STUDY

## Groundwater Monitoring Network:

- Groundwater Study initiated in 2005.
- 56 monitoring wells installed and sampled.
- 27 surface water locations sampled.
- Sampling conducted from 2005 through 2015.



# GROUNDWATER STUDY

## Groundwater Chemistry:

- Over 250 different chemicals were analyzed from the **groundwater** and **surface water** samples to determine potential impacts from AUES activities.
- Maximum detected chemical concentrations were compared to regulatory drinking water standards and screening criteria to determine Chemicals of Potential Concern (COPCs).
- COPCs were then evaluated in the Human Health Risk Assessment.

***Groundwater Sampling Well***

# GROUNDWATER STUDY

## Human Health Risk Assessment:

- Human health risk assessment (HHRA) is an estimate of the potential for health impact.
- HHRAs are based on:
  - Conservative assumptions concerning how individuals may be exposed to contaminated media (e.g., groundwater) and for how long.
  - Published toxicity data for the **chemicals** to which exposure is assumed.
- *Receptors considered:* Adult resident, Child Resident, AU Student, Site Workers.

***Groundwater Sampling Well***

# GROUNDWATER STUDY

## Risk Assessment Conclusions:

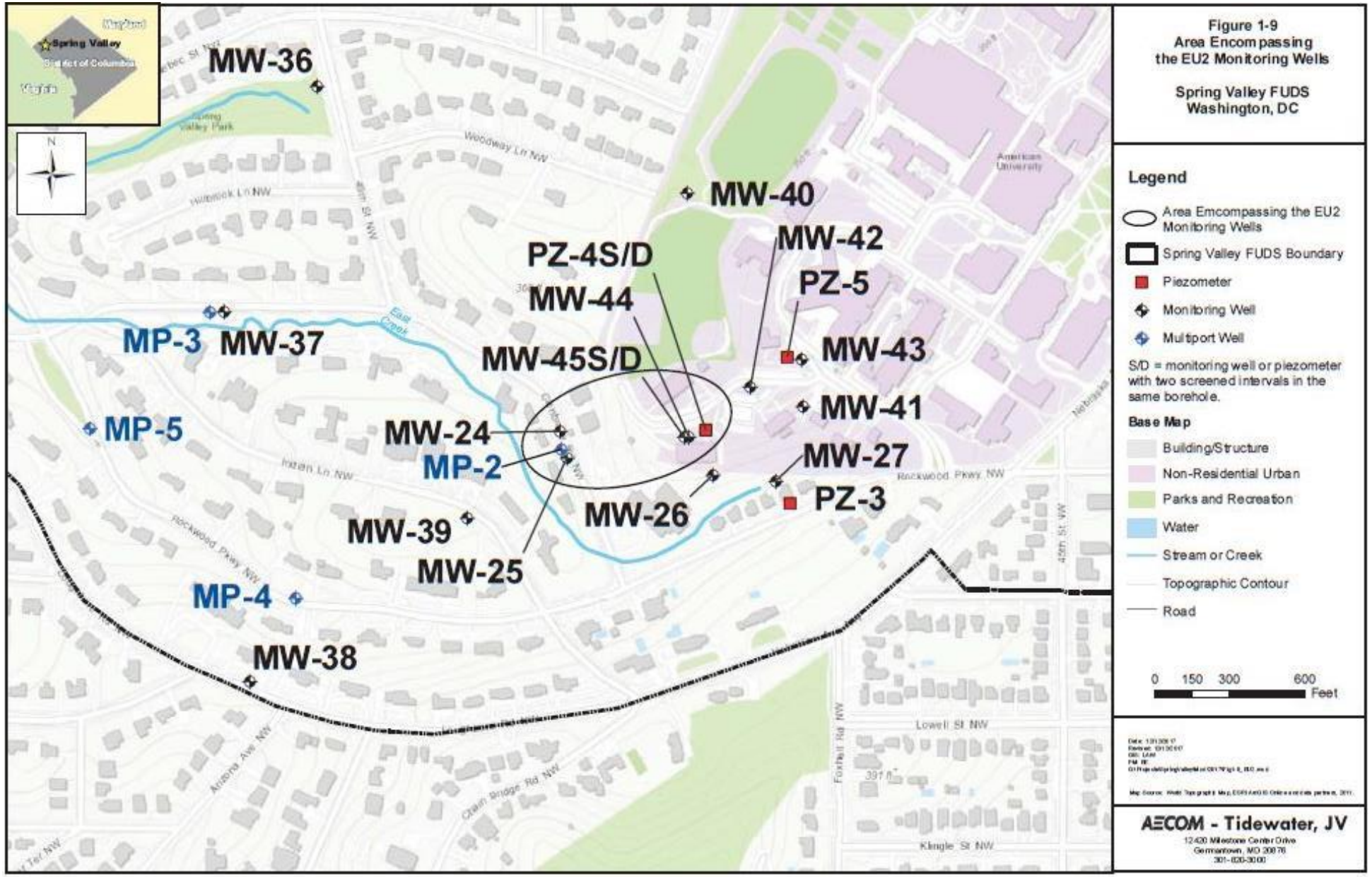
– *CURRENT LAND USE:* No unacceptable risk for current land use. Groundwater is not used as a drinking water source.

– *FUTURE LAND USE:* Unacceptable risk if groundwater is used as drinking water in the vicinity of Glenbrook Road and Lot 18 Disposal Areas (Exposure Unit 2) due to the presence of perchlorate and arsenic.

- **Perchlorate** – currently present above drinking water advisory level (15 ppb) in wells next to Kreeger Hall on AU.
- **Arsenic** - currently present above drinking water standard (10 ppb) in one well located on Glenbrook Rd.

***Groundwater Sampling Well***

# GROUNDWATER STUDY: EXPOSURE UNIT 2



# ARSENIC AND PERCHLORATE IN EU2: MP2

| MP2-1 | | |
|---|---|---|
| Date | Arsenic | Perchlorate |
| 06/30/14 | 6.9 | 1.39 |
| 06/30/14 FD | 6.65 | NT |
| 12/11/13 | 6.6 | 3.08 |
| 04/30/13 | 7.6 | 5.82 |
| 07/20/12 | 8.4 | 6.3 |
| 05/03/12 | 7.4 | 4.5 |
| 03/30/12 | 7.5 | 5.8 |
| 3/30/2012 FD | 7.6 | 7 |

| MP2-2 | | |
|---|---|---|
| Date | Arsenic | Perchlorate |
| 06/30/14 | 12.4 | 3.84 |
| 12/11/13 | 11 | 0.403 |
| 12/11/13 FD | 7.1 | NT |
| 05/13/13 | 12.6 | 9.74 |
| 07/20/12 | 16 | 12 |
| 05/03/12 | 15 | 12 |
| 03/30/12 | 15 | 12 |

| MP2-3 | | |
|---|---|---|
| Date | Arsenic | Perchlorate |
| 07/01/14 | 13.7 | 0.783 |
| 12/11/13 | 15.2 | 6.89 |
| 05/13/13 | 11 | 2.57 |
| 07/20/12 | 18 | 18 |
| 05/03/12 | 18 | 17 |
| 03/30/12 | 15 | 17 |

| MP2-4 | | |
|---|---|---|
| Date | Arsenic | Perchlorate |
| 07/01/14 | 7.6 | ND |
| 12/11/13 | 9.9 | 8.09 |
| 05/13/13 | 9.2 | 1.57 J |
| 07/20/12 | 12 | 25 |
| 05/03/12 | 15 | 25 |
| 03/30/12 | 12 | 21 |

| MP2-5 | | |
|---|---|---|
| Date | Arsenic | Perchlorate |
| 07/01/14 | 9.8 | ND |
| 12/11/13 | 10.3 | 5.07 |
| 05/13/13 | 9.1 | 2.67 |
| 07/20/12 | 14 | 26 |
| 7/20/12 FD | 15 | 24 |
| 05/03/12 | 15 | 26 |
| 03/30/12 | 13 | 24 |

| MP2-6 | | |
|---|---|---|
| Date | Arsenic | Perchlorate |
| 07/01/14 | 10.8 | ND |
| 12/11/13 | 10.2 | 2.43 |
| 05/13/13 | 11 | 9.05 |
| 07/20/12 | 16 | 25 |
| 05/03/12 | 17 | 25 |
| 5/3/2012 FD | 17 | 26 |
| 03/30/12 | 15 | 27 |

| MP2-7 | | |
|---|---|---|
| Date | Arsenic | Perchlorate |
| 07/01/14 | 11.8 | 0.245 J |
| 12/11/13 | 12 | 8.18 |
| 05/03/13 | 12 | 16.6 |
| 07/20/12 | 16 | 24 |
| 05/03/12 | 17 | 25 |
| 03/30/12 | 14 | 20 |

| MP2-8 | | |
|---|---|---|
| Date | Arsenic | Perchlorate |
| 07/01/14 | 11.9 | 0.917 |
| 12/11/13 | 10.3 | 3.67 |
| 05/13/13 | 12.6 | 17.9 |
| 07/20/12 | 15 | 25 |
| 05/03/12 | 16 | 24 |
| 03/30/12 | 14 | 24 |

**MP = Multi-Port well**

# ARSENIC AND PERCHLORATE IN EU2:
# MWS 24 & 25

| MW-24 | | |
|---|---|---|
| Date | Arsenic | Perchlorate |
| 06/30/14 | 4.2 | 1.69 |
| 12/12/13 | 1.8 | ND |
| 12/12/13 FD | 1.7 | ND |
| 04/30/13 | 16.8 | ND |
| 02/06/12 | 7.9 | 1.6 J |
| 11/07/11 | 3.9 | 2.4 |
| 08/02/11 | 4.6 | 3 |
| 05/17/11 | 3.7 | 2.3 |
| 11/02/09 | 5 J | 3.1 |
| 06/13/07 | 9.3 J | 18.5 |
| 07/11/06 | 10.5 | 62.6 |
| 12/22/05 | 10.4 | 70 |

| MW-25 | | |
|---|---|---|
| Date | Arsenic | Perchlorate |
| 06/30/14 | 4.2 | 4.05 |
| 12/11/13 | 6.7 | 4.04 |
| 04/30/13 | 4.5 | 3.12 |
| 02/06/12 | 2.2 J | ND |
| 11/07/11 | 3 | 2.5 |
| 08/02/11 | 3 | 2.8 |
| 05/10/11 | 3.1 | 2.9 |
| 11/03/09 | 8.4 J | 25 |
| 11/03/09 FD | 8.2 J | 23 |
| 06/13/07 | 8.1 J | 74.1 |
| 07/11/06 | 9.5 J | 124 |
| 12/22/05 | 5 J | 60 |

**MW = Monitoring well**

# ARSENIC AND PERCHLORATE IN EU2:
# PZ-4S AND PS-4D

| PZ-4S | | |
|---|---|---|
| Date | Arsenic | Perchlorate |
| 09/16/14 | 5.7 | 4.16 |
| 09/16/14 FD | 5.5 | 4.44 |
| 07/02/14 | 6.2 | 8.58 |
| 03/20/14 | 2.8 | 10.9 |
| 12/13/13 | 3.6 | 6.75 |
| 07/24/13 | 1.4 | ND |
| 07/24/13 FD | 1.5 | ND |
| 05/03/13 | 0.22 J | 5.57 |
| 02/08/12 | 2.4 J | 28 |
| 11/09/11 | ND | 25 |
| 08/04/11 | ND | 19 |
| 7/28/2011 (a) | NT | 18 |
| 05/16/11 | 2.6 J | 30 |
| 11/10/09 | NT | 50 |
| 06/13/07 | ND | 146 |
| 07/07/06 | ND | 71.8 |

| PZ-4D | | |
|---|---|---|
| Date | Arsenic | Perchlorate |
| 09/16/14 | 6.1 | 13.8 |
| 07/02/14 | 7.8 | 16.7 |
| 03/20/14 | 3.9 | 44.5 |
| 12/13/13 | 1.8 | 39.8 D |
| 07/24/13 | 1.5 | 5.59 |
| 05/03/13 | NT | NT |
| 04/09/12 | NT | 36 |
| 02/07/12 | 2.7 J | 39 |
| 11/08/11 | ND | 45 |
| 08/05/11 | ND | 39 |
| 7/28/2011 (a) | NT | 9.8 |
| 05/16/11 | 2 J | 39 |
| 11/11/09 | NT | 41 |
| 06/13/07 | ND | 41 |
| 07/07/06 | 0.6 J | 34.7 |

PZ = Piezometer
S = Shallow
D = Deep

# ARSENIC AND PERCHLORATE IN EU2:
# MWS 44, 45S AND 45D

| MW-44 | | |
|---|---|---|
| Date | Arsenic | Perchlorate |
| 09/16/14 | 0.55 J | 40.1 |
| 07/01/14 | 1.2 | 49.8 |
| 03/20/14 | 0.69 J | 42.3 |
| 03/20/14 FD | 0.78 J | 40.5 |
| 12/12/13 | 0.75 J | 40.2 |
| 12/12/13 FD | 0.85 J | 39.8 |
| 04/29/13 | 0.15 J | 40.5 |
| 09/06/12 | ND | 35 |
| 9/6/12 FD | ND | 36 |
| 03/29/12 | ND | 34 |
| 03/29/12 FD | ND | 33 |

| MW-45S | | |
|---|---|---|
| Date | Arsenic | Perchlorate |
| 09/16/14 | 1.2 | 2.55 |
| 07/01/14 | 1.8 | 5.74 |
| 03/20/14 | 1.2 | 5.86 |
| 12/13/13 | 1.5 | 1.28 |
| 05/03/13 | 0.53 J | 31.1 |
| 05/03/13 FD | 0.32 J | 30.9 |
| 09/06/12 | ND | 6 |

| MW-45D | | |
|---|---|---|
| Date | Arsenic | Perchlorate |
| 09/16/14 | 3 | 0.22 J |
| 07/01/14 | 1.5 | ND |
| 03/20/14 | 1.3 | ND |
| 12/12/13 | 1.3 | 5.3 |
| 12/12/13 FD | 1.4 | 5.26 |
| 05/03/13 | ND | 54.3 |
| 05/03/13 FD | 0.16 J | 52.9 |
| 09/06/12 | ND | 3.6 |

MW = Monitoring well

# GROUNDWATER STUDY

## FEASIBILITY STUDY and PROPOSED PLAN

– The Army Corps developed a Feasibility Study to evaluate alternatives to address the potential future risk if the groundwater in Exposure Unit 2 is used as drinking water in the future.

– The Army Corps identified Land Use Controls (LUCs) and Long Term Monitoring as the Proposed Plan.

– DOEE invoked dispute resolution, since LUCs only prevent exposure and do not have an objective to restore groundwater to drinking water standards.

– **Nationwide DOD/EPA Policy Disagreement:**

- *EPA and DOEE position:* groundwater must be restored to drinking water standards
- *DoD position:* CERCLA is risk based, cleanup decisions should be based on risk for reasonably anticipated future land use.

# GROUNDWATER STUDY

The Dispute Resolution was paused at Tier 2 while the Army Corps and their Partners discussed conducting additional groundwater data collection.

The Army Corps is moving forward with a new round of groundwater sampling in order to obtain more current information that will allow us to evaluate if there are any significant changes in groundwater concentrations since the last sampling event (4 years ago).

**USGS will be conducting the sampling starting tomorrow (September 11).**

After this sampling is completed, the Partners will meet to discuss the results and to determine the requirements for any future groundwater sampling.

***Groundwater Well on Glenbrook Road being prepared in August for Sampling in September***

# SPRING VALLEY RESTORATION ADVISORY BOARD

## *Community Items*


# SPRING VALLEY RESTORATION ADVISORY BOARD

**Open Discussion:**

**Reminders:**

- The next RAB meeting will be **Tuesday, November 12th, 2019**

**Upcoming Agenda Items:**

- *Suggestions?*
- Upcoming Groundwater sampling results.
- FY19 Financial wrap-up / FY20 Preview.

# SPRING VALLEY RESTORATION ADVISORY BOARD

- Public Comments
- Wrap-up

**U.S. Army Corps of Engineers**
**Spring Valley Restoration Advisory Board**
**St. David's Episcopal Church**
**Minutes of the September 2019 Meeting**

| **RESTORATION ADVISORY BOARD MEMBERS PRESENT AT THIS MEETING** | |
|---|---|
| Dan Noble | Military Co-Chair/USACE, Spring Valley MMRP Manager |
| Greg Beumel | Community Co-Chair |
| Jennifer Baine | Community Member |
| Brenda Barber | USACE, Spring Valley Project Manager |
| Brian Barone | Agency Representative - Department of Energy & Environment |
| Paul Bermingham | Community Member |
| Mary Kathryn Covert Steel | Community Member |
| Paul Dueffert | Community Member |
| Mary Douglas | Community Member |
| William Krebs | Community Member |
| Lee Monsein | Community Member |
| Dan Nichols | At Large Representative - American University |
| Malcolm Pritzker | Community Member |
| John Wheeler | Community Member |
| **RESTORATION ADVISORY BOARD MEMBERS NOT PRESENT AT THIS MEETING** | |
| Dave Tomlinson | Agency Representative - Department of Energy & Environment |
| Mary Bresnahan | Community Member |
| Marguerite Clarkson | At Large Representative - Horace Mann Elementary School |
| Steve Hirsh | Agency Representative - Environmental Protection Agency (EPA) Region III |
| Lawrence Miller | Community Member |
| Tom Smith | Community Member |
| George Vassiliou | Community Member |

| **ATTENDING PROJECT PERSONNEL** | |
|---|---|
| Todd Beckwith | USACE |
| Brittany Crissman | USACE, Corporate Communications Office |
| Chris Gardner | USACE, Corporate Communications Office |
| Ivanna Goldsberry | USACE |
| Whitney Gross | Spring Valley Community Outreach Program |
| Holly Hostetler | ERT, Inc. |
| Carrie Johnston | Spring Valley Community Outreach Program |
| Rebecca Yahiel | Spring Valley Community Outreach Program |
| **HANDOUTS FROM THE MEETING** | |
| I. Final Agenda for the September 10, 2019 RAB Meeting<br>II. Army Corps of Engineers Presentation<br>III. August 2019 Monthly Project Summary | |

# AGENDA

**Starting Time:** The September 2019 Restoration Advisory Board (RAB) meeting began at 7:07 PM.

## I. Administrative Items

### A. Co-Chair Updates

Dan Noble, U. S. Army Corps of Engineers (USACE), Spring Valley Project Manager, welcomed everyone and opened the meeting.

### 1. Introductions

Chris Gardner, USACE, Corporate Communications Office introduced Brittany Crissman, new member of the USACE Corporate Communications Office.

Comment from B. Crissman, USACE, Corporate Communications Office - I am excited to be here. I am just observing today but I will be here for Chris. Nice to meet you.

### 2. General Announcements

D. Noble reviewed the website updates which included the July and August Site-Wide Monthly Project Update, weekly 4825 Glenbrook Road updates and photos, June Partner meeting minutes, and the July RAB meeting minutes. The next Partner meeting date of October 17 is also posted. The August 2019 Corps'pondent newsletter has been finalized and mailed.

### B. Task Group Updates

**RAB Technical Assistance for Public Participation (TAPP) Consultant**

Since the last meeting, USACE Baltimore sent out informational emails to the RAB members with introductions to the two eligible companies that indicated interest in taking over the task; ATI, Inc. and Nspiregreen, LLC.

D. Noble asked Greg Beumel, Community Co-Chair how he would prefer the RAB conduct discussion or selection of the TAPP candidate firms.

Comment from G. Beumel, Community Co-Chair - Let me just ask. I think some people wrote in and had comments. If you read the material, did it seem to you that one or more of the candidates; I guess you could say more if you liked them both. Did you like one of them better than the other, and/or you are fine with either of them; or you thought they both were not adequate?

D. Noble explained that ATI, Inc. proposed an individual whom they would offer up as the TAPP consultant. Nspiregreen, LLC only introduced the company and would have to propose an individual. Since both companies are 8(a) contractors, USACE Baltimore can negotiate a contract directly with that firm.

Comment from G. Beumel, Community Co-Chair - I thought that the one person who was proposed by ATI, Inc. looked very qualified, because they actually had a person. There was a problem that they were potentially pretty far away and would take a lot of the revenue to bring him to meetings, but I was just talking with Dan, they are willing to propose somebody else. I thought that person anyway was more than qualified to do the job; they had the right background, they had some Superfund background, they knew, sort of, what happens at Superfund waste sites. The other firm, I thought, was less on target with their firm itself, and since they did not actually bring up somebody, it was hard. We are looking for one person that can be with us rather than a general staff, even if they are giving us the lead person. I favored ATI.

D. Noble disclosed that ATI, Inc. has a contract with the USACE Baltimore District Construction Division, a separate contract from the USACE Baltimore District Environmental Group. Nspiregreen, LLC does not have a contract of any kind with USACE Baltimore District at this time.

Question from Mary Kathryn Covert Steel, Community Member - Dan, is there additional verification that would have to go on? What is the Army's process once we select one of these firms?

D. Noble explained that USACE Baltimore would confirm with the Small Business Administration that the selected firm is in good standing and has not been disbarred recently. The firms are already participants in the 8(a) program that requires a complete vetting process to enter the program.

The 8(a) program is a way for small minority-owned businesses to obtain government contracts. As long as the firms are qualified to do the work, USACE Baltimore is allowed to set aside the competition rules and hire the firms directly. The firms go through a process upfront to enter the program and are allowed to remain in the program for 10 years. This means the firms have a 10-year period to receive government contracts on a non-competitive basis. Since most of the firms in the program are small companies just starting out, the 8(a) program gives the firms a way to get government business without having to bear the significant expense of competition over a period of 10 years. The government has 8(a) goals for specified dollar figures or percentages of business to be directed towards 8(a) contractors to gain experience over the 10-year period. The firms then graduate from the program and must compete for government work.

Question from William Krebs, Community Member - It is clear that they are going to do the work themselves, they are not going to subcontract it out to some other contractor?

D. Noble explained that the firms are allowed to subcontract work, and ATI, Inc. is proposing to establish a subcontract agreement with an individual, a professor at the University of Wyoming, to provide the work to USACE Baltimore.

Comment from G. Beumel, Community Co-Chair - But they are not subcontracting back to another business. They are not subcontracting back to a large business, which is the usual big scam. This is a specific individual, the professor.

Comment from W. Krebs, Community Member - Right, I understand that. I was more concerned about the big scam.

Comment from Paul Bermingham, Community Member - My reaction was similar to Greg's; I thought that ATI, Inc. was better aligned, you know, in terms of their technical and background and so on, but they are not local. There is a question then about how he comes here and what access we would have as well, we need to learn more about that. Nspiregreen, LLC, they are local, but they seem more an urban and transport planning and the environmental issues around those functions than what is happening here. As in the proposed individual, [Ed. garbled] what person would we be dealing with? The person that ATI, Inc. has proposed is very competent versus how much is he in DC? What is involved with this other person? I am more aligned with ATI, Inc., I would say going towards ATI, Inc.

Comment from G. Beumel, Community Co-Chair - I am with you 100 percent.

Comment from Paul Dueffert, Community Member - I guess part of that question then is exactly what are we asking this person to do? If it is just to stand in the same shoes as Peter, yeah. I mean I think the ATI, Inc. person has effectively cloned him and that would be great. If, as we bring all of this to a conclusion, if somehow the portfolio is broader and entails advice as to how we reach out to the community and do things, I do not know what that means, but Nspiregreen, LLC is local and they seem to be more oriented towards that. I could see that could be of value somehow, but it would entail shifting the role somewhat, which I do not think is the plan, as far as I can tell, but I have no idea.

D. Noble explained that the TAPP Contractor is meant to be a technical advice person.

Question from Lee Monsein, Community Member - Dan, so when you talk to them, I do not quite understand what they mean by 'he will take the lead in this project.' Does that mean that they will just direct students that are at the university with him or will he direct someone? I mean, just when you ask them, what do they say are the plans for this guy; is he going to fly into town?

D. Noble confirmed that ATI, Inc. discussed with the candidate the issue of whether the candidate would be willing to travel.

Question from L. Monsein, Community Member - And what was the answer?

D. Noble explained that the answer is 'yes, the candidate is willing to travel to DC once a month.'

Comment from L. Monsein, Community Member - Ok, I mean he is very well qualified. He got his start at my alma mater. We definitely want some continuity here and if they are proposing that this guy be the main player all along, that is a huge advantage. We should go with it.

D. Noble explained that, by law, USACE Baltimore is limited to a $25,000. per year budget for

the TAPP contractor. The TAPP contractor would have to travel back and forth once a month for 12 meetings per year; 6 RAB meetings and 6 Partner meetings. Peter deFur, the former TAPP contractor, attended both the RAB and Partner meetings. Travel from Wyoming for 12 meetings per year would add up to a large part of the TAPP budget spent on reimbursement of travel. USACE Baltimore could ask if ATI, Inc., the company that seems to have the experience, if ATI, Inc. can give a choice of individuals that might be more local.

Comment from L. Monsein, Community Member - It is interesting how they found someone that far away.

D. Noble was not sure if ATI, Inc. had worked with the candidate in the past, but recalled that the candidate had roles on other RABs elsewhere.

Question from L. Monsein, Community Member - When you talked to the other company, were they aware that was something that we were hoping for and then they said that they could not provide someone, or did they just tell you up front?

D. Noble explained that he had a conversation with the owner of Nspiregreen, LLC and made it clear to the owner that the RAB was looking for an individual that will attend the RAB meetings every other month and interact with the RAB members. In the email follow-up to both companies, D. Noble specifically noted that one of the big decisions remaining on the project is the groundwater issue, and that any groundwater experience that a candidate has would be seen as a benefit. D. Noble then received the materials from both companies.

Question from W. Krebs, Community Member - How well are we going to be inclined to do video-conferencing?

D. Noble explained that he was not sure video-conferencing would be possible in the basement of St. David's Episcopal Church. USACE Baltimore could ask the candidate to attend the RAB meetings in person and participate in the Partner meetings remotely via teleconference. The Partner meetings are now only about 3 hours long, and there may not be a benefit for the candidate to travel that far for the 3-hour meeting. P. deFur was able to travel from Richmond, Virginia for the Partner meetings and had other business in the area.

Question from P. Dueffert, Community Member - How about as an initial step to ask them if they can provide someone who is closer. If their answer is, 'this is the guy,' then he seems perfectly fine.

D. Noble asked if the RAB would prefer USACE Baltimore ask ATI, Inc. or both companies if the companies can propose a local candidate.

Comment from P. Dueffert, Community Member - I think it would be fair to ask both companies and give Nspiregreen, LLC another chance to identify a person.

Comment from L. Monsein, Community Member - I am just confused why they would offer up this guy as a lead for the project knowing that they would spend a good half of it paying for it. So maybe that is something else to think about.

Comment from P. Dueffert, Community Member - My sense of Peter is he did spend a good number of hours going through these reports doing detailed analysis and giving us the results. So, if this guy spends most of his time in flights and going from hotel and back, it is not actually hours to spend on us. It would make sense for the Task Force to find another alternative.

Question from L. Monsein, Community Member - Would it be of any help for one of us to talk to them?

G. Beumel confirmed this.

Comment from L. Monsein, Community Member - The two of us can.

D. Noble confirmed this and noted that he would consult with the USACE Baltimore Contracting Office to ensure contacts made by the RAB members are appropriate.

G. Beumel confirmed this.

Comment from L. Monsein, Community Member - Sounds good. If that is of value, I would be happy to.

Question from Jennifer Baine, Community Member - If you guys talk to them do you think we could move forward or do we need to wait until the next meeting? I mean, I would trust both of you.

G. Beumel explained that G. Beumel and D. Noble would send emails to the RAB in the interim.

Comment from J. Baine, Community Member - That way it is not another two months.

G. Beumel and D. Noble confirmed this.

## II. USACE Program Updates

### A. Site-Wide Remedial Action (RA)

Ivanna Goldsberry, USACE Baltimore briefly reviewed the Site-Wide Remedial Design (RD)/Remedial Action (RA).

#### 1. 92 Residential Properties and 13 Federal/City Lots

- Working with 79 of the 92 residential properties.
- Completed 70 civil surveys and 61 arborist surveys.
- Geophysical clearing walkthroughs completed at 55 properties.
- Vegetation removed from 33 private properties and 9 City/Federal lots.
- Geophysical surveys completed at 32 private properties and 4 City/Federal lots off Dalecarlia Parkway.
- No new initial anomaly removals have been initiated since the last meeting. The Planned Remedial Action Area map will continue to be updated as geophysical surveys are completed and if any munitions debris (MD) is found.
- The Regulatory Partners approved the first Property Summary Memorandum to be sent to homeowners of completed properties. Assurance letters for completed properties will begin to be drafted and sent to homeowners.

Question from Allen Hengst, Audience Member - The Area of Interest 13, which is that rectangle in the upper right-hand corner, where I think you might have about a dozen properties? Some are white, which indicate they have already been done?

I. Goldsberry confirmed the white sections indicate properties that have been completed.

Question from A. Hengst, Audience Member - The other ones are blue?

I. Goldsberry confirmed the blue sections indicate properties that have not yet been surveyed.

Question from A. Hengst, Audience Member - Are you going to do all those blue ones?

I. Goldsberry confirmed this.

Question from A. Hengst, Audience Member - And you have the property owner's ok, because one of those properties refused 5 years ago?

I. Goldsberry deferred the question to the Spring Valley Community Outreach Team. She asked Whitney Gross, Spring Valley Community Outreach Program if information about a specific property may be disclosed.

W. Gross explained that the Community Outreach Team can speak to audience members after the meeting. A neighborhood block may be discussed, but information about access to a specific private property may not be disclosed.

Comment from A. Hengst, Audience Member - It is on the bottom row of that rectangle, the one to the right of the white square, so it is the second one over from the left. That is the property that refused after a geophys [Ed. sic] had been done and they identified anomalies there and then he refused to let them on.

I. Goldsberry explained that W. Gross and Rebecca Yahiel, Spring Valley Community Outreach Program will look into the status of that property.

Comment from A. Hengst, Audience Member - Woodway Lane.

I. Goldsberry thanked A. Hengst, Audience Member.

The Dalecarlia Parkway vegetation removal and survey efforts are ongoing. Vegetation was removed on the eastern side of Dalecarlia Parkway. The vegetation is removed to provide a clear line of sight for the geophysical survey equipment to the robotic total station (RTS).

In response to a comment from an audience member at the last RAB meeting regarding the noise barrier that was removed when vegetation was removed along Dalecarlia Parkway behind the audience member's home, USACE Baltimore met with a representative from the DC Urban Forestry Division from the Department of Transportation. During the meeting, a site walk at the specific location behind the resident's home was performed. Native species that may thrive at the property were discussed, however the invasive bamboo present at the property may potentially kill any new plants introduced. USACE Baltimore is exploring options so a resolution is still pending.

Comment from Audience Member 1 - Ma'am, those were my neighbors and myself, and so, I guess, we would ask that you continue to communicate with us on what you are doing back there and the bamboo has continued to grow in, very invasive when other plants are removed and it takes over the space and so we need resolution and it has been a long time now without any resolve or communication for us and we have been working with the mayor's office, et cetera, and we are getting nowhere. We are upset.

I. Goldsberry explained that USACE Baltimore just met with the DC Urban Forestry Division at the end of August and experienced delays in scheduling the meeting. USACE Baltimore continues to work with the DC Urban Forestry Division to determine a resolution. Once a proposal is ready, R. Yahiel and W. Gross will meet with the homeowners to discuss options.

Comment from Audience Member 1 - Thank you.

Question from P. Dueffert, Community Member - I have to ask, what is a robotic totaling station?

I. Goldsberry explained that the RTS is a device that collects coordinate information.

Comment from P. Dueffert, Community Member - Sounds scary.

D. Noble explained that the RTS is a unit that knows exactly where it is in the world. The device can scan the area where the surveyor with a reflective mirror is standing to detect exactly where the surveyor is in the world. Data is collected automatically as the surveyor moves around the area to match to signals in the ground that the surveyor is collecting. The data is used to draw a map of exactly where the signal was detected.

Comment from P. Dueffert, Community Member - Thank you.

I. Goldsberry continued, that the geophysical surveys are ongoing at the private properties. Dynamic surveys are conducted with the G-858 magnetometer that scans for potential burial pits. Dynamic and Cued surveys are conducted with the Man Portable Vector (MPV) equipment.

The map on the bottom right of slide #10 of the presentation shows the process data. The colors represent the gradient of metallic signatures; blue indicates the lowest metallic signature and red indicates a concentration of metallic signatures. A data process map is created for each property after the geophysical survey is completed.

During the last RAB meeting, one of the homeowners expressed concern about a target that was left in the roots of a tree at the homeowner's property. Last week, the team went back to the property to investigate the anomaly. A professional arborist was present during the investigation to ensure no damage was done to the tree by the activities. An air spade tool was used to perform excavation of the soil around the roots. The target turned out to be part of a sprinkler system that is buried in the yard. A few of the metallic pieces found included a hose clamp around an irrigation pipe and a metallic T-junction piece to connect two pipes. The team determined the investigation complete, filled the hole, and restored the location.

Some anomalies are found under hardscape areas. In DC, if those areas are within public spaces such as sidewalks or driveway aprons, a permit is required from DC to excavate. The team was able to obtain 2 approved permits and uncovered 2 anomalies at 2 different properties last week. The homeowners were alerted before the team arrived to perform the work and traffic controls were implemented to protect the areas. A professional hardscape company repaired the areas after excavation was complete.

Question from W. Krebs, Community Member - What were the anomalies?

I. Goldsberry explained that the team did not find anything of interest.

Question from W. Krebs, Community Member - Did you find anything not of interest? Did you find anything?

I. Goldsberry explained that a pipe was found at one of the properties and she did not recall what was found at the other property. No MD or munitions of concern were found at either of the properties.

Question from P, Bermingham, Community Member - What is an anomaly if it is not of interest?

I. Goldsberry explained that an anomaly is something with a metallic signature that the survey equipment detects as not naturally occurring. In soil there are naturally-occurring minerals and metals that also have metallic signatures, so the geophysical equipment scans for signatures that are clustered together that seem unnatural. The equipment can detect pipes because they are an

unnaturally occurring metal, the remediation is looking for munitions-related debris and pipes are not munitions-related debris.

Question from P. Bermingham, Community Member - So if somebody had cutlery in the ground, whatever, that is not of interest, but they show up as an anomaly?

I. Goldsberry confirmed this.

**2. Schedule**

- Fall 2019
  - Continue to finalize plant removal plans and conduct plant removal in Dalecarlia Woods and private properties.
  - Continue geophysical surveys and anomaly removal.
  - Obtain Right-of-Entries (ROEs) from the next group of homeowners.
  - Conduct sampling to delineate the soil removal area in the southern American University (AU) campus exposure unit.
- Winter 2019 - Continue finalizing plant removal plans with subsequent groups in preparation for geophysical surveys.

Comment from M. K. Covert Steel, Community Member - This is a comment for Whitney and Rebecca and Carrie, the Community Outreach Team. Are you guys monitoring Nextdoor, the neighborhood listserv? The Spring Valley listserv has had several posts about 'how much these plants cost,' 'USACE has been here,' 'they are offering me this, is this what you got, should I ask for more,' that kind of thing. I read them and noticed the discussion and I think it would be good if you guys could monitor it as well.

W. Gross thanked M. K. Covert Steel and confirmed that the Outreach Team will look at the listserv. The Outreach Team works with homeowners in each case. For example, if the homeowners say they bought something or have a different landscaper or arborist, they can show the Outreach Team the receipt with the letterhead or letter from their arborist and the Outreach Team will discuss it with the homeowner and the Army Corps.

Comment from M. K. Covert Steel, Community Member - I think you have to have the zip, you know, you put your address on there, so, if you need us to flag it using our ID, let us know.

W. Gross thanked M. K. Covert Steel.

Question from W. Krebs, Community Member - How many rights of entry do you need? I thought you already had all the rights of entry.

W. Gross explained that ROEs are only obtained when intrusive work begins at a property. Many properties are at different stages, some requiring ROEs. I'm not sure how many ROEs exactly we have off the top of my head. We're working with about 70 homeowners at this time.

I. Goldsberry explained that a new ROE is obtained when activities begin on a new property, since ROEs expire and do not carry over from the last investigation.

Question from W. Krebs, Community Member - Ok, so they are renewing.

W. Gross confirmed this.

Question from Audience Member 1 - I have one question and then one comment. The question is, on your initial slide there is a comment about initial anomaly removal. What does that mean

exactly, and how do you finalize? Like, your last slide, the first one.

I. Goldsberry explained that sometimes the team has to go back and perform hardscape excavations or investigate an anomaly, such as the target in the tree roots. The initial anomaly removal is the first excavation that occurs right after the survey is performed.

Question from Audience Member 1 - Perfect. So, you are not showing stats here on everything that has been finalized?

I. Goldsberry asked Audience Member 1 to clarify her question.

Question from Audience Member 1 - I guess, if that is initial, I am just wondering for homeowners that are asking me questions about the process, generally, like, when does this get finalized?

I. Goldsberry explained that the number of how many properties have been finished was not included in this presentation but will be added to the presentation for the next RAB meeting. I. Goldsberry thanked Audience Member 1 for the suggestion.

Comment from Audience Member 1 - That might be helpful. And then, just, I guess, to express appreciation for the work that was done on the house that did have the anomaly under the tree. The homeowner of that house could not come tonight but wanted to thank the group here for the work that they did and the quality of the [Ed. garbled] subcontractors who were onsite during the work and their knowledge. So, thank you.

**B. Former Public Safety Building (PSB)**

Brenda Barber, USACE, Spring Valley Project Manager provided a brief update on the former Public Safety Building (PSB).

- Completed mobilization and training.
- Conducted pot-holing to verify utility location and depths.
- Cut and capped water line to Jack Child Hall that crossed the slope above the former PSB.
- Removed the upper slope. When the upper slope was cut back, the engineer team evaluated the slope area required to safely excavate the PS foundation below.
  - As a result, the team worked with AU to remove a fourth tree from the area.
  - The Erosion and Sediment Control Plan was updated, requiring review and approval by Department of Energy & Environment (DOEE). B. Barber received word that the approval process is being expedited. The team expects the approval and permits will be in place to resume excavation work at the site next week.
- Removed all the concrete piers and sidewalks on the slope that led down to the former PSB.

**C. Glenbrook Road**

B. Barber provided a brief update on 4825 Glenbrook Road and 4835 Glenbrook Road.

**1. Recent Activities**

- The Glenbrook Road sites have been quiet, due to concerns with Areas 2 and 4.
- The team continued low probability work to remove Hazardous and Toxic Waste (HTW) and Arsenic (As) contaminated soil.
- Developing plans and path forward for further excavation near the property line where a glass bottle was recovered, as well as any remaining small excavation areas overall in Areas 2 and 4, when cooler fall weather returns.
- Developing a Risk Assessment (RA) for Area 4 to determine if additional excavation is

required, or if the potential areas may be left As-Is with no further excavation. Plans and safety protocols for both plans are concurrently in development. The RA and plans will be discussed with the Partners in October. The weather will be cool again in the fall, so excavation work may resume if that is the plan selected.
- The property was surveyed to determine the amount of backfill necessary for site restoration.
- Work at the Federal Property included, preparing for upcoming waste shipments next week; performing trailer and site repairs; and carrying out equipment inventory and inspections.

**2. Glassware finds**

On July 22, the team encountered a small amount of potential WWI-related glassware while excavating. Later in the week, the team recovered an intact glass bottle:

- The team collected soil samples where the container was found.
- Edgewood Chemical Biological Center (ECBC) collected the bottle and transported the bottle to Edgewood, Maryland.
- The location was covered with a plastic liner and additional soil.
- The container was determined to be empty. The container headspace and soil samples tested negative for low level agent and agent breakdown products (ABPs).
- There are no remaining concerns with the bottle, now on display at the Federal Property.

**3. Upcoming efforts**

- Complete As hotspot removals.
- Continue to calculate exposure point concentrations (EPCs) for remaining aluminum (Al), antimony (Sb), As, cobalt (Co), total cyanide (CN), manganese (Mn), mercury (Hg), nickel (Ni), thallium (Tl), and vanadium (V). This will allow the team to determine additional "hot spots" for excavation to reduce unacceptable EPCs.
- Excavate Area 2 in the fall. The effort will be conducted using hand-excavation with ECBC when the weather turns cool.
- Discuss plans for Area 4 with the Partners in October.
- Begin site restoration when all excavation is complete.
- Now that the contaminated soils along the shared property line have been removed, soil gas monitoring equipment may be installed in the basement of 4835 Glenbrook Road for the second round of soil gas sampling.

Question from A. Hengst, Audience Member - Will we have the results of the soil gas sampling at 4835 in time for the November RAB meeting?

B. Barber explained that the soil gas samplers must run for 3 weeks and the analysis of the samples takes 2 months. The results might not be available for the November RAB meeting, but USACE Baltimore can send an email over the holidays when the results become available, and then present the findings at the January RAB meeting.

Question from A. Hengst, Audience Member - So, that is part of the Glenbrook Road updates that come weekly, I guess. The 4835 results would be recorded along?

B. Barber confirmed that 4835 Glenbrook Road information is included in the weekly 4825 Glenbrook Road email. As results become available, the information is added to the weekly update. The sample analysis is expected to take much longer.

Question from A. Hengst, Audience Member - Maybe January?

Brenda confirmed this, the sampling information will not likely be available by the November RAB meeting.

**4. Tentative Schedule**

- Late Fall 2019 - Completion of all low probability operations at 4825/4835 Glenbrook Road. Working hours: Monday - Thursday from 6:30AM to 5: 00PM. Heavy equipment operations do not begin until after 7:00AM.
- Winter 2020 - Potential completion of intrusive activities at 4825 Glenbrook Road. Start of site restoration at 4825/4835 Glenbrook Road.
- Summer 2020 - Anticipated project completion.

Question from M. K. Covert Steel, Community Member - Brenda, what does site restoration look like?

B. Barber explained that site restoration will include a slope from AU campus to Glenbrook Road with a small level lot section in the middle for any AU activities. The area will be grassed and seeded so AU may do what they wish with the property. Fencing will include no fence on the front of the property but fences between 4801 Glenbrook Road, 4825 Glenbrook Road, and the upper campus, and then a partial fence between 4835 Glenbrook Road and 4825 Glenbrook Road.

Question from W. Krebs, Community Member - Are we still paying rent to American University for either of those properties?

B. Barber confirmed that USACE Baltimore is still leasing the properties because the properties are at USACE Baltimore's disposal and are not available for AU to use in any capacity at this time.

**D. Groundwater Feasibility Study / Dispute Resolution**

Todd Beckwith, USACE Baltimore provided a review of the Groundwater Remedial Investigation (RI) and a brief update on the Groundwater Feasibility Study (FS).

**1. Groundwater RI Main Objectives:**

- Determine groundwater and surface water occurrence, flow, and chemistry.
- Determine if American University Experiment Station (AUES) activities in the past impacted local groundwater quality.
- Determine nature and extent of any contamination detected.
- Assessment of potential human health risks posed by chemicals detected in groundwater and surface water.

**2. Conceptual Site Model**

While not an exact representation of the Spring Valley groundwater flow, the Conceptual Groundwater Flow Model shown on slide #24 of the presentation is a good example of groundwater flow in Spring Valley. The area on the left side of the figure is considered high ground at AU and the right side of the figure the Potomac River. The groundwater elevation is ~350 ft above sea level for AU and ~30 ft above sea level for the Potomac River, creating a ~300-foot drop-off between AU and other areas in Spring Valley going towards the Potomac River. Groundwater flows downhill, so the general direction of groundwater flow within Spring Valley is from AU and other areas of Spring Valley down into the Potomac River.

The geological conditions include a soil layer on top of weathered bedrock, or saprolite, on top of crystalline bedrock. Most of the groundwater flow moves within the weathered bedrock layer,

varying from location to location. There are streams that run through Spring Valley that interact with the water table in different areas of Spring Valley.

Groundwater flows slowly; in weathered bedrock the groundwater flows ~1 foot per day towards the Potomac River.

**3. Groundwater Monitoring Network**

- Study initiated in 2005, conducted through 2015.
- Over the years, 56 monitoring wells installed and sampled.
- Samples collected from 27 different surface water locations.
- Some of the first wells installed were located on the eastern side of the Dalecarlia Reservoir to determine that no contamination was impacting the Dalecarlia Reservoir. Conclusions were that there was no impact to the reservoir.
- Wells were installed near AU because a significant amount of soil contamination was detected in that area. In areas where contamination was detected, more wells were installed to delineate the nature and extent of the contamination.
- Wells were installed at Sibley Memorial Hospital as a result of contamination detection.
- Background wells were installed north of Spring Valley to establish the general background conditions of the groundwater flowing into the neighborhood.

**4. Groundwater Chemistry**

- Over 250 different chemicals were analyzed from the groundwater and surface water samples to determine potential impacts from AUES activities. The list of 250 chemicals was based on historical activities at the site.
- Maximum detected chemical concentrations for each of the chemicals were compared to regulatory drinking water standards and conservative screening criteria from Environmental Protection Agency (EPA) and DOEE to determine Chemicals of Potential Concern (COPCs).
- The identified COPCs were then evaluated in the Human Health Risk Assessment. The 2 main contaminants of concern for the groundwater study were As and perchlorate.
- The 3 metals, Co, Mn, and strontium (Sr), were detected in a few different locations, identified as COPCs, and carried through the Human Health Risk Assessment. These metals were not necessarily site-related but exceeded the screening criteria.

**5. Human Health Risk Assessment**

- The Human Health Risk Assessment (HHRA) is an estimate of the potential for health impacts at the site.
- USACE uses EPA guidance for performing an HHRA.
- HHRAs are based on:
  - Conservative assumptions of how individuals may be exposed to contaminated media (e.g. groundwater), how long the individuals may be exposed, and the type of exposures occurring at the site.
  - Published toxicity data for the COPCs.
- The Spring Valley receptors considered included: adult resident, child resident, AU student, and site workers.

Question from A. Hengst, Audience Member - Does the site workers include the AU staff, like faculty?

T. Beckwith explained that the receptors included both indoor and outdoor site workers.

Question from A. Hengst, Audience Member - So, it includes faculty?

T. Beckwith confirmed this.

**6. Risk Assessment Conclusions**

- Current Land Use - no unacceptable risk for the current land use. Groundwater is not used as a drinking water source. Exposure scenarios considered were wading or swimming in surface water or using the groundwater as a watering source for lawn or landscape.
- Future Land Use - the same exposure scenarios as the current land use were considered with the added potential of using groundwater as a drinking water source in the future. For that scenario, 1 unacceptable risk was identified: groundwater used as a drinking water source in the area around Glenbrook Road and Lot 18 Disposal Areas (Exposure Unit 2) due to the presence of perchlorate and As in those areas.
  - Perchlorate - currently present above drinking water advisory level of 15 parts per billion (ppb) in wells next to Kreeger Hall on AU campus.
  - Arsenic - currently present above drinking water standard (10 ppb) in one well located on Glenbrook Road.

Question from Mary Douglas, Community Member - Could I just ask a question, the possible future use of the (groundwater) with perchlorate and arsenic, was that not the source of contention between EPA and other members of the Partners? Was there not one contingent that wanted signage for future possible notification that that was unsafe and one contingent that wanted it cleaned up further?

T. Beckwith explained that the dispute came later in the process. This section of the presentation is a review of the Groundwater Remedial Investigation (RI). EPA and DOEE agreed with the conclusions of the Groundwater RI and the identified risk. A later slide will discuss the dispute.

Comment from M. Douglas, Community Member - Ok, thank you.

Question from J. Baine, Community Member - Can you clarify current? Do you mean, because the last time the groundwater numbers were presented, they were going to hold, and there was a debate of whether they were going to be tested or not, and I thought it was decided that they were going to be re-tested. So, are these current, like, as in 2019?

T. Beckwith explained that the current land use is looking at the current uses of the land by people of the area.

Comment from J. Baine, Community Member - No, I mean the levels. Currently, the level is above 15 parts per billion.

T. Beckwith confirmed that the levels are based on sampling that occurred 4 years ago, the most recent samples.

Comment from J. Baine, Community Member - I see. That was what I was trying to ask.

**7. Exposure Unit 2**

The oval in the center of slide #29 of the presentation indicates the Area of Concern, Exposure Unit 2. Exposure Unit 2 contains the wells that have had detections above drinking water standards. The other wells surrounding Exposure Unit 2 have been sampled and there have been no significant detections, so the general area of groundwater contamination is bounded, as shown in slide #29.

- Multiport (MP)-2, located on Glenbrook Road, is the one well that still has As above 10ppb, the drinking water standard. MP-2 is a deep multiport well installed to ~200 ft., with sampling ports at 8 different depths within the well. MP2-1 is the first sampling port at ~30 ft below ground surface. Sampling port MP2-2 is at ~50 ft.
- Piezometer (PZ)-4D and Monitoring Well (MW)-44 still have perchlorate above the drinking water standard.

When MP2 was first sampled in 2012, both perchlorate and As levels were above drinking water standards. The yellow highlights shown on slides #30, #31, #32, and #33 indicate sample results that were above the drinking water standard. There were a number of different sampling ports that had both As and perchlorate above drinking water standards. Most recent sampling results show that perchlorate is no longer an issue, the perchlorate is no longer above the 15-ppb drinking water advisory level. Some sampling ports in MP2 still have As detections above 10 ppb, but the concentrations seem to be decreasing.

Question from M. K. Covert Steel, Community Member - Todd, I am not following. I thought we were going to re-do these samples. Are we only re-doing some of them?

T. Beckwith explained that another round of samples will be collected. When evaluating groundwater data, all the data and general trends are considered when making decisions. The data for MP-2 seems to indicate that the well is cleaning up and the groundwater conditions are improving. The MP-2 well is across the street and down-grade from the site of significant source removal, ~40,000 tons of contaminated soil. The groundwater conditions in this area would be expected to improve.

Question from P. Dueffert, Community Member - Why did the sampling stop in 2014?

T. Beckwith explained that all the data necessary to write the Groundwater RI report had been collected at that point. The Groundwater RI report was written, and the decision was made to stop the sampling at that point, finalize the Groundwater Decision Document (DD), and then consider conducting additional sampling if necessary.

Question from A. Hengst, Audience Member - I think it is neat how you laid out all those different ports on one page to show the different readings, but my understanding is they correspond to different depths?

T. Beckwith confirmed this.

Question from A. Hengst, Audience Member - So, is the shallowest one the one on the upper left, and the deepest one the one on the lower right?

T. Beckwith confirmed that MP2-1 is the shallowest port at ~30 ft and MP2-8 is at ~160 ft below ground surface.

Question from A. Hengst, Audience Member - So, you basically have it from, on the arsenic side, starting from the second one on the left all the way over to the bottom one on the right, except for those 2, I guess it is 4 and 5, are not over the limit. MP4 and MP5 are not over the limit but the rest are. It looks like, as you go deeper, it gets higher. Is that true? The deeper the well port is, the higher the reading?

T. Beckwith explained that the difference between an 11 and 12 reading is not significant, the readings are similar concentrations.

Question from A. Hengst, Audience Member - And the deepest one is 150 ft or?

T. Beckwith confirmed that the deepest MP-2 port is ~160 ft.

Question from A. Hengst, Audience Member - So, you basically have it from the second one down to 160 ft. The second one is how deep, the second one on the left?

T. Beckwith explained that MP2-2 is ~50 ft.

Question from A. Hengst, Audience Member - So, from 50 to 150 ft you have got arsenic over the limit, basically?

T. Beckwith confirmed this.

Comment from A. Hengst, Audience Member - That is pretty unusual, is it not?

T. Beckwith explained that he would not say the results are unusual.

Question from A. Hengst, Audience Member - Has that happened elsewhere at any other FUDS, where you have arsenic in the water?

T. Beckwith explained that he could not speak to As contamination at all other FUDS sites.

Comment from A. Hengst, Audience Member - So, if you do these readings again and they are still high, you are going to be right back where you were when you paused, except you are still not going to agree to clean it up because it is groundwater. You do not care what the readings are, you are not going to clean it up. And the city and EPA want you to clean it up. So, I guess what you are betting on is when you do these tests again, they will be below the limit, and then it is a moot point and you can move on with land use controls. But if they are still up, then you go to Tier 1, right? I mean, you are not going to agree.

T. Beckwith explained that these are issues that must be discussed with the Partners.

Comment from A. Hengst, Audience Member - But you are not going to, the Army is not going to change its position about cleaning up the groundwater, you are not going to do it no matter what the level is. So, you are betting on it being below.

T. Beckwith explained that is a decision for USACE to make, after discussing with Partners.

Comment from Brian Barone, Agency Representative - DOEE - I think Todd is providing data at this point.

Comment from A. Hengst, Audience Member - Yep.

Comment from B. Barone, Agency Representative - DOEE - I think that is appropriate, but hypotheticals and what will happen we do not know.

Question from A. Hengst, Audience Member - We are going to know by January.

G. Beumel explained that B. Barone answered the question that the data is being presented right now. The decisions will be made later and DOEE and EPA will be involved with the decisions.

Comment from A. Hengst, Audience Member - So, a year would have gone by and we will be right back where we were last December.

T. Beckwith explained that he did not know that.

Question from P. Dueffert, Community Member - What is the timeline for the re-test?

T. Beckwith confirmed that the re-test will be performed this week.

Question from P. Bermingham, Community Member - And the timing of the results of the re-test?

T. Beckwith explained that the results will be back ~1 month after the sampling.

Question from P. Bermingham, Community Member - So, by the next RAB?

T. Beckwith confirmed this.

- Monitoring Well (MW)-24 and MW-25, located on Glenbrook Road on either side of MP-2, are shallow wells with well screens ~25 ft below ground surface. Historically, MW-24 had As and perchlorate at levels above drinking water standards. MW-25 also had higher levels for As and perchlorate in 2005-2007.
- The shallowest well next to Kreeger Hall, PZ-4S, had a well screen at ~35 to 45 ft below ground surface. When first sampled in 2006-2007, this well had the highest detection of perchlorate at 146 ppb. In recent years, the concentrations have decreased significantly.
- PZ-4D, a deeper well next to PZ-4S, is located at ~60 ft below ground surface. The concentrations at PZ-4D were more persistent, hovering at ~40 ppb for many years. In recent years, the concentrations have decreased, now hovering at ~15 ppb.
- MW-44 is located ~90 ft below ground surface. This well has had persistent perchlorate detections at ~40 ppb since it was first sampled in 2012 - 2014.

Question from Dan Nichols, At Large Representative - American University - What is the location of that one, Todd?

T. Beckwith confirmed that the location of MW-44 is next to Kreeger Hall.

Comment from D. Nichols, At Large Representative - American University - That is Kreeger also. Ok, thank you.

T. Beckwith explained that these were all wells near Kreeger Hall that represent a vertical delineation of the location and depth of the perchlorate.

- MW-45S/D are deeper wells next to Kreeger Hall. Recent results at these wells have been clean as well.

**8. Feasibility Study and Proposed Plan**

Based on the results of the Groundwater RI, an unacceptable risk was identified if the groundwater in Exposure Unit 2 is used as a drinking water source. Based on that risk, there is a requirement to perform a Groundwater FS to evaluate alternatives that could address the risk. The Groundwater FS completed a review of the alternatives, including Land Use Controls (LUCs), a pump and treat system, and bioremediation.

Question from Malcolm Pritzker, Community Member - This is all based on groundwater as used as drinking water. What kind of circumstances would there have to be, changes would there have to be for groundwater to ever be used as drinking water?

Comment from A. Hengst, Audience Member - I can think of 3 circumstances.

Comment from M. Pritzker, Community Member - I did not ask you. Excuse me.

Comment from A. Hengst, Audience Member - Somebody poisons the reservoir. Somebody, a

terrorist, poisons the reservoir. You have nuclear fallout from a meltdown at the power plant which has fallout landing on the reservoir, or you have an oil spill on the Potomac River. Then we would be drinking groundwater.

Comment from M. Pritzker, Community Member - Thank you.

Comment from A. Hengst, Audience Member - Those are just 3 possibilities.

Question from M. Pritzker, Community Member - Sir, can you answer my question?

Comment from A. Hengst, Audience Member - He cannot answer it. I am answering it. He cannot answer it.

Comment from M. Pritzker, Community Member - But I did not ask you the question.

Comment from A. Hengst, Audience Member - But he cannot answer it. So, I gave you 3 scenarios. Each of those scenarios are possible.

Question from M. Pritzker, Community Member - Could I suggest that we allow him the courtesy?

Comment from A. Hengst, Audience Member - He already said he did not, he could not answer it. Did you not hear him?

Comment from M. Pritzker, Community Member - I did not hear him say that.

Comment from A. Hengst, Audience Member - He said I cannot answer that.

T. Beckwith noted that A. Hengst's point is taken.

Comment from G. Beumel, Community Co-Chair - Let us stop arguing this issue because this is actually what has happened in the past, and he is trying to get you up to date on what is happening in the past.

Comment from A. Hengst, Audience Member - But he forgot.

Comment from G. Beumel, Community Co-Chair - And an oil spill on the Potomac River would not make us suddenly drink groundwater. There would not be enough time to drill enough wells. So, just because you think it is a good idea does not make it so. Let us continue with this report to tell us where we are at, because we have a groundwater study beginning tomorrow, and then from there we are going to get new results, and then we are going to go to a decision-making process, and we will probably go back to dispute resolution. Ok?

Comment from L. Monsein, Community Member - You know, kind of a recurring theme throughout all of these years has been that certain questions are not asked and therefore they do not have to be answered. For example, where did a lot of this contamination come from? Some of it probably never came from these activities in, you know, 1917 and 1918, but the Army Corps decided not to speciate, not to ask the question, and basically clean it up wherever it was. The EPA also said, 'it does not make a difference whether that is or is not a possibility, if it could be used for drinking water if someone wanted to do it someday down the road, it does not make a difference how likely or not, that it has got to be cleaned up.' So, there is lot of that. I think that, basically, the answer to the question that was asked to you is that there is no answer for it. It does not make a difference how likely it is that that will happen. If it could happen, then the EPA says that it has to be cleaned up. I do not agree with that myself.

Comment from A. Hengst, Audience Member - Neither does the Army.

Comment from L. Monsein, Community Member - But, so, anyway.

T. Beckwith confirmed that there is a disagreement over groundwater clean-up requirements between EPA, DOEE, and the Department of Defense (DoD). The DoD's position is risk-based, and that the clean-up should be based on whether there is unacceptable risk at a site. The LUC alternative is an acceptable remedy, as long as the remedy manages the risk.

Question from D. Nichols, At Large Representative - American University - Does the drinking water standard apply at another site that has had to have a clean-up? Has that standard been used before for groundwater for drinking water standard? Is that a commonly acceptable standard for groundwater?

T. Beckwith confirmed that the drinking water standard is sometimes used for clean-up, certainly in areas where people are on private water wells with significant contamination issues.

Question from M. K. Covert Steel, Community Member - But any other Superfund sites?

B. Barone explained that the District has a non-degradation standard, which means that all water sources in the District of Columbia should be protected to a level where they could be used for drinking water. When this project got going, applicable standards were established for groundwater use; the drinking water standard, or Maximum Contaminant Level (MCL), for arsenic, and an interim standard for perchlorate. The District hopes to move things towards a clean-up that will allow for drinking water use. Whether or not it is ever going to happen, the standard is to maintain the integrity of the groundwater. That is a policy.

Question from D. Nichols, At Large Representative - American University - That is equally applied no matter the location?

B. Barone confirmed this.

Question from D. Nichols, At Large Representative - American University - Thank you.

Question from M. Douglas, Community Member - I have a process question. If we had a TAPP advisor on board now as we have previously, would they be weighing in on the decision-making process or the dispute-resolution process?

T. Beckwith confirmed that USACE would consider the TAPP advisor's input.

Question from M. Douglas, Community Member - So, does that argue in favor of getting somebody to take a look at this issue on behalf of the RAB sooner rather than later? I mean, I guess it is mainly a question for Dan.

B. Barone explained that when the dispute happened and DOEE tried to think of a reasonable way to move forward rather than going to arbitration, it was established that the data is 4 years old. Some of the concentrations are decreasing, some of the concentrations are close to the standard. A 12 standard for As versus a 10 MCL is very close. Background levels of As have been elevated in DC in the past. USACE has cleaned up a lot of material even before now. Before going to that discussion, DOEE felt that it made sense to have a look at what is there now and that is what the Partners are doing. It is important to determine that the wells that are sampled are good wells and are giving good data. Some of the techniques used could potentially impact the concentrations, such as when there is sediment accumulation in the wells, that might result in higher concentrations. The concentrations are fairly close to the drinking water standard. The discussions about next steps can happen once the data is in-hand. If the As cleans up, then there is no need to

address As and the focus can be on perchlorate. If both contaminants do not pass, then the discussions will go forward.

Question from M. Douglas, Community Member - What is the timeframe for the new testing?

T. Beckwith explained that testing will begin this week.

Question from M. Douglas, Community Member - All these wells are going to be tested, or all the problematic wells?

T. Beckwith confirmed that all the problematic wells in Exposure Unit 2 will be sampled, beginning tomorrow.

B. Barone explained that a small number of wells will be tested.

Comment from M. Douglas, Community Member - Well, that sounds reasonable.

Question from M. K. Covert Steel, Community Member - Todd, just one follow-up question. Has the Army cleaned up at any Superfund sites, the water to drinking water standards or would this outcome of the potential dispute resolution be the first? I would appreciate any example of precedent.

T. Beckwith explained that he does not know the drinking water outcomes of Superfund sites across the country. He was sure that the groundwater has been cleaned up in the scenario of a rural area with people on private wells and in the scenario of wells out west where water is a lot less available. Clean up of the water would be performed there because contamination is a real risk to a drinking water source.

Question from John Wheeler, Community Member - I have a question for Dan. Is there an established dispute resolution process where the Corps and the 2 regulators do not agree?

D. Noble confirmed that the established dispute resolution process is under the Defense and State Memorandum of Agreement (DSMOA) that exists between the DoD and the city. DC invoked the dispute resolution under the DSMOA. The rules of the DSMOA govern the process.

B. Barone explained that there are different steps to the process. If the issue is not resolved at the first step, then the process would go to the director of DOEE, and after that the process would be elevated to the mayor's office.

Comment from John Wheeler, Community Member - Ok, there is a process and right now it is still somewhat hypothetical. So, I do not want to play it to the end.

Question from M. Pritzker, Community Member - Before you move along, this entry about Nationwide DoD/EPA Policy Disagreement. Can you describe what that is?

T. Beckwith explained that EPA and DOEE's position is that when it comes to groundwater, regardless of whether anyone is using the groundwater as drinking water, EPA and DOEE expect the water to be cleaned up. Their Remedial Action Objective is to restore groundwater to drinking water use. The DoD position is that The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) law that the DoD follows is risk-based, so the DoD makes decisions based on risk. If there is a scenario in which groundwater is not being used as a drinking water source, then LUCs would be acceptable.

Question from M. Pritzker, Community Member - Perhaps this is the question that John was asking. Is there a procedure to resolve that dispute or are we governed by the Department of

Defense's standards?

T. Beckwith explained that the last step of the dispute resolution process is the mayor for DC and the Deputy Assistant Secretary of the Army for USACE. Ultimately, USACE is the lead agent for this project and would have the ultimate authority to make the decision.

Question from Malcolm Pritzker, Community Member - So, it is the Army's call.

T. Beckwith confirmed this.

Comment from A. Hengst, Audience Member - But then you could be sued by the DC Attorney General.

Question from L. Monsein, Community Member - Could I ask, maybe I missed this over the years, but did we ever talk about the potential ways to clean up, if we were to go down that route, or any of the ways that have been used to clean up groundwater around the states? I might have missed that meeting.

T. Beckwith explained that the Groundwater FS has different alternatives that were considered, including a pump and treat system that involves installing wells, pumping the water out, and putting the water through a treatment system to remove the contaminants.

Question from L. Monsein, Community Member - So, you would use the existing wells or?

T. Beckwith explained that new wells designed for the pump and treat purpose would be installed.

Question from L. Monsein, Community Member - And would have higher volume. And that has been done in some places?

T. Beckwith confirmed that the pump and treat method has been used in many places. The pump and treat method is not always effective at achieving drinking water standards. The method will remove the contaminants from the ground, but many sites have had pump and treat systems installed for decades and do not get to drinking water standards. Other alternatives considered in the Groundwater FS include bioremediation,that involves injecting nutrients into the subsurface to promote bacterial growth that can act to break down the perchlorate in the subsurface. This method will not treat As.

Question from L. Monsein, Community Member - That is detailed in the Decision Document that I can go back and read for interest?

T. Beckwith and D. Noble explained that the remediation alternatives are part of the Groundwater FS. T. Beckwith gave a presentation on the Groundwater FS a few years ago.

Comment from L. Monsein, Community Member - I must have missed that one meeting, because it has always been mentioned but not in detail. I will go back. Thank you.

T. Beckwith explained that the Groundwater FS can be shared online, but the document is still in the Draft Final stage because the dispute must be resolved to finalize the Groundwater FS.

Question from A. Hengst, Audience Member - Question about the Army's position on bioremediation. I know a couple years ago you said, or the Army believed, and EPA did not agree, that if you bioremediate the perchlorate, it would liberate the arsenic. You remember that position?

T. Beckwith explained that the liberation of As in the subsurface by bioremediation of perchlorate can happen, but it is not a position.

Question from A. Hengst, Audience Member - That is your theory? Ok, so that would apply to Kreeger where you have perchlorate. My question is, what about bioremediation for the arsenic? Is that not a possibility?

T. Beckwith explained that As is an element and cannot be destroyed. The element As can only be de-mobilized, so that As no longer moves with the groundwater, dropping out of a solution and becoming less soluble. Perchlorate is made up of a chlorine and 4 oxygen molecules, so if a few or all of the oxygen molecules are broken off, then the compound is broken down and is no longer perchlorate.

Comment from A. Hengst, Audience Member - So, it sounds like the Army's reservations about bioremediating the perchlorate would not apply to the arsenic because it is just not relevant. You do not bioremediate arsenic, you only do it with perchlorate. Ok.

T. Beckwith confirmed this and explained that it is true that if USACE began injecting chemicals to treat the perchlorate, there would be the potential to mobilize As and make As more soluble.

Comment from A. Hengst, Audience Member - I know that is what the Army believes. But the EPA does not believe that and that is another disagreement that you have, which is really moot now because you have got arsenic at one place and perchlorate at the other.

T. Beckwith explained that he did not think that the EPA disagrees with the statement that the mobilization of As is possible. USACE and EPA do not know that for sure, but it is a possibility.

Comment from A. Hengst, Audience Member - A few years ago. Well, I think this was more relevant when you had arsenic.

Comment from G. Beumel, Community Co-Chair - Ok, we do not need to fight issue right now because we are not yet making the selection of the solution.

Comment from A. Hengst, Audience Member - I am talking about the past. Once upon a time, the well on Glenbrook Road had perchlorate and arsenic over the limit, now it is just arsenic.

Comment from G. Beumel, Community Co-Chair - Right. So, the past does not matter as much, since that situation does not exist right now.

Comment from A. Hengst, Audience Member - Just wanted to clarify the position.

The Dispute Resolution was paused at Tier 2 while USACE and the Partners discussed conducting additional groundwater sampling. The U.S. Geological Survey (USGS) will begin conducting sampling tomorrow, September 11. After the sampling is completed, USACE and the Partners will discuss the results and determine the requirements for any future groundwater sampling, such as additional data collection or installing more wells.

Question from J. Baine, Community Member - You are going to start sampling tomorrow, when do you expect to have the results?

T. Beckwith explained that the sampling results are expected in ~1 month.

**III. Community Items**

**IV. Open Discussion and Future RAB Agenda Development**

G. Beumel noted that a RAB Member is leaving the RAB and the members should have received the news by email. By the next meeting the membership committee will discuss about a plan to recruit a new member. If the RAB members have any ideas or suggestions or if an audience

member is interested, please let USACE know. The membership committee will go through a formal member search process.

Comment from Malcolm Pritzker, Community Member - I am on the membership committee, we have not had a lot of people knocking on my door.

Comment from G. Beumel, Community Co-Chair - Apparently, he does not have a waiting list of people wanting to be RAB members.

Comment from Malcolm Pritzker, Community Member - If there is, I do not know about it.

Question from M. Douglas, Community Member - What is the projected absolute-ish end date for the project, the whole thing. I mean, I know Brenda said 2020, next summer for the Glenbrook Road part, but what about all the different aspects of it?

D. Noble confirmed that B. Barber expects the Glenbrook Road portion of the remediation to be wrapped up in ~1 to 2 years. Originally, the Site-Wide RA was expected to be complete by July 2020. USACE is discussing the schedule with the contractor and a new schedule is pending. USACE will share the new schedule for the Site-Wide RA at the January or March RAB meeting. All the elements of the Site-Wide RA will be completed by summer 2020 except for the work continuing on the 92 residences. The new schedule projection may extend ~1 or 2 years beyond the original completion date. The schedule of the groundwater portion of the Site-Wide RA is unknown, the project will not be over until the groundwater remedy has been determined.

Question from M. Douglas, Community Member - I was thinking a new RAB member might be more willing to join if they knew that there was a more limited time frame.

D. Noble noted that the project has been ongoing for 26 years.

Question from W. Krebs, Community Member - Is any more funding required until it is all fixed up?

D. Noble explained that funding for the Site-Wide RA is in place. USACE will share the FY19 Funding Actuals and FY20 Funding Projections at the next RAB meeting.

W. Gross noted that anyone with questions can contact the Community Outreach Team online or by phone.

**A. Upcoming Meeting Topics**

- Funding: FY19 Actuals and FY20 Projections
- RAB TAPP Consultant
- Groundwater FS Study/Policy Issues between USACE, EPA, and DOEE
- Site-Wide RD/RA
- 4825 Glenbrook Road/4835 Glenbrook Road

**B. Next RAB Meeting:**

Tuesday, November 12, 2019

**C. Open Discussion**

**V. Public Comments**

**VI. Adjourn**

The meeting was adjourned at 8:35 PM.