



Restoration Advisory Board June 11, 2020 - Meeting Agenda

- **Welcome**
- **Introductions**
- **Presentations**
- **Q&A Session**
- **Updates**

Thank you for joining us. The meeting will begin shortly. If you are experiencing technical difficulties, contact WebEx by telephone at 1-866-779-3239.

Virtual Meeting Instructions



- Attendee cameras are not being used; no attendees will be viewed by others
- Attendee microphones will remain muted except when recognized for questions
- Webinar sign-in names will be used for the record
- Comments for Feb. 2020 RAB Meeting to be sent to Dave Barney
- Please hold all questions or comments until after the presentations

Q&A Options

1) Ask a question by typing it in the **Q&A box**.

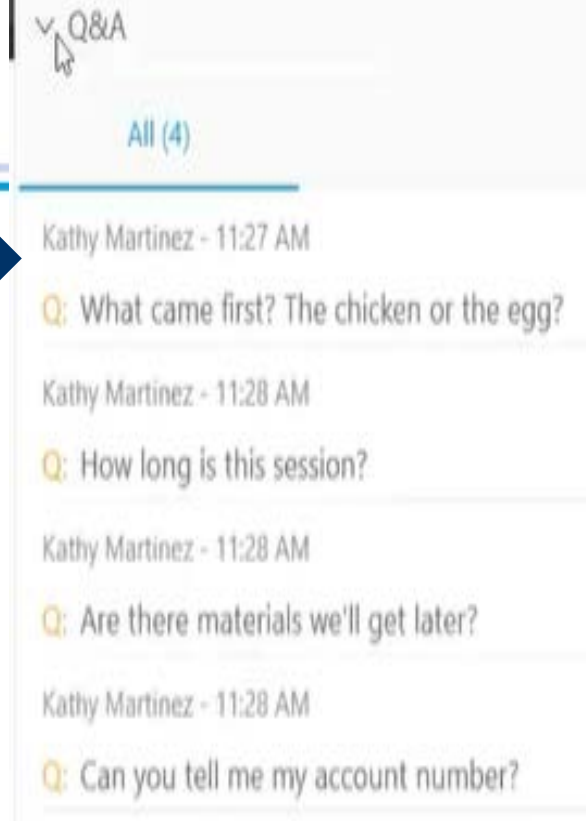
You may need to click the three white dots in the control panel to open the Q&A box



2) **Raise your hand** to be recognized and have your microphone unmuted.

Raise Hand  in the **Participants** panel to signal a question

3) **Phone-only** attendees will have their microphone unmuted and have the opportunity to ask a question.



THANK YOU FOR ATTENDING TONIGHT'S MEETING



BRAC Cleanup Team (BCT) Points of contact:

Navy: Dave Barney, BRAC Environmental Coordinator

(781) 626-0105

david.a.barney@navy.mil

Brian Helland, Remedial Project Manager

(215) 897-4912

brian.helland@navy.mil

EPA: Laurie O'Connor

(617) 918-1605

Oconnor.Laurie@epa.gov

MassDEP: David Chaffin

(617) 348-4005

david.chaffin@state.ma.us

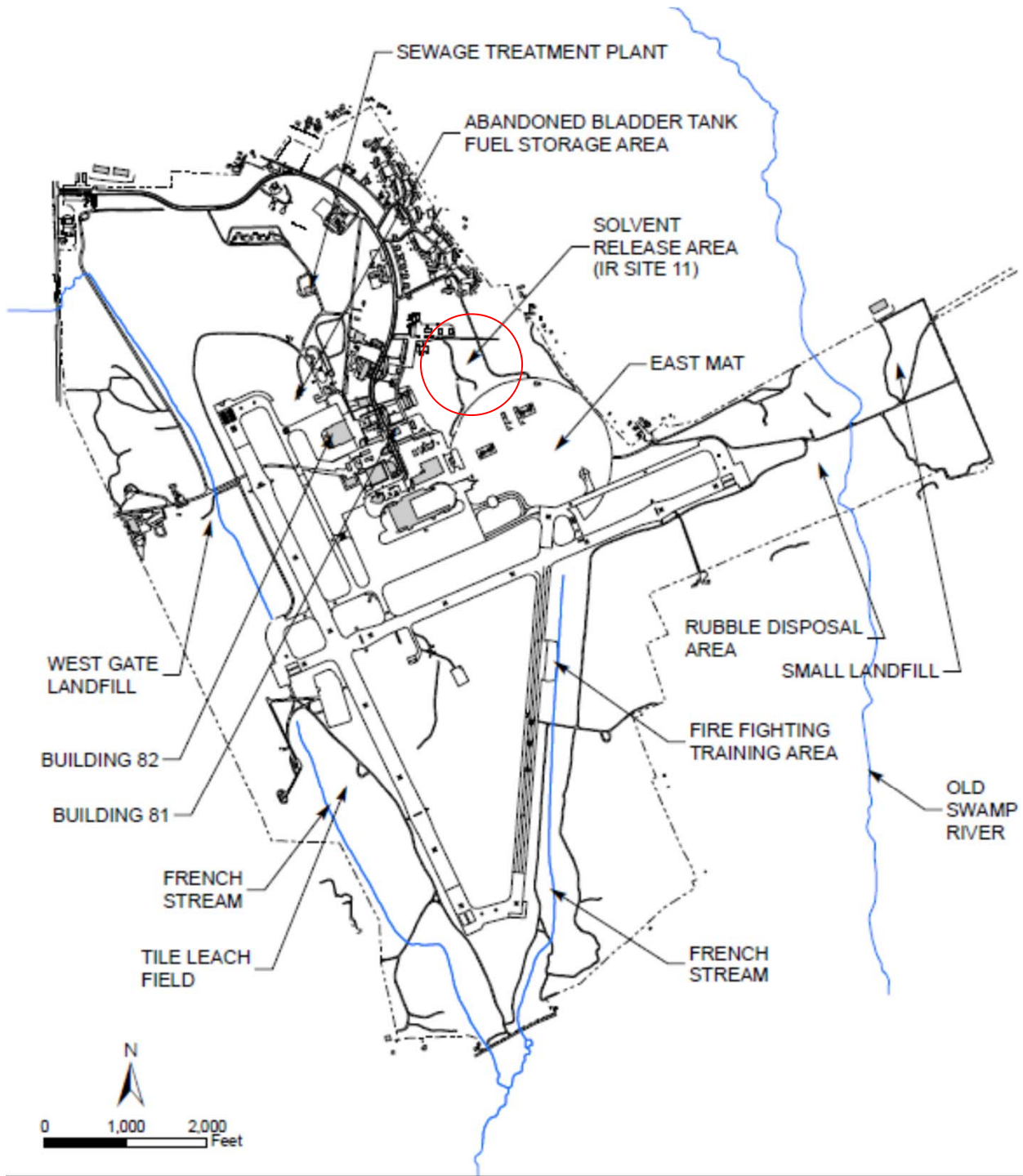


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Solvent Release Area Bioremediation Progress

June 2020



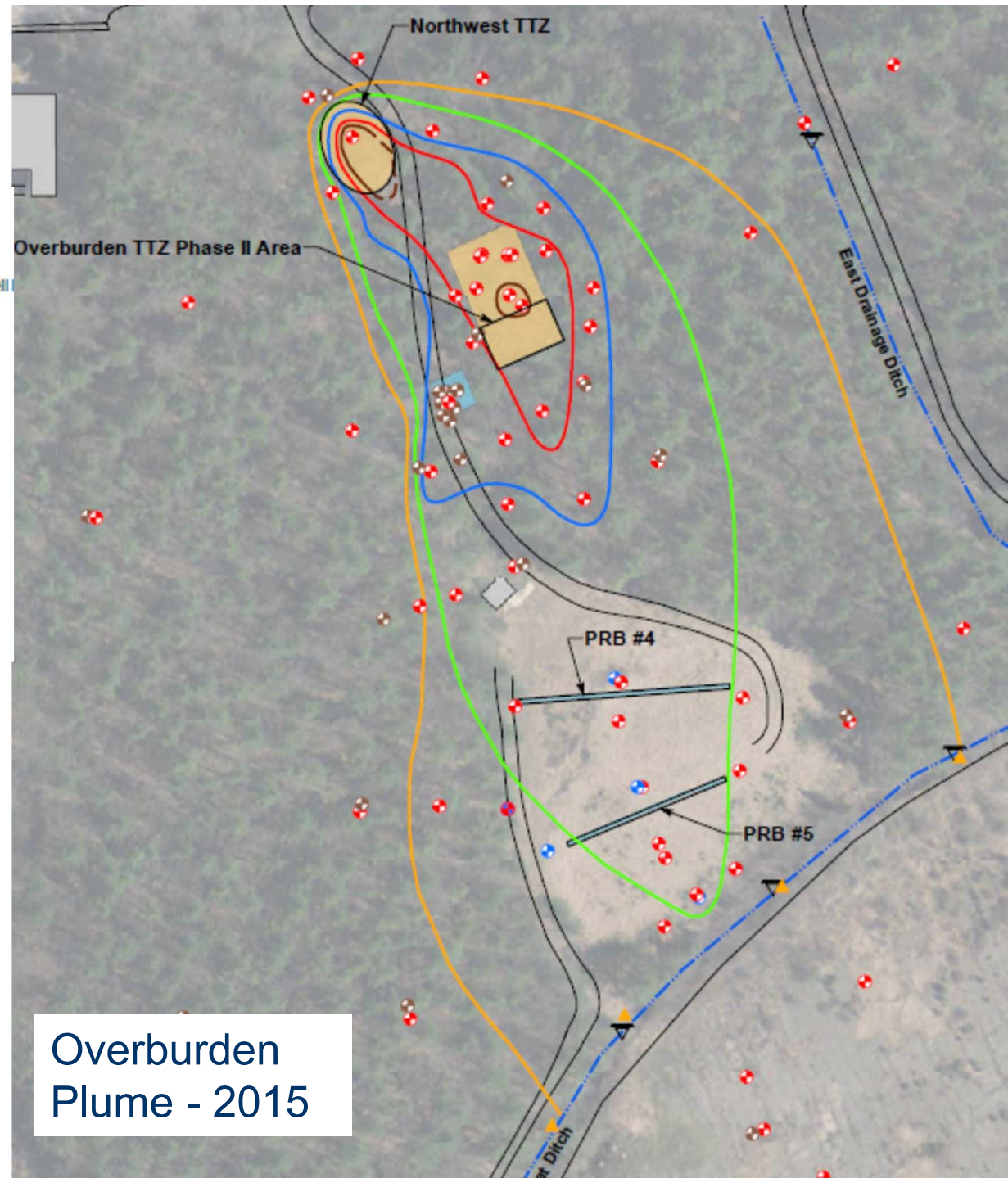
Solvent Release Area Overview



- The Record of Decision (or ROD) for the SRA included Overburden and Bedrock Source Area Enhanced Bioremediation via enhanced reductive dechlorination (ERD) and Mulch Permeable Reactive Barriers (PRBs)
- ERD is a remediation technology commonly applied for treating chlorinated VOCs in groundwater.
 - Transforms chlorinated VOCs through a series of biochemical reactions where chloride atoms are replaced by hydrogen atoms by naturally occurring bacteria under reducing conditions.
 - Performed by modifying groundwater geochemistry to create reducing conditions that are conducive to progressive dechlorination of chlorinated VOCs by bacteria.
 - As the naturally-occurring microbial populations utilize the added carbon substrate (electron donor), dissolved oxygen is consumed and generation of anaerobic reducing conditions proceeds. These reducing conditions, along with the presence of an electron donor (hydrogen), enable the reductive dechlorination process to occur.

Legend

- Overburden Monitoring Well
- Weathered Bedrock Monitoring Well
- Overburden and Weathered Bedrock Monitoring Well
- Bedrock Monitoring Well
- Surface Water/Sediment Location
- Groundwater 10 ug/L PCE Contour
- Groundwater 100 ug/L PCE Contour
- Groundwater 1000 ug/L PCE Contour
- Groundwater 5000 ug/L PCE Contour
- Groundwater 10000 ug/L PCE Contour
- Overburden MIHPT Point
- Approximate Staff Gauge Location
- Overburden Target Treatment Zone
- Bedrock Target Treatment Zone
- Building



Overburden Plume - 2015

Solvent Release Area Recent Activities

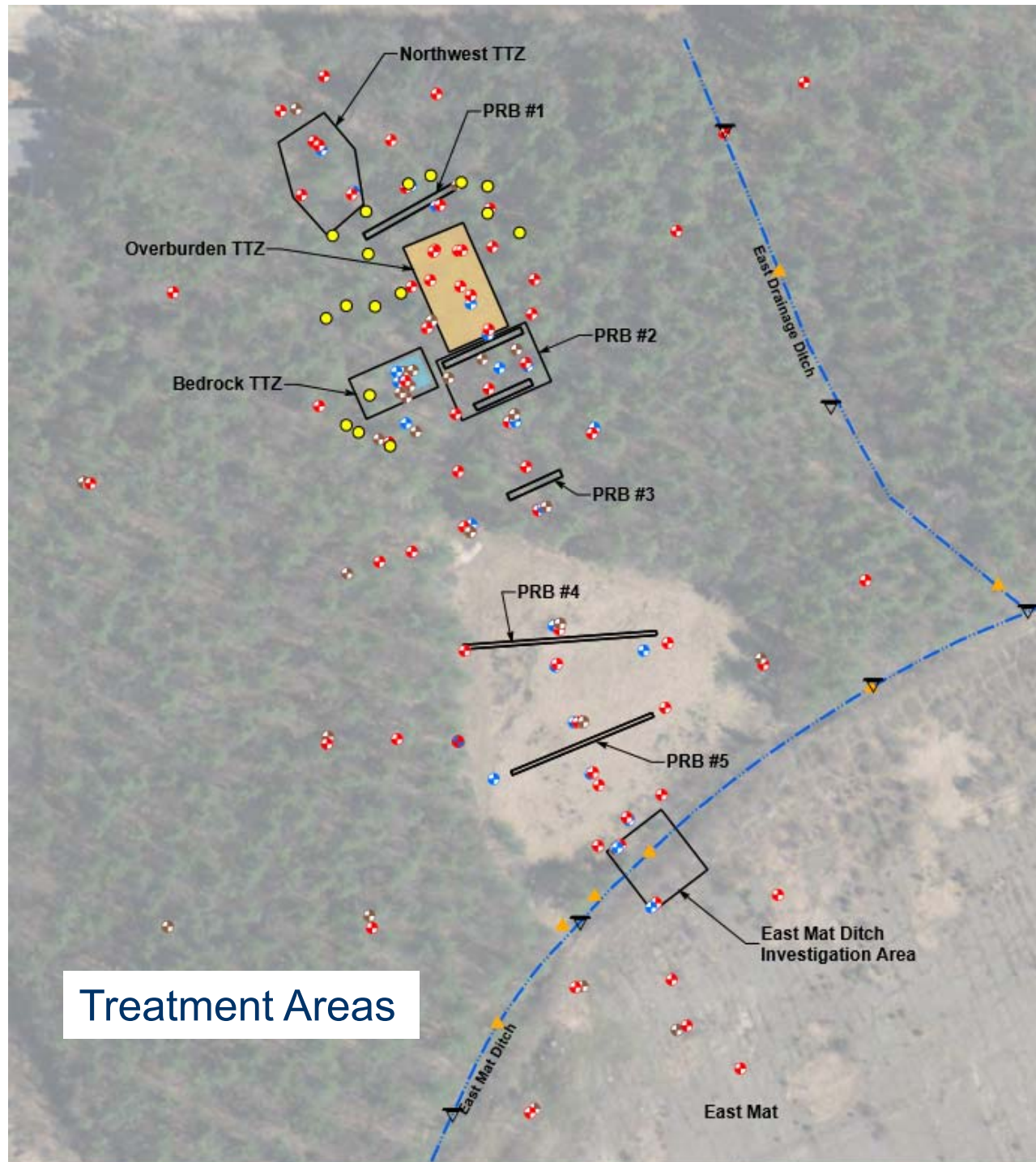


Injection Summary

- **2015 – 2016:** Phase I Enhanced Reductive Dechlorination (ERD) injections in Overburden and Bedrock Target Treatment Zones (TTZ). ERD injections into overburden (23 wells and 17 direct push points) and bedrock (6 wells). Additional characterization to understand extent of CVOCs.
- **2017:** Phase II injections occurred over a wide portion of the site (NW TTZ, OB TTZ, PRB#1-PRB#5). ERD injections into overburden (74 direct push points) and weathered bedrock (51 wells). Additional investigation of the East Mat Ditch Area.
- **2018:** Continued Phase II ERD injections into weathered bedrock (45 wells) to fill in injection gaps (OB TTZ, PRB#1, PRB#2, PRB#3). Installed 10 bedrock borings (19 wells) to better characterize CVOCs bedrock.

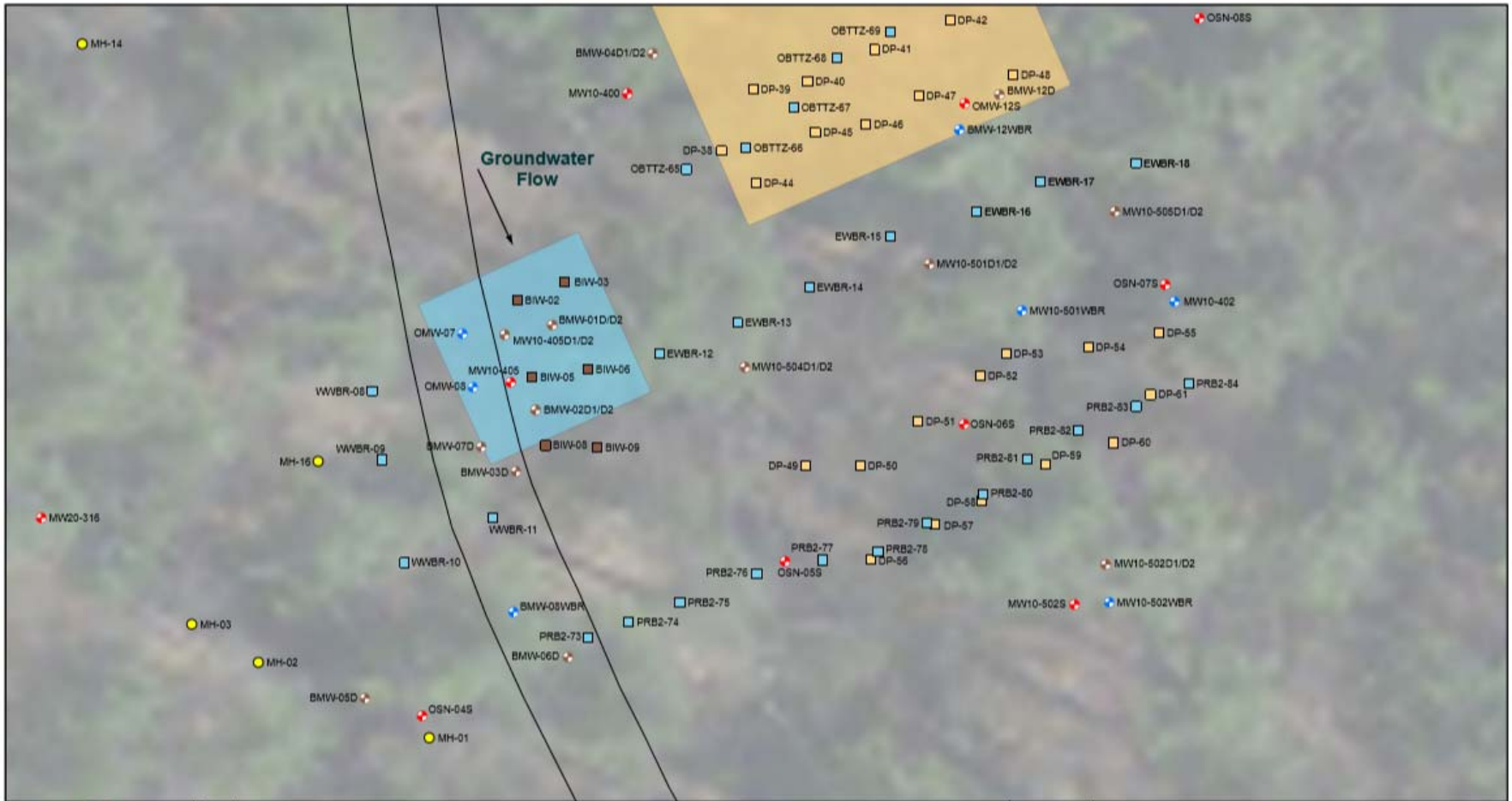
Recent History (2019-Present)

- **March 2019:** Select weathered bedrock and bedrock monitoring event
- **September 2019:** Site-wide post-injection monitoring event
- **December 2019, March 2020, June 2020:** Targeted groundwater monitoring in the East Mat Ditch Area and select bedrock wells to better evaluate trends
- **March 2020:** A Draft Bioremediation Progress Report was submitted, will be finalized in June 2020.



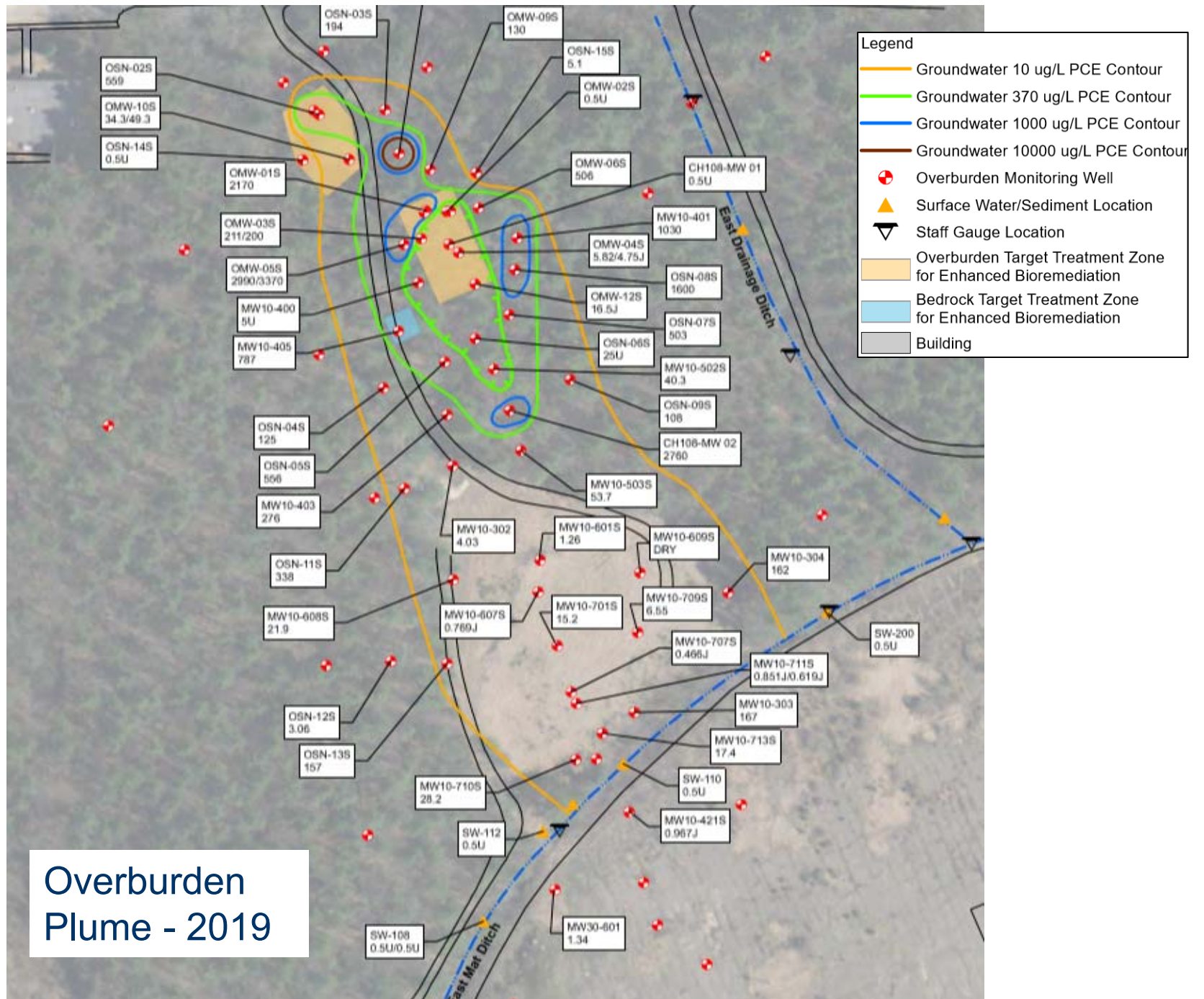
Treatment Areas

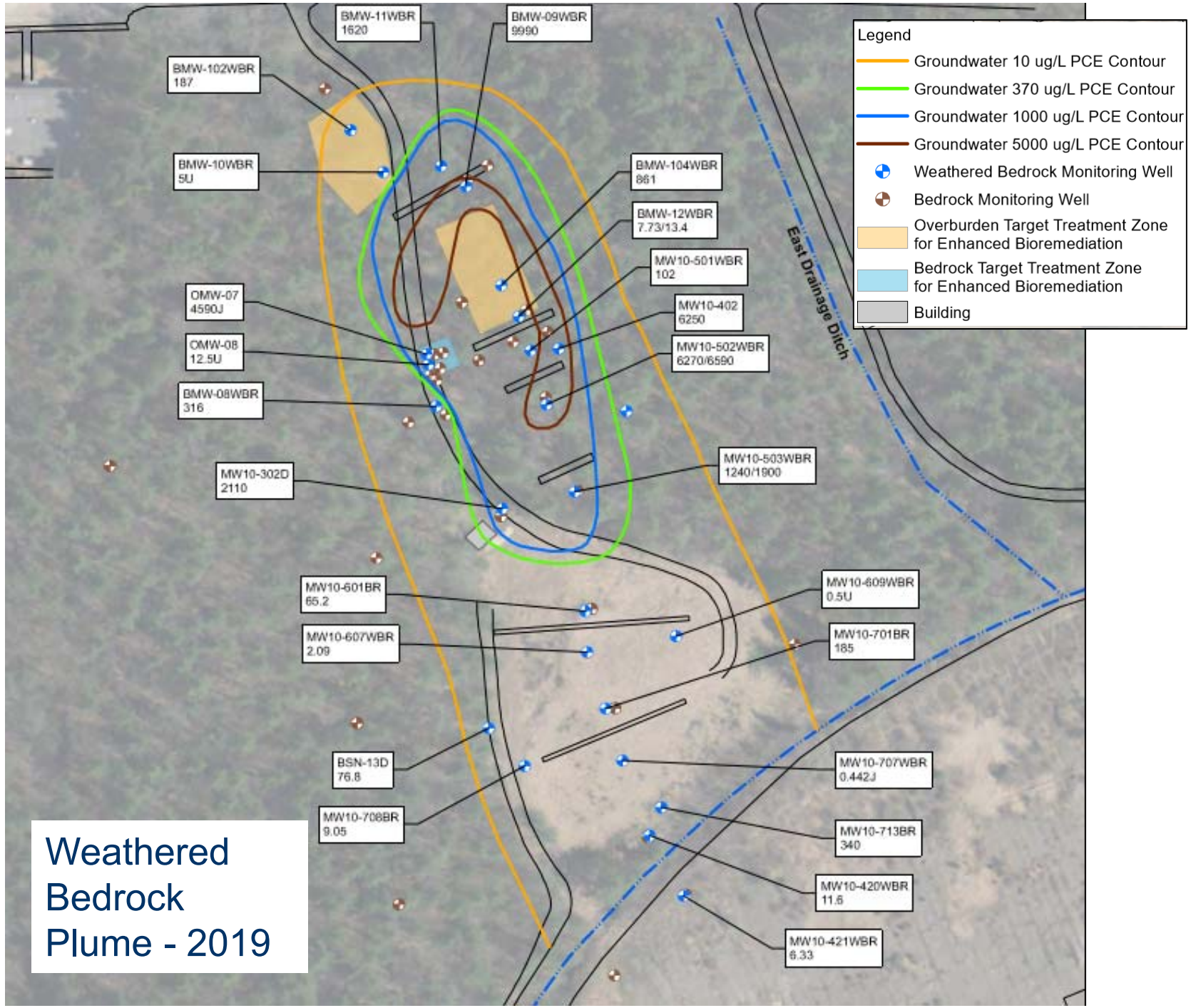
Well Network Example – BR TTZ and PRB#2



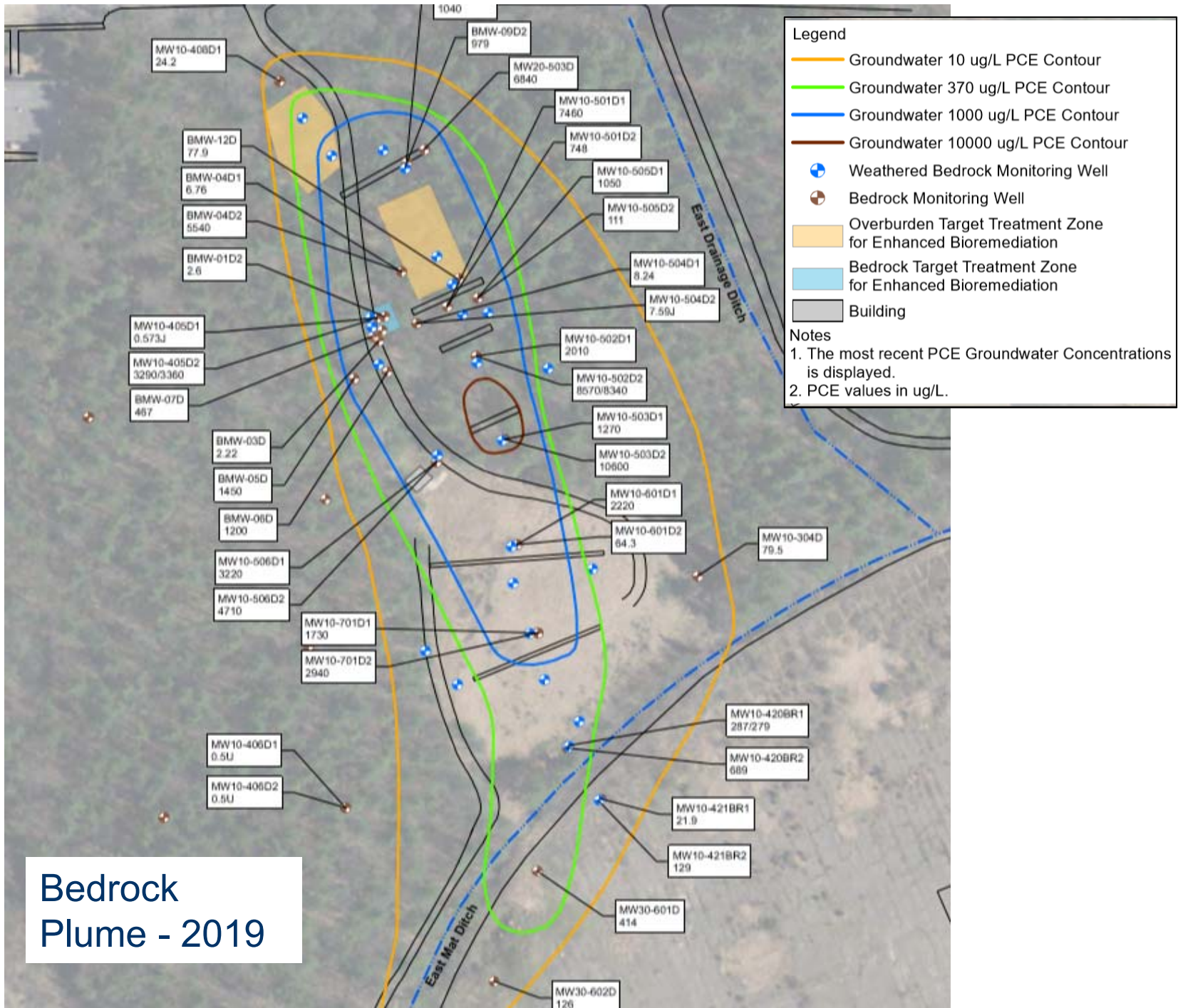
	Legend Overburden Monitoring Well Weathered Bedrock Well Bedrock Well Overburden MIHPT Point	Sonic (Weathered Bedrock Injection) Sonic (Bedrock Injection) Direct Push (Overburden Injection) Overburden Target Treatment Zone for Enhanced Bioremediation Bedrock Target Treatment Zone for Enhanced Bioremediation	Notes 1. The Western Weathered Bedrock Treatment and Investigation Area has been grouped with the Bedrock Target Treatment Zone area as the two areas overlap. 2. The Eastern Weathered Bedrock Treatment and Investigation Area has been grouped with PRB#2 as the two areas overlap.	 Scale in Feet
	Drawn: JB 01/27/2020 Approved: MS 01/27/2020 Project #: 60274886			
	FIGURE 1-6 BEDROCK TTZ AND PRB #2 MONITORING WELL AND INJECTION POINT LOCATIONS SOLVENT RELEASE AREA FORMER NAVAL AIR STATION SOUTH WEYMOUTH			

Path: \\NAVDTC\PP\U201_services.eastnc.com\60274886-6041\GIS\Projects\BRA\PCB_CW_Concentrations_201906\XDD\Pic 1 & PRB2_Western_Eastern_Weathered_Bedrock_Investigation_Areas.mxd

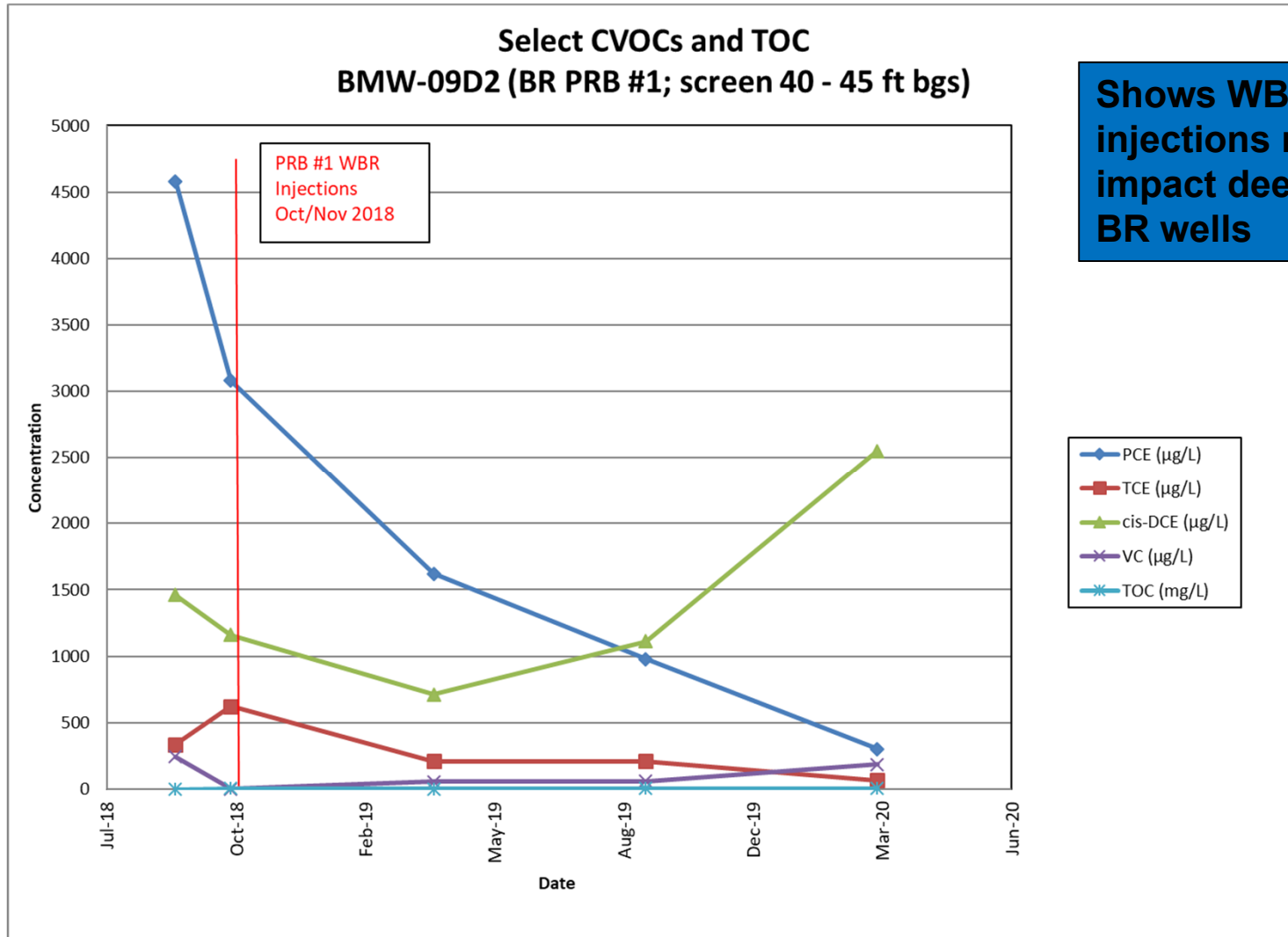




Weathered
Bedrock
Plume - 2019



Bedrock Well CVOC/TOC After WBR Injections



Shows WBR injections may impact deeper BR wells

SRA - Path Forward



- **September 2020:** Site-wide post-injection monitoring event
- **Fall 2020:** Submit Remedial Design for additional injections
 - Many PRBs did not treat the full lateral extent of the plume, injections will target these areas.
 - Injections will be in overburden and weathered bedrock
 - Bedrock wells will continue to be monitored.
 - Bedrock injections are costly and data suggests weathered bedrock injections may positively impact bedrock.
 - The need for bedrock injections will be evaluated in 2023-2025 after the impacts of the 2021 injections are fully understood.
 - Monitoring will continue in areas where injections previously were performed to assess long-term biodegradation progress (i.e., rebound, full dechlorination)
- **Summer 2021:** Perform additional SRA injections
- **Fall 2021:** Post-injection monitoring begins



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Environmental Restoration Program Status and Updates

June 2020

Former NAS South Weymouth Environmental Sites



- Basewide PFAS Investigation – No update, Draft Final V2 PFAS Site Inspection pending
- **Building 81**
- Fire Fighting Training Area – No update, Spring results under evaluation
- Hangar 1 – No update, Draft Final RI pending
- **Industrial Operations Area**
- **Review Item Area 111, Old Hangar 2**
- **Rubble Disposal Area**
- Sewage Treatment Plant - No update, NAUL pending
- Small Landfill – No update, LTM on-going
- **Solvent Release Area – Included in Separate Presentation**
- West Gate Landfill – No update, LTM on-going

Building 81 Recent Activities & Path Forward



- **October 2019** – Final post-injection monitoring event was completed
- **January 2020** - Final Land Use Control Implementation Plan (LUCIP) for the site was issued
- **April 2020** – The Final Remedial Action Completion Report (RACR) and Final Long-term Monitoring (LTM) Plan were submitted
 - LTM sampling began. The data will be used to confirm concentrations are decreasing and evaluate if additional injections will be needed in the future.
- Navy is in the process of preparing a Notice of Activity and Use Limitation that will be recorded against the property deed.
- Finding of Suitability to Transfer (FOST) document will be issued, and then the property will be eligible for transfer.
- Annual Inspection/Certifications and Five-Year Reviews will be completed to evaluate the remedy.

Current Status

- The Work Plan for completing the Remedial Action excavation will be implemented in June 2020.
- Navy is preparing an Explanation of Significant Differences to document differences to the original specifications in the 2015 ROD, including:
 - Increase in volume and cost of soil excavation and offsite disposal
 - Revised the RG for chromium, select polycyclic aromatic hydrocarbons (PAHs), and PCBs
 - Issue EPA's TSCA Determination



Photographs of the IOA after stockpiled soil was removed.

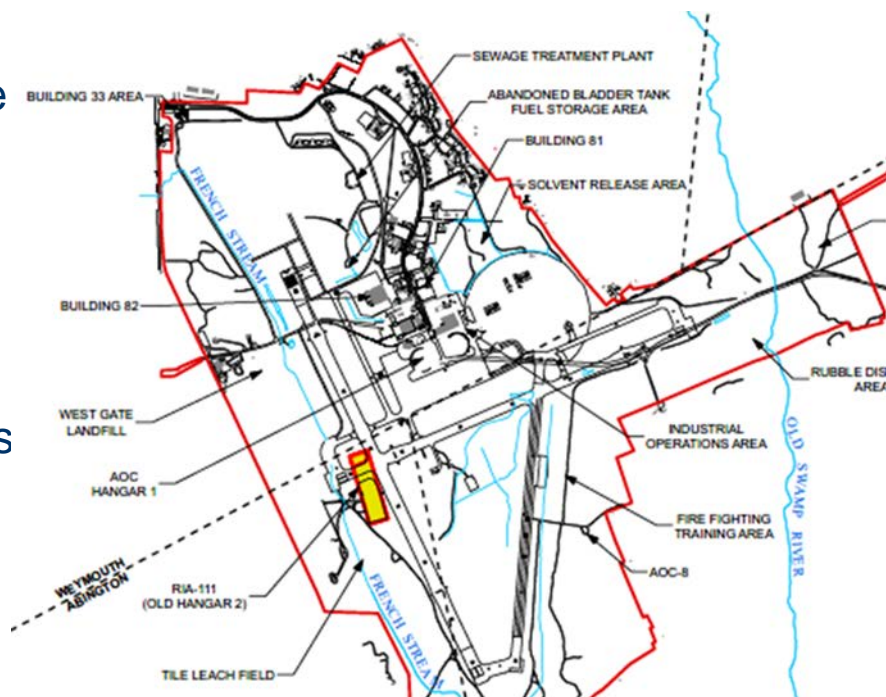


EPA's TSCA Determination

- TSCA = Toxic Substances Control Act
- PCBs are a special contaminant regulated under TSCA (as well as Superfund)
- EPA determination:
 - PCB-contaminated soil at OUs 23 and 24 meets the definition of a PCB remediation waste under TSCA and thus is regulated for cleanup and disposal under 40 C.F.R. Part 761
 - The risk-based RG of 1 part per million (ppm) for PCBs in soil and the remedial measures selected to address risks to unrestricted use posed by PCB-contaminated soil will not pose an unreasonable risk of injury to health or the environment under 40 C.F.R. Section 761.61(c)
- EPA is required to make this determination available for public comment
- EPA's TSCA Determination will be available in the Draft Explanation of Significant Differences (ESD)
- When available, Navy will send out a notice of the ESD availability and instructions on how to comment on EPA's TSCA Determination

Phase 2 Supplemental Data Gap Investigation Update

- Fieldwork completed in March 2020.
- Purpose of the investigation was to investigate the northern slab area and fill data gaps identified for the southern slab area.
- Investigation fieldwork included topsoil removal, utility clearance, a geophysical survey, soil boring advancement, test pit excavation, soil sampling and vault inspections
- Six soil borings were advanced to determine the extent of petroleum-impacted soil surrounding two catch basins. No visual or olfactory evidence of contamination was observed.
- Six samples were collected for laboratory analysis (VPH, EPH, metals).



Phase 2 Supplemental Data Gap Investigation Update (Continued)

- Based on the results of the geophysical survey and surface features observed following topsoil removal, a 8 test pits were completed.
- A total of 25 soil samples were collected from the test pit (sidewall or bottom sample) for laboratory analysis (VOCs, VPH, EPH, metals, PAHs, and PCBs).
- In addition, two liquid grab samples were collected from water observed in two vaults where vault inspections were completed. Samples were collected for laboratory analysis (VOC, VPH, EPH, metals, PAHs, and PCBs)



Photo of cleared northern hangar slab area



Photo of test pitting activities in the southern hangar slab area

Phase 2 Supplemental Data Gap Investigation Schedule

- **April/May 2020** – Laboratory analysis
- **May/June 2020** – Data validation
- **June 2020** – Report preparation
- **August 2020** – Final Report

Landfill Gas Investigation Update

- The Navy is in the process of conducting an investigation to determine the presence of methane at and beyond the property line along the northeast portion of the landfill and adjacent to the Bill Delahunt Parkway and/or in adjacent utility features.
- The investigation began in July 2019 and will continue through July 2020.
- The data collected will be used to determine next steps for monitoring and/or mitigation, if needed.



Rubble Disposal Area – Landfill Gas Investigation



- Additional temporary gas probes were installed north of RDA and in areas of potential future development in February 2020 to determine if methane is migrating to areas where buildings may be constructed in the future.
- Based on the data collected between July 2019 and May 2020, methane concentrations greater than MassDEP action level (1.25 % methane) are present at and beyond the RDA property boundary in the subsurface. However, shallow monitoring locations (surface soil and utilities) do not show impacts of elevated methane concentrations.
- The results of the investigation will be presented in a Tech Memo which is expected to be finalized in October 2020.



Photo of methane monitoring at utility access points



Photo of methane monitoring at temporary gas probes north of RDA



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Updates and Action Items

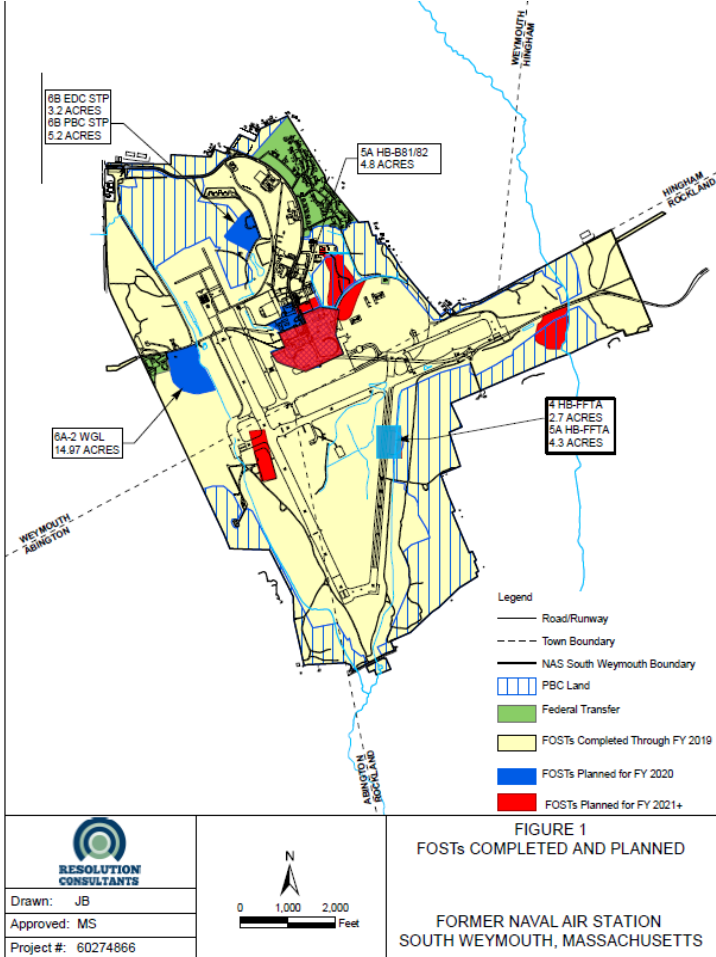
June 2020

Action Items & Updates



➤ Finding of Suitability to Transfer (FOST) Actions:

- Sewage Treatment Plant
 - 3.2 acres EDC
 - 5.2 acres PBC
- B81/B82 Holdback Parcel
 - 4.8 acres EDC
- West Gate Landfill
 - 14.9 acres EDC
- Fire Fighting Training Area
 - 2.7 acres PBC
 - 4.3 acres EDC
- IOA Site
 - Mobilization June 15, 2020
 - TSCA Determination



Next Meeting & Agenda Topics



- **Next Meeting - October 8, 2020** – To be determined if this can/will be conducted in-person or if we need to continue to use the “virtual” meeting bridge.
- **Topics** - Per and poly fluoroalkyl substances (PFAS) and general Site update
- **Feedback** – Please let us know what you thought of tonight’s meeting. What worked, what didn’t, what can we improve. Positive or negative assessments are most welcome.

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david.chaffin@state.ma.us