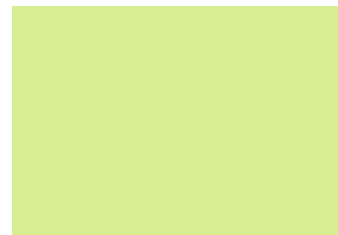
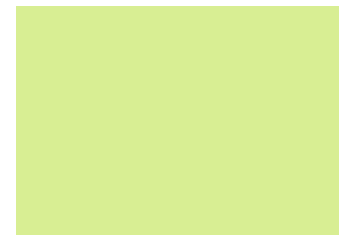
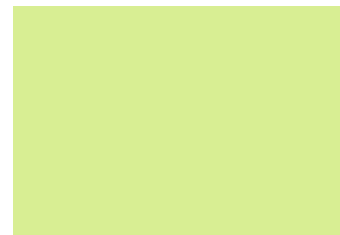


INTRODUCTION TO TASC & SUMMARY OF PHASE 2 REMEDIAL INVESTIGATION (RI) WORK PLAN

700S 1600E PCE PLUME
SUPERFUND SITE

SEPTEMBER 10, 2020



OVERVIEW

- Overview of the Technical Assistance Services for Communities (TASC) Program
- Phase 2 Remedial Investigation (RI) Work Plan
 - Summary
 - TASC comments
- Q&A and Discussion

This presentation is funded by EPA's TASC program – its contents do not necessarily reflect the policies, actions or positions of EPA



TASC PROGRAM OVERVIEW



TASC

- Technical Assistance Services for Communities (TASC)
- Provides non-advocacy, independent technical assistance
- Funded by EPA but TASC reports do not necessarily reflect the policies, actions or positions of EPA



TASC PROGRAM SERVICES

- Community trainings
- Reviews and explanations of technical information
- Educational presentations
- Technical assistance needs assessments (TANAs)
- Community Advisory Group (CAG) formation support
- Meeting facilitation
- Outreach materials



EXAMPLES OF TASC PRODUCTS

Technical Assistance Services for Communities
West Lake Landfill Superfund Site
 Fact Sheet - June 2015

TASC Summary - Landfill Leachate at Bridgton Landfill

Introduction

This fact sheet provides information on the collection, pumping, pumping, treatment and disposal of landfill leachate (LCL) from the Bridgton Landfill.

What is landfill leachate?

It is the liquid that drains or "leaches" from a landfill. It varies widely in composition, depending on the age of the landfill and the type of waste. It usually contains dissolved and suspended (solid) material. Disposal of landfill leachate requires a permit. It can contain various regulated substances.

Leachate Collection

The Bridgton Landfill (also called the former Sashbury Landfill) has a leachate collection system. The system captures rainwater and groundwater that flows through the landfill as well as liquids from decomposing wastes in the landfill.

The May 2011 Leachate Land Report <http://www.epa.gov/landchem/docs/leachate/051111.pdf> shows that the LCS-30, LCS-33 and LCS-45 units contained less than 10 feet of leachate over the past year. Though there were no readings for LCS-32 since October 2014, Leachate levels were greater than 10 feet for LCS-10, 28-4.

The Maine Department of Natural Resources reported that Bridgton Landfill pump leachate from the LCSs at a rate that keeps the height of leachate in the landfill at no more than 10 feet above the quarry floor. About half of the LCSs were able to do so during the past year. A subsurface smoldering event (a chemical reaction called pyrolysis, in which materials heat up and decompose) caused damage to some LCSs under the associated leachate monitoring devices. When too much leachate accumulates in the landfill, the potential for contamination to reach groundwater increases.

LCS-31 and LCS-46, leachate level readings for LCS-33 were only available since March 2011; the monitoring device had failed and was unusable for preceding months. Likewise, LCS-48 was not active for some of the past year; only readings since March 2011 were reported.

U.S. Environmental Protection Agency
 Technical Assistance Services for Communities (TASC)

Many of the chemicals found in your home can harm your health if you breathe them or accidentally eat or drink them. They can also harm the environment or pollute drinking water if they are not thrown away correctly.

Word Search

Volatile Organic Compounds (called VOCs) are easily because they move quickly into the air we breathe. VOCs can also move quickly into our water. Search up, down, forward, backward and on the diagonal to find the VOCs hidden below. Cross off the VOCs when you find them to keep them from polluting the air and water.

Check your list also carefully, and your partner if you have one, if these 16 words appear. You are the master! If you, your partner and your partner are safely done, many chemicals and household items are special collection days near you.

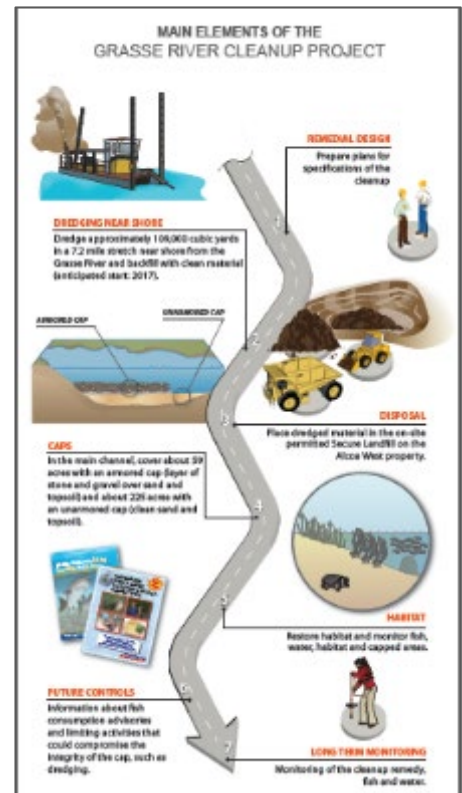
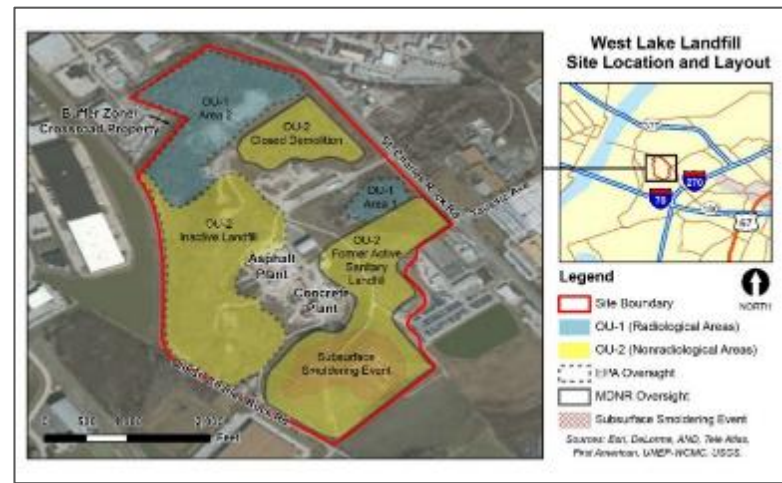
For a reminder of separating waste collection events, check out the fact sheet about environmental contamination prevention collection.

Below are some things that you can keep in the collection bags:

- Antifreeze (Ethylene Glycol)
- Acetone
- Household Cleaners
- Pesticides
- Lubricants

PAINT
NAIL POLISH
PESTICIDES
EXHAUST
GASOLINE
FURNITURE
BLEACH

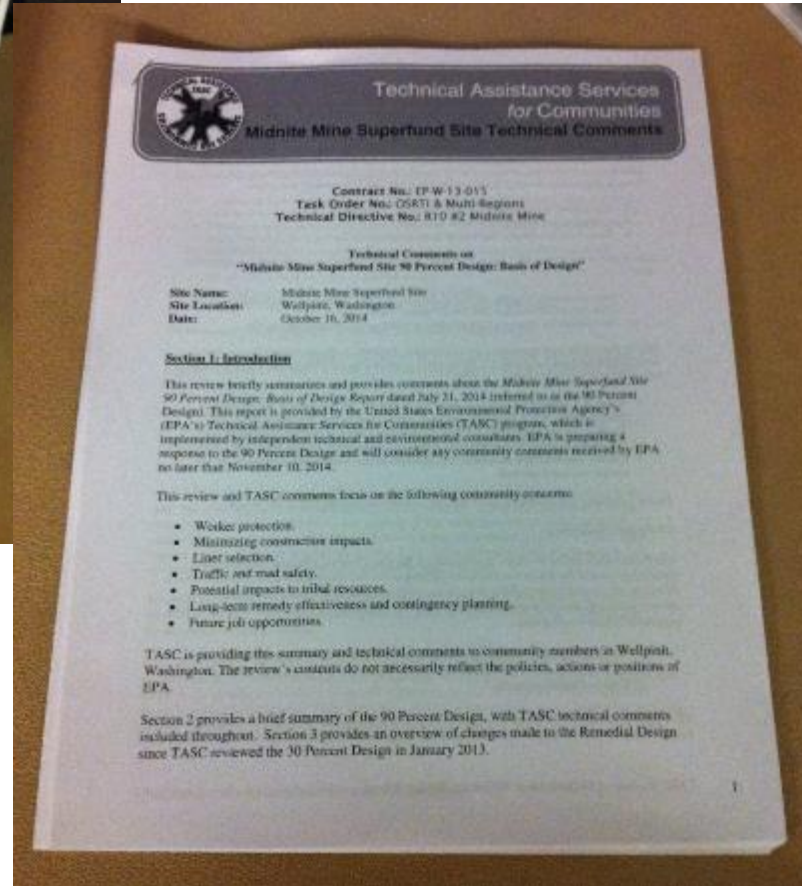
Word search grid containing hidden VOCs.





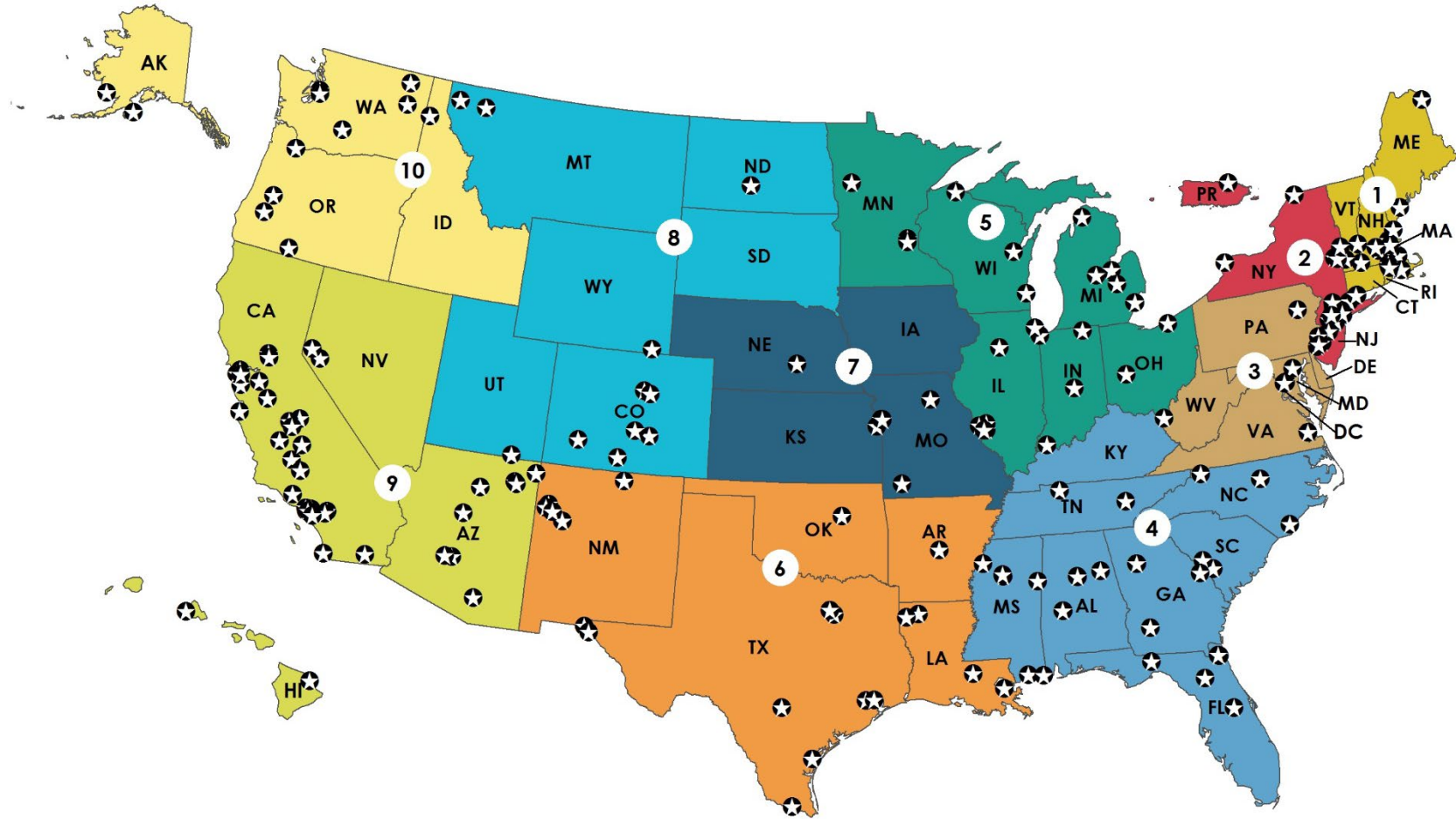
BEFORE

AFTER



TECHNICAL
DOCUMENT
REVIEW AND
SUMMARY

COMMUNITIES SERVED



ADDITIONAL TASC RESOURCES

- EPA TASC website (includes link to TASC brochure, frequent questions and information about communities receiving TASC support):
<https://www.epa.gov/superfund/technical-assistance-services-communities-tasc-program>





SUMMARY OF PHASE 2 REMEDIAL INVESTIGATION (RI) WORK PLAN

THE SUPERFUND CLEANUP PROCESS

THE SUPERFUND REMEDIAL PROCESS



[NOTE: removal actions can occur at any time]

REMEDIAL INVESTIGATION (RI)

- The goal of the **Remedial Investigation** is to determine the extent of contamination and potential risks
 - Samples soil, surface water, groundwater, indoor air and waste from locations across the site and near site boundaries
 - Assesses risks posed by contaminants to potential receptors



Remedial Investigation/Feasibility Study & Proposed Plan



REMEDIAL INVESTIGATION: SCHEDULE

- Phase 1: 2018 to 2020
- Phase 2: 2020 to 2021
- Draft RI Report: June 2021
- Final RI Report: October 2021

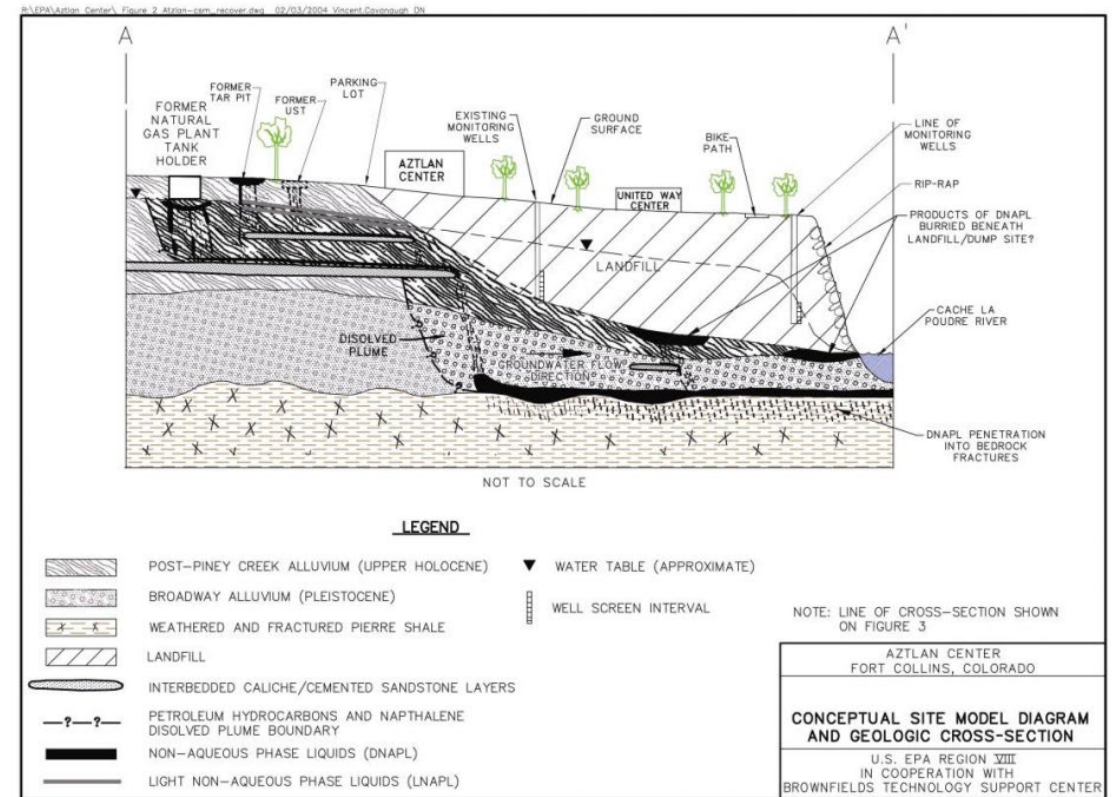
BACKGROUND

- Groundwater is contaminated with PCE and other volatile organic compounds (VOCs) that form when PCE degrades.
- 2004: PCE was found in public drinking water well (not above EPA standard); well shut down
- 2016: Vapor intrusion was addressed at one home
- Phase 1: Collected groundwater, surface water and soil vapor samples
- In general, groundwater at the site flows westward. However, groundwater flow at the site is complex and not fully understood, so more study is needed.
- Purpose of Phase 2 of the remedial investigation:
 - Fill data gaps left after Phase 1
 - Refine understanding of the site

CONCEPTUAL SITE MODEL

- Describes what contaminants are present at a site, where they are, how they move and change in the environment, and how they might pose a risk to people or the environment. Diagrams can help explain the conceptual site model.
- Unifies the site data into a manageable story that can be used to chart the path forward. The conceptual site model can point out data gaps and be updated as new information is collected.

- Example CSM diagram (different site):




STUDY QUESTIONS

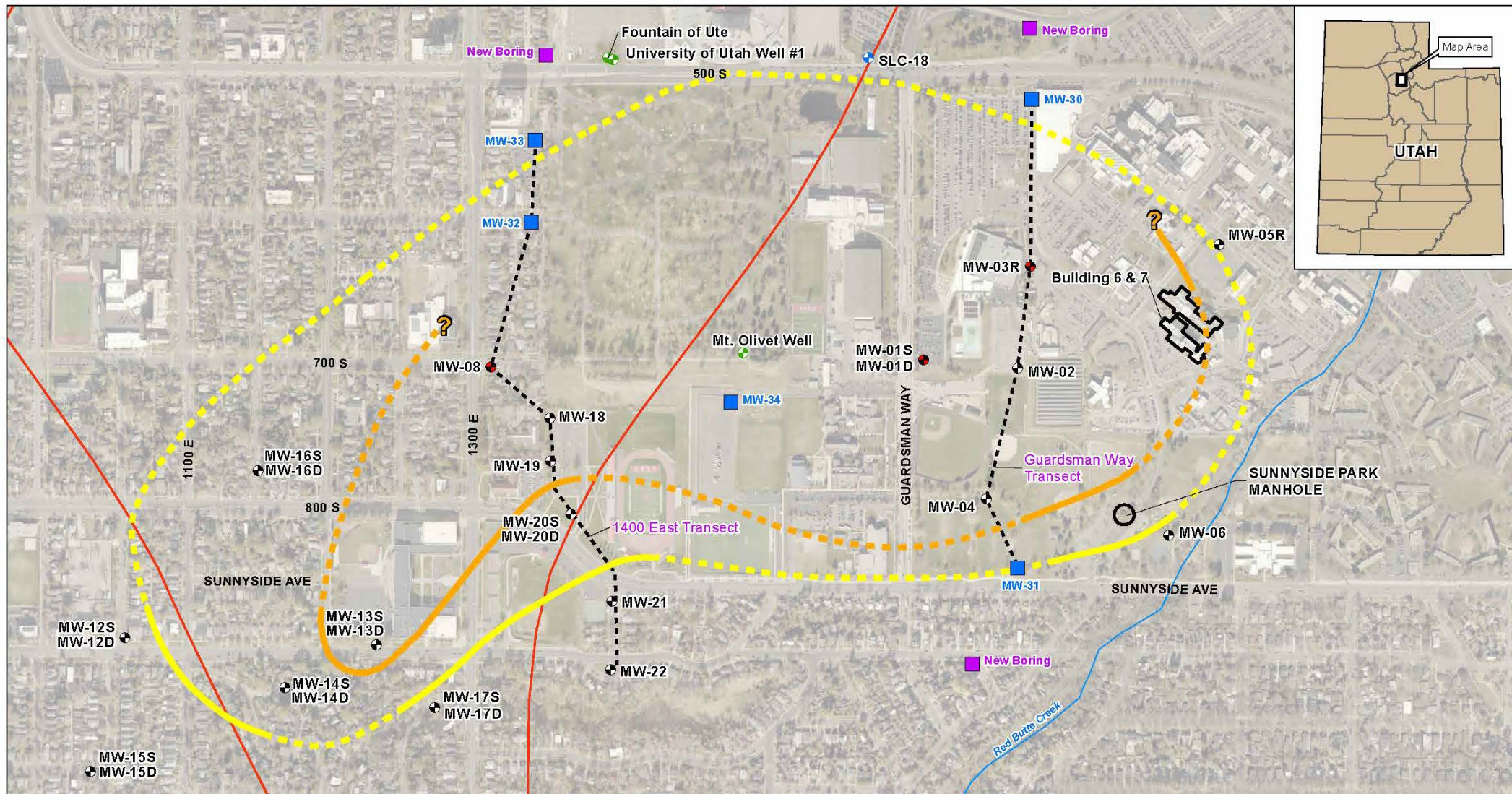
- How does the site's groundwater flow affect the movement of contaminants?
- Where is the groundwater contamination (depth and lateral extent)?
- How much contamination is there?
- How are natural processes changing the contaminant concentrations?
- Is contamination above the water table acting as a source of groundwater contaminants?
- Is there a risk from vapor intrusion at the VA Medical Center?
- Does groundwater contamination pose a risk to human health?
- Does surface water contamination pose a risk to human or ecological health?

KEY PHASE 2 DATA COLLECTION ACTIVITIES

- Installing more monitoring wells to define the length, width and depth of the plume.
- Collecting data to better understand how groundwater flows at the site and how much contamination is moving across the site.
- Collecting data to see if and how PCE is breaking down naturally in the groundwater (“natural attenuation”).
- Collecting surface water samples to help define the plume location and assess risk.
- Collecting soil vapor samples to better define the source areas and assess the risk from vapor intrusion.
- Collecting indoor air samples at about 20 homes to assess vapor intrusion.



- Western side of plume, near East High School
- Yellow line is edge of PCE plume
 - Solid line = known
 - Dashed line = inferred
- Red wells 
 - New monitoring wells to be installed during Phase 2 (to better define the edge of the plume)
 - Some proposed wells and borings may not be needed, depends on Phase 1 results
- Red lines are geologic fault lines



Legend

- Monitoring Well
- Boring Location - Phase 1
- Step-out Boring - Well IDs to be determined
- Red Butte Creek
- Fault Line
- Transect Line
- Multi-level Monitoring Well
- Irrigation Well
- Municipal Well
- 5 µg/L PCE
- 50 µg/L PCE
- Dashed Line - Inferred Extent
- ? - Extent not Defined

Notes
 - µg/L = micrograms per liter
 - Proposed step-out boring locations will only be installed if Phase 1 borings and wells do not delineate plume boundaries.

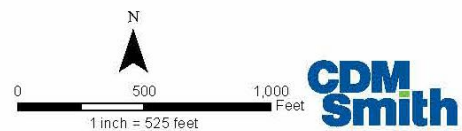


FIGURE 4-3
 PROPOSED PLUME DELINEATION
 BORINGS - PHASE 2

OU-1 REMEDIAL INVESTIGATION
 700 SOUTH 1600 EAST PCE PLUME
 SALT LAKE CITY, UTAH

PHASE 2 RI WORK PLAN – APPENDICES

- Field Sampling Plan: Describes the methods that will be used to collect data
- Quality Assurance Project Plan (QAPP)
 - Describes how environmental data will be collected, to ensure that the data will be reliable
 - Documents the project's technical planning process
 - Provides a detailed plan for the environmental data operation

NEXT STEPS

- Conduct Phase 2 of the remedial investigation
- RI Report: 2021
 - Will include human health and ecological risk assessments
 - Two rounds of review by EPA and UDEQ
- Feasibility Study: To evaluate cleanup options

TASC COMMENTS #1

- TASC comments are for the CAG and community – TASC does not provide comments to EPA or UDEQ on behalf of the community.
- Schedule: Work Plan shows Phase 2 field work beginning before EPA and UDEQ have completed their review of the Phase 2 RI Work Plan.
 - *Why will Phase 2 work begin before the Work Plan is finalized?*
- Vapor intrusion: Work Plan states that Phase 2 of the RI will collect indoor air samples at about 20 homes to assess vapor intrusion.
 - *How were the 20 homes selected?*
 - *Why does the Field Sampling Plan not mention indoor air sampling?*
 - *What will the VA do if it discovers an immediate risk from vapor intrusion?*
 - *How will indoor air sampling be affected by COVID-19?*

TASC COMMENTS #2

- Vapor intrusion: Concentrations of VOCs in homes due to vapor intrusion are usually higher in winter than in summer.
 - *Will indoor air sampling be conducted during the winter?*
 - *Should the language about wintertime sampling that appears in Table 4-1 for the VA Medical Center (under D2) also be added for other areas of the site (under D3)?*
- Study area: The Work Plan's Study Area Boundary does not include Red Butte Creek or Liberty Park Pond.
 - *Is the Study Area Boundary large enough to include all potentially impacted areas, including surface water?*
- Outdoor air: High levels of PCE were detected in soil vapor near a manhole in Sunnyside Park.
 - *Is there a risk to park users from breathing vapors?*

TASC COMMENTS #3

- 1,4-Dioxane: The Field Sampling Plan includes a memo explaining why the VA thinks 1,4-dioxane does not need to be included in routine groundwater monitoring. The memo says that 1,4-dioxane has been detected above its screening level of 0.46 micrograms per liter [$\mu\text{g}/\text{L}$] only one time (at an estimated level of 0.47 $\mu\text{g}/\text{L}$).
 - *Why does the memo not mention the 2.7 $\mu\text{g}/\text{L}$ detection in GW-052 in 2016?*



QUESTIONS?

CONTACT:
Hagai Nassau
(717) 256-3583
hnassau@skeo.com