

Beede Waste Oil Superfund Site

Agenda

05/09/2022



- Introductions
- Brief overview of Superfund and Community Involvement Process
- Beede Cleanup Components
- Cleanup Activity Progress
- Current Cleanup Action:
 - Excavation of Lower Landfill and Wetland Sediments
- On-going Investigations: Long term monitoring and Bedrock/Emerging Contaminants: PFAS
- Five Year Review
- Questions

Introductions

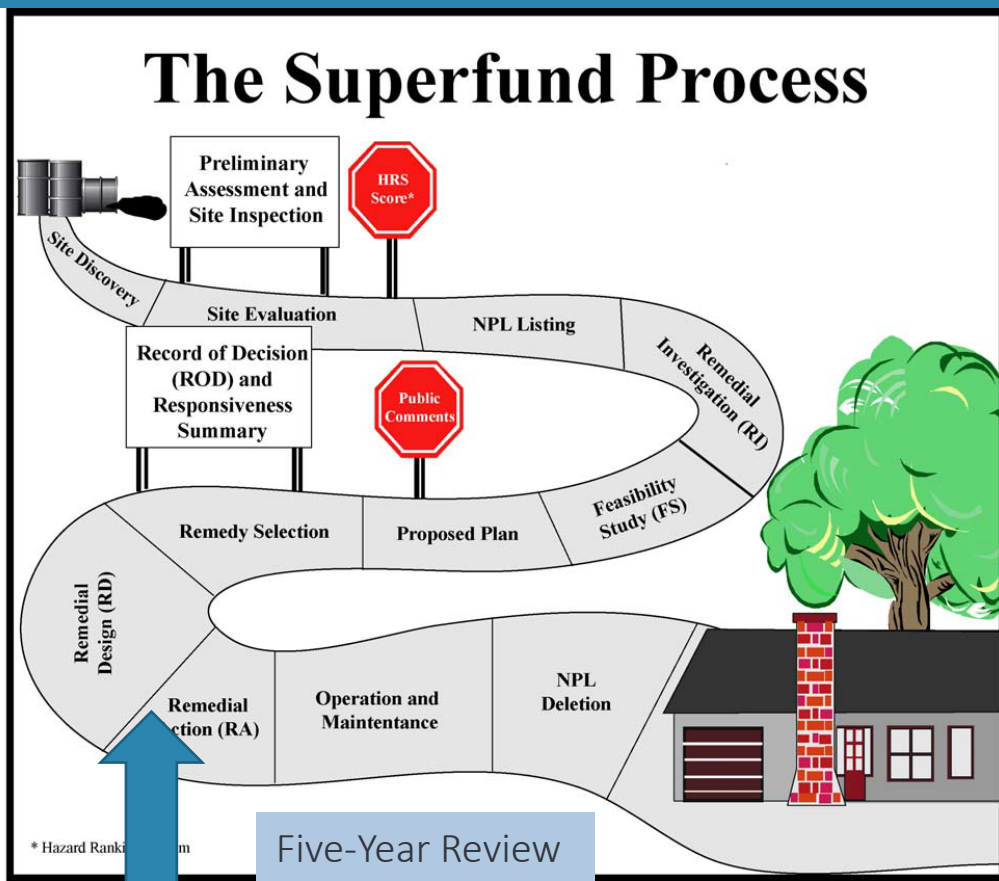


- EPA- Lead Agency:
Cheryl Sprague, Project Manager
Kate Melanson, Community Relations
- NHDES- State Oversight
Stephanie Monette, Project Manager
Sanborn Head Associates,
Chip Crocetti and Mike Abberton
- Beede Site Group

Mike Skinner, Project Coordinator
Woodard & Curran:
Supervising Contractor, Peter Nangeroni
Construction Manager: Scott Freeman



Superfund Cleanup Process



National Priority Site Listing: EPA determines if the site poses a threat to people and the environment and whether hazards need to be addressed immediately. Identifies the nations worst hazardous waste sites that warrant cleanup.

- **Remedial Investigation/Feasibility Study/Proposed Plan and Remedy Selection:** The process of investigating the conditions at the Site, the potential threats to human health and the environment, the evaluation and comparison of cleanup options, the solicitation of public comment and the selection of the remedy.
- **Remedial Design:** Development of detailed cleanup plans and engineering drawings to attain cleanup standards.
- **Remedial Action:** Construction and implementation of the plans developed in the remedial design.
- **Operation and Maintenance and Long- term monitoring:** Activities taken to ensure that cleanup work at a site continues to protect human health or attain cleanup standards; includes treatment operations, monitoring and enforcement of site restrictions.
- **NPL deletion:** Cleanup goals have been achieved and site is fully protective of human health and the environment.

Beede Superfund Site

Figure 1-1

Site Plan

Beede Waste Oil Site
Plaistow, New Hampshire



Legend

- Extraction Well
- Injection Well
- Landfill Boundary
- Property Boundary
- Extent of Thermal Remediation
- Kelly Brook
- Rapid Infiltration Basin
- Remediation Action Area

NOTES:
1. Basemap/site feature information derived from Figure 3 through Figure 8 of the Remedial Investigation Report for the Beede Waste Oil/Cash Energy Site by Sanborn, Head and Associates, 2001.
2. Additional/new site features based on proposed/as-built construction drawings associated with ongoing Remedial Action activities.
3. Limits of Kelly Brook encompass approximate flow channels and bordering wetlands with areas of seasonal standing water and do not indicate limits of main flow channel.

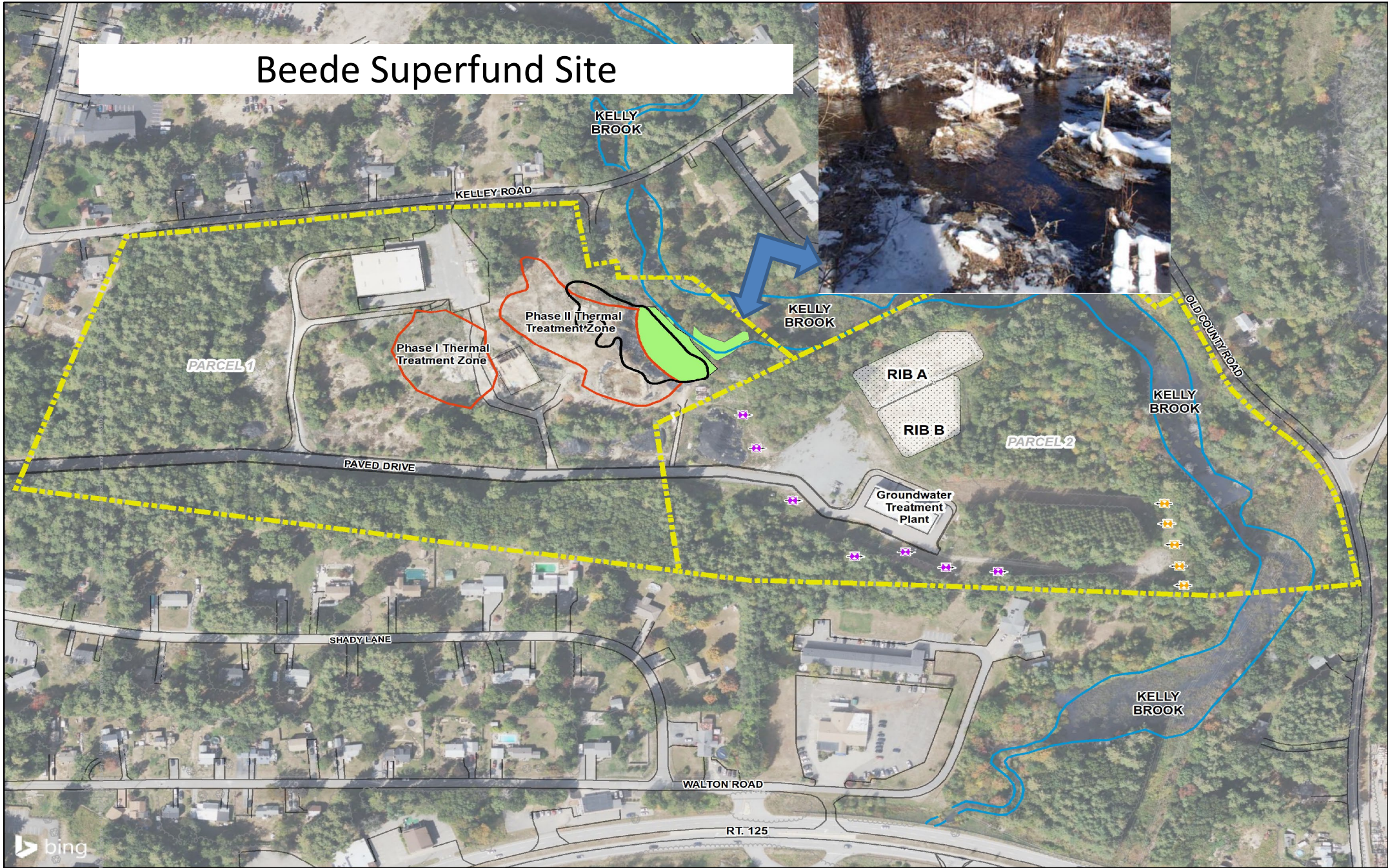
1 inch = 200 feet
0 50 100 150 200 Feet



Woodard
& Curran

Project #: 218516
Map Created: April 2022

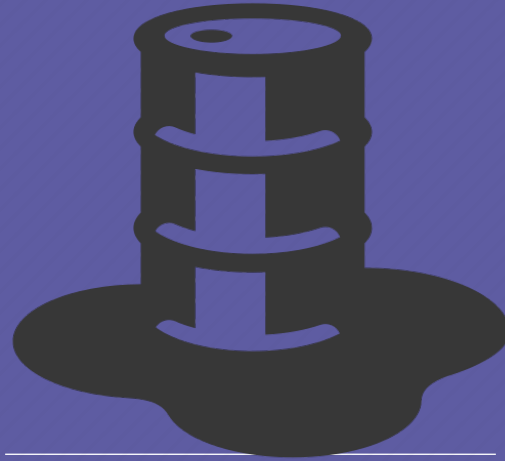
Third Party GIS Disclaimer: This map is for reference and graphical purposes only and should not be relied upon by third parties for any legal decisions. Any reliance upon the map or data contained herein shall be at the users' sole risk.



Beede Cleanup Remedy Components



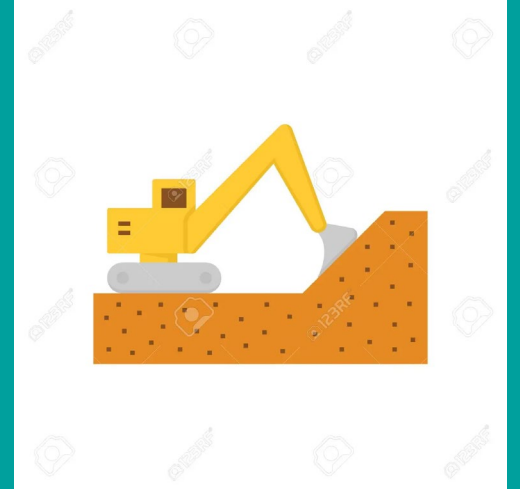
Restoration
of
Groundwater



Treatment of deeper soils
and removal of landfill
debris impacted by
releases of oil, petroleum
and solvents within the
former lagoon, tank
storage and landfill areas



Excavate Sediment in
oil impact area of Kelly
Brook (north of the
landfill area)



Excavation of
contaminated shallow
(up to ten feet) soils
primarily within parcel
1, removal of soil piles
and debris, backfilling,
grading and restoration

Cleanup Activity Progress

Restoration of Groundwater

✓ Construction Completed

Treatment operations on-going since 2013

Used to supply steam for thermal remediation

Long-term monitoring to evaluate progress on attainment of groundwater cleanup standards

Thermal (Steam) Remediation of deeper soils to desorb and mobilize residual oils and contaminants from soil for recovery and treatment

✓ Phase 1 Lagoon Area completed in 2015

✓ Phase 2 Storage tanks area completed in 2020

Current Work:

Lower Landfill- and Kelly Brook sediment excavation

Remedial Action initiated in April 2022

Completion of field work expected by end 2022

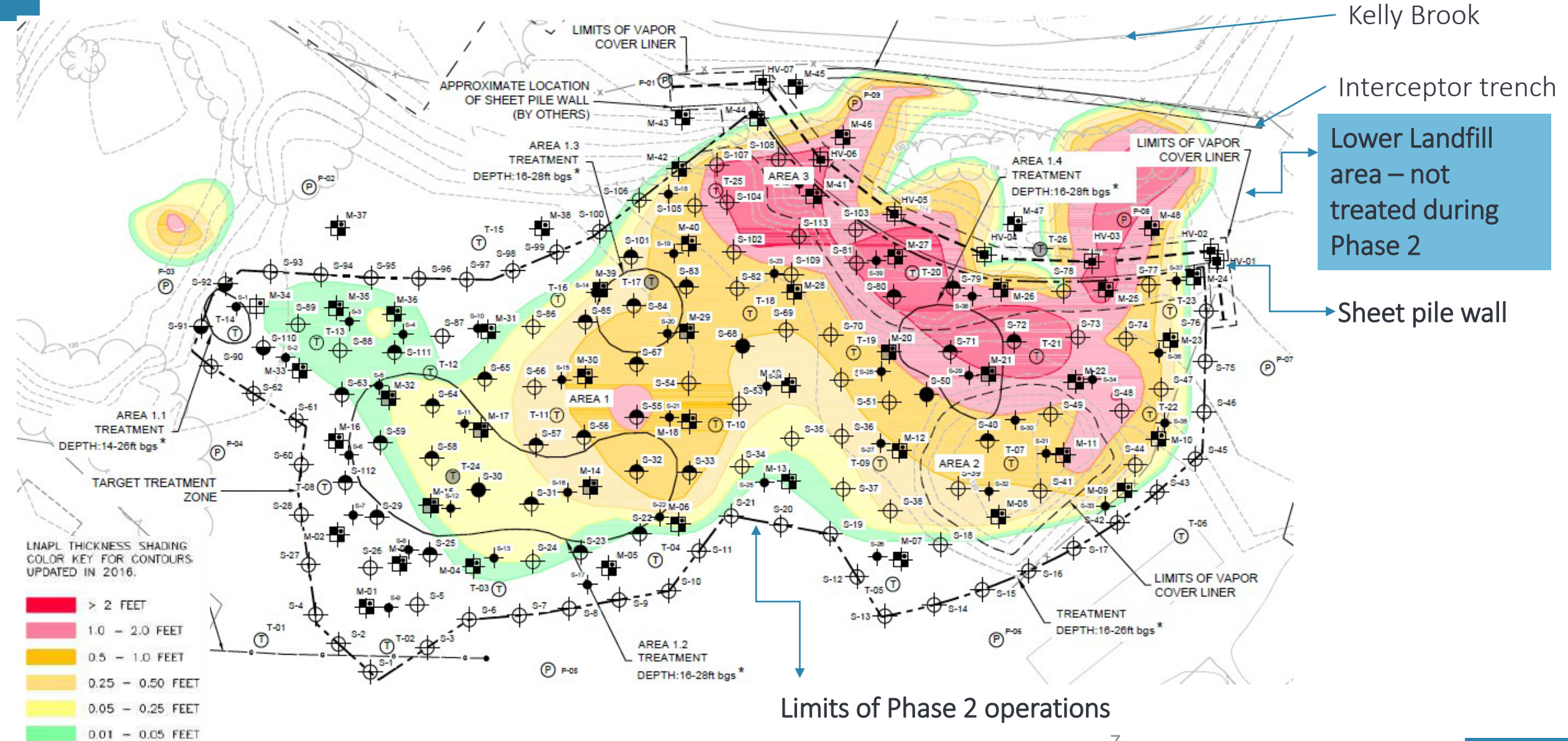
Future Work

Excavation of contaminated shallow surface soils, soil piles, debris and site restoration

Remedial Design 2023

Remedial Action 2024+

LNAPL (oil) – before Phase 2 Remediation



Phase 2 LNAPL recovery

- LNAPL recovery was required from the area between the Phase 2 treatment zone and the Kelley Brook interceptor trench through Multi phase contingency wells skimmers. This was done to minimize / prevent oil movement into Kelley Brook.
- Belt Skimmers have also been used in this area as well to recover oil.



Lower Landfill and Sediment Remedial Action

Focus on lower landfill and sediment area



Soil and Debris Excavation

- Addressing residual oil impacts in soil
- Located between the Phase 2 thermal treatment area and Kelly Brook

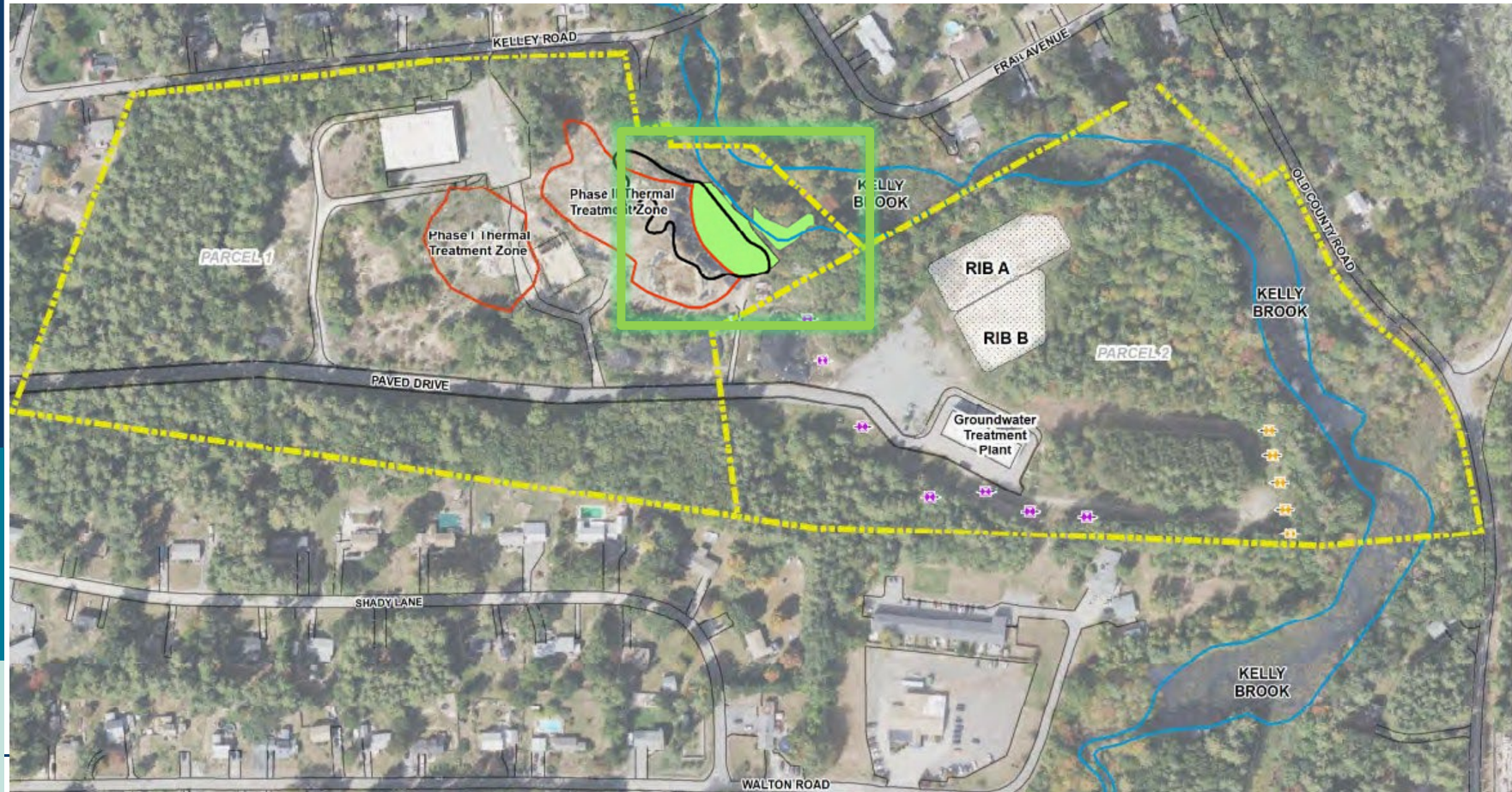


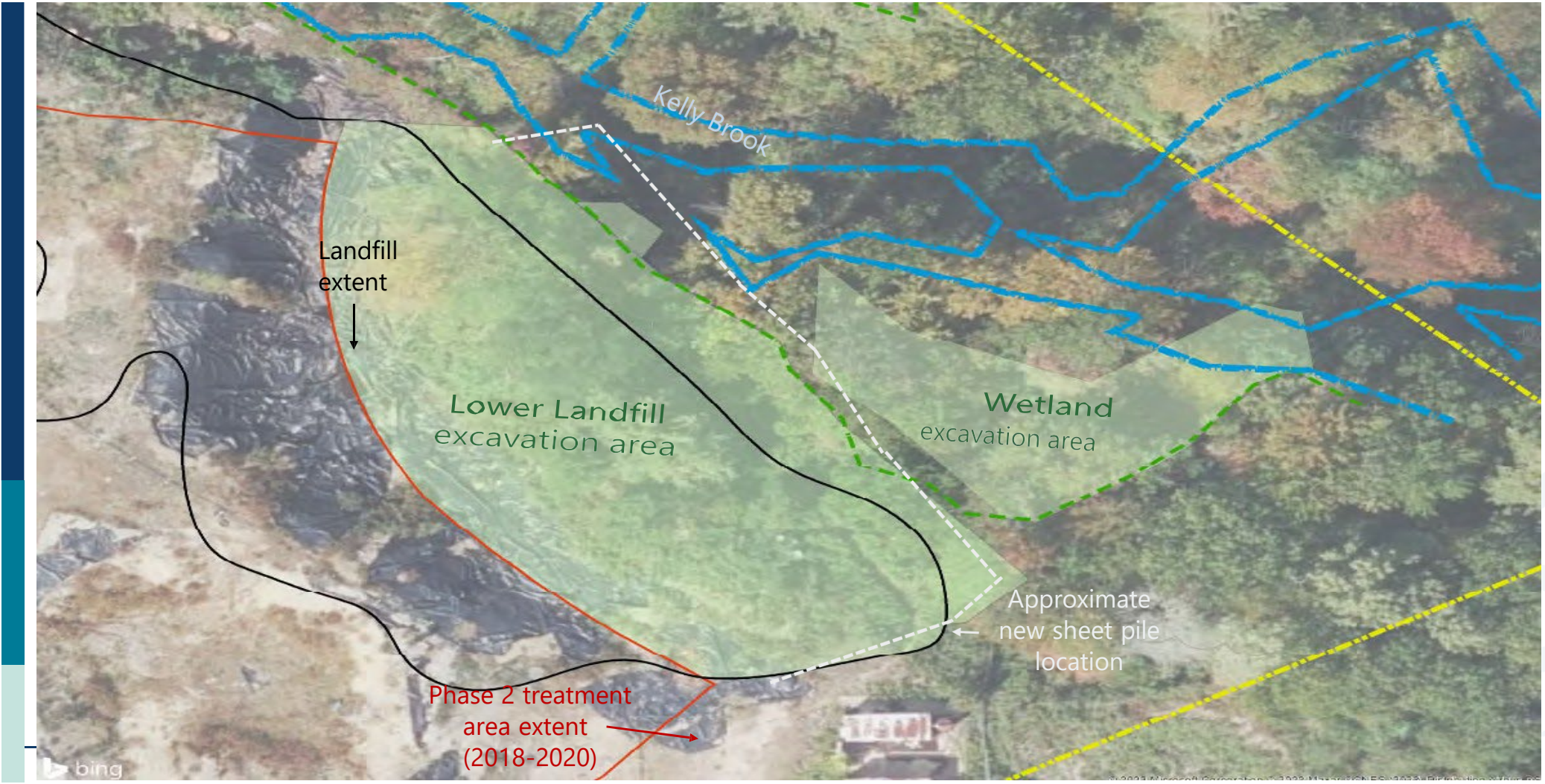
Sediment Excavation

- Targeting arsenic and PCB levels in sediment above ROD clean-up levels

Protection of human health and the environment

Where is this onsite?





Estimated excavation volumes



Shallow soil and landfill debris ~
4,400 cubic yards (cy)



Smear zone soil (oil impacted) ~
1,700 cy



Interceptor trench concrete ~
70 cy



Sediment ~ 325 cy

Summer timing of importance

Lower landfill area:
Excavating into
water table

Sediment areas:
naturally wet
conditions

Goal to remediate
during drier
weather conditions
in the summer

Schedule/ Sequence of remediation

► **Spring 2022**

- Well abandonment
- Erosion and sedimentation controls
- Invasive plant species management
- Tree/ vegetation clearing
- Survey
- Site preparation

► **Summer – Fall 2022**

- Air, sound, vibration and Kelly Brook monitoring
- Sheet pile installation
- Dewatering and treatment of groundwater
- Excavation and offsite disposal of impacted soil and miscellaneous debris
- Excavation and offsite disposal of sediment
- Removal of oil interceptor trench
- Backfilling, grading and restoration of excavated areas

Estimated 5 months to complete

What our neighbors will hear/ see



Onsite

- Sheet pile installation
- Excavation equipment (excavators, front end loaders, dump trucks)
- Removal of debris in Kelly Brook



Offsite

- Noise from sheet pile installation
- Trucks removing soil and sediment from the Site
- Trucks bringing in backfill and supplies

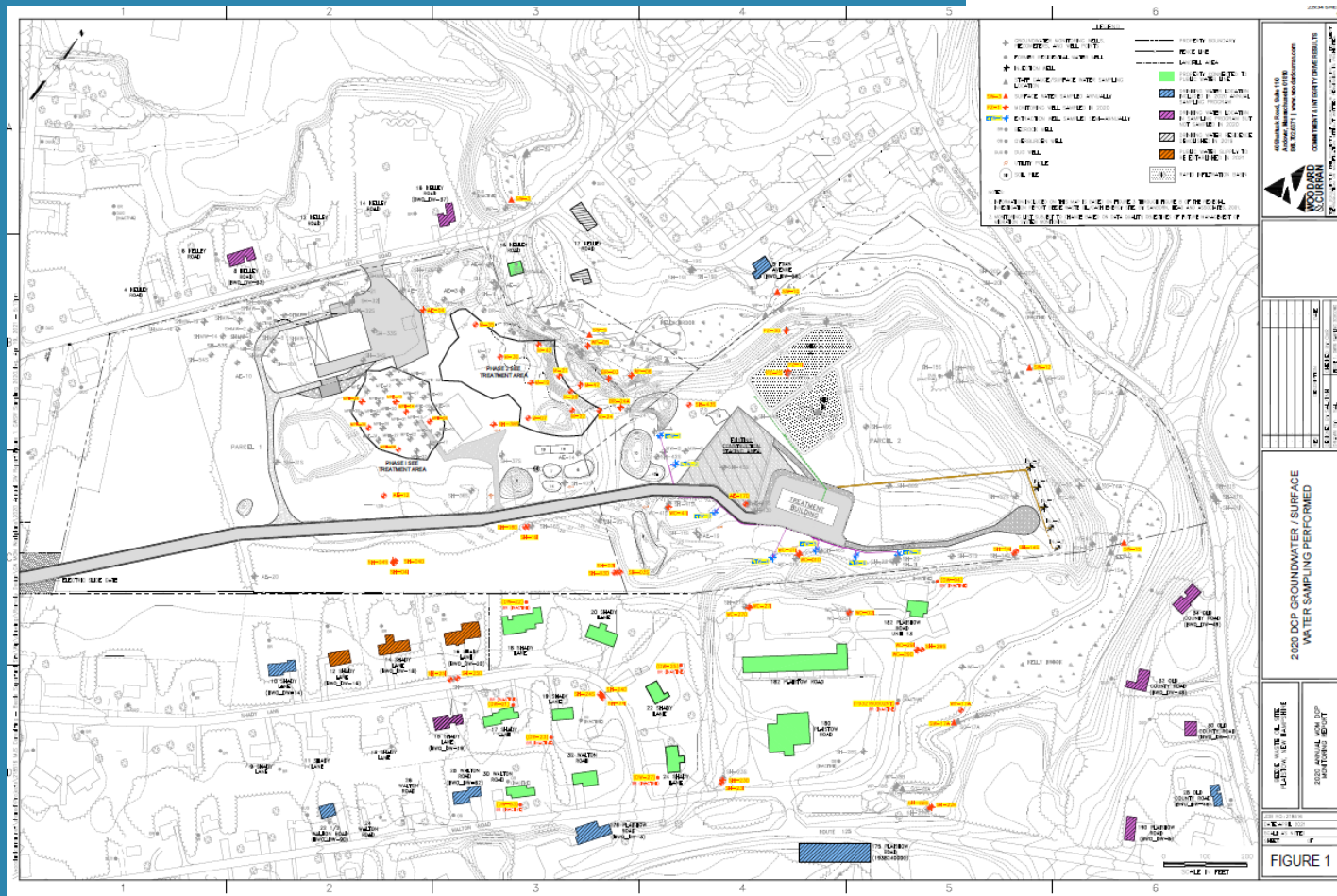
On-going Groundwater Investigations

Long-term Monitoring of Groundwater

- On and Off-site monitoring
- Residential Water Supply Well monitoring
- Future issuance of NHDES Groundwater Management Permit

Bedrock Investigations

- Assessment of contaminant migration into and within bedrock fractures
- Monitoring includes emerging contaminants: 1,4-dioxane and Per- and Polyfluoroalkyl Substances (PFAS)
- No current Federal drinking water standards (screening levels)
- NHDES recently lowered for 1,4-dioxane from 3 ug/l to 0.32 ug/l
- NHDES established standards for four PFAS in 2020:
 - PFOA 12 ppt
 - PFOS 15 ppt
 - PFNA 11 ppt
 - PfHxs 18 ppt



Five Year Review- 2022



- Purpose: To evaluate the implementation and performance of the remedy in order to determine if the remedy is or will be protective of human health and the environment.
- Steps in the Five-Year Review (FYR)
 - Notify the public of the Five-Year Review start and completion
 - Review Key Documents
 - Review remedy and data on contaminants
 - Conduct site inspection
 - Conduct interviews with community
 - Report:
 - Issues and Recommendations
 - Assess protectiveness of remedy
 - Protective
 - Protective in the short term (2017 FYR finding)
 - Protectiveness deferred
 - Not protective

**100% FINAL
DESIGN
REPORT**

**Lower Landfill
Area Smear
Zone Soils and
Sediment**

Beede Waste Oil
Superfund Site
Plaistow, New Hampshire

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218516
February 2022



SEMS Doc ID 664351

Beede Final Remedial Design

Final RD Report (SEMS Document ID: 664351):

[http://semspub.epa.gov/src
/document/01/664351](http://semspub.epa.gov/src/document/01/664351)