



Village of Whitefish Bay Public Works Department

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Mathew Collins, Director of Public Works

April 7, 2025

Memo to: President Kevin Buckley and the Village Board of Trustees

From: Matthew Collins, Director of Public Works

Re: Whitefish Bay Landfill Presentation

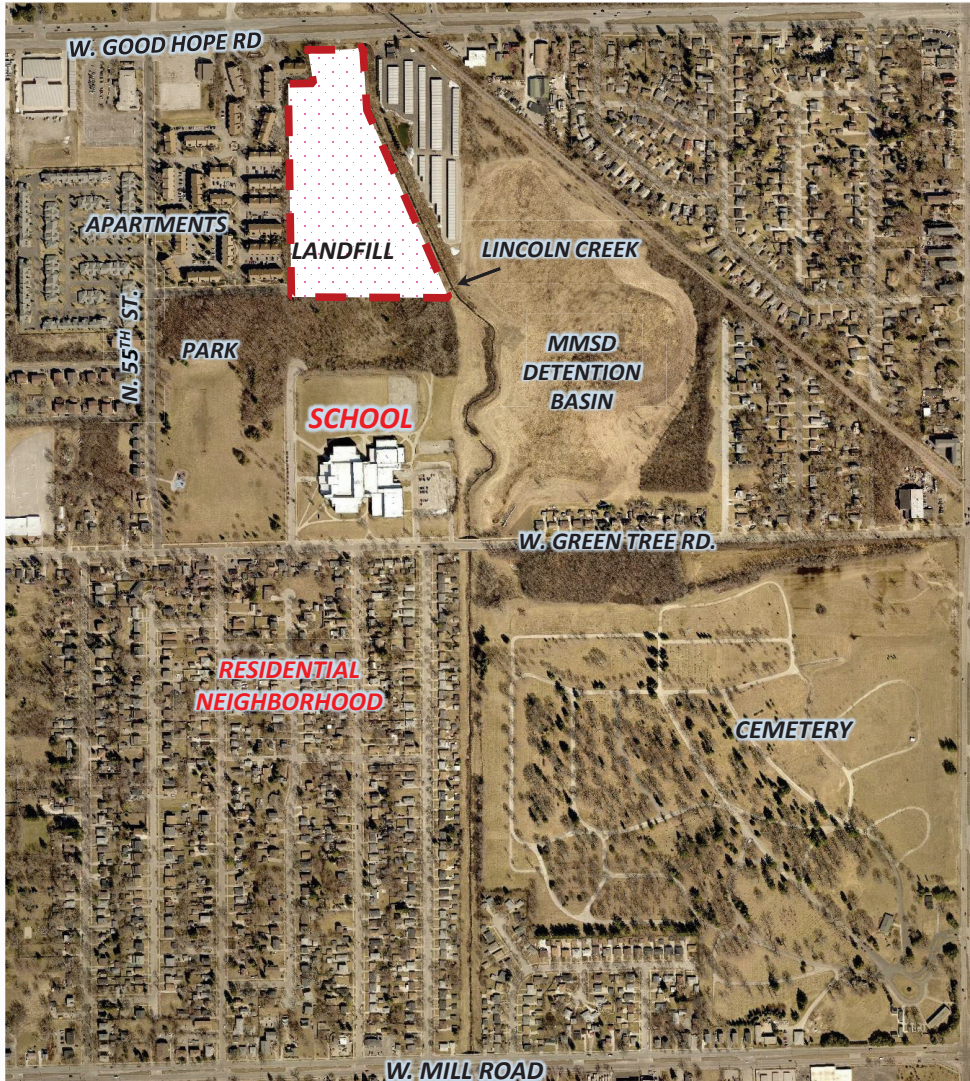
The Village of Whitefish Bay owns approximately 13 acres of property within the City of Milwaukee located at 5201 West Good Hope Road. The property was acquired in 1960 as a deposit site for the Village's refuse incinerator and demolition debris that was in operation until 1972. In the mid 1980s, the Village conducted environmental impacts and testing and discovered illegal "midnight dumping" of volatile organic compounds (VOCs) occurred likely in the 1960s on the southern half of the site and found that this was not the result of Whitefish Bay activities. Since this discovery, the Village has worked alongside the DNR to investigate, test, monitor, mitigate, and report findings based on the discovered VOCs. Since the discovery, the Village has been compliant with all DNR requirements.

Since 1995, the Village has contracted with The Sigma Group to perform soil, soil vapor, and groundwater sampling and modeling to prepare remediation action plans as required by the DNR. Based on continuous testing, recent data show diminishing contamination as shown on the attached presentation and exhibits. The DNR will still require a remediation plan to include the following: source area remediation, landfill cover soil evaluation, landfill cap, and continued monitoring.

Sigma and Village staff presented updates to the Public Works Committee regarding the landfill activities on January 9, 2023. The Whitefish Bay Landfill is one of three presentations Village staff have scheduled in advance of capital improvement plan discussions, which will start in May. This topic was pulled out for an earlier presentation given the complexity of the topic to allow for more robust conversations if the Village Board so chooses. The next phases and budget impact projections of the Whitefish Bay Landfill are shown within the attached exhibit based on ongoing discussions with consultants and representatives within the DNR. The Landfill will be incorporated within the 6-year Capital Improvement Project plan to determine impacts to future Village budgets based on DNR requirements within the remedial action plan.

The April 7, 2025 Landfill presentation to the Village Board is informational only and no action is required.

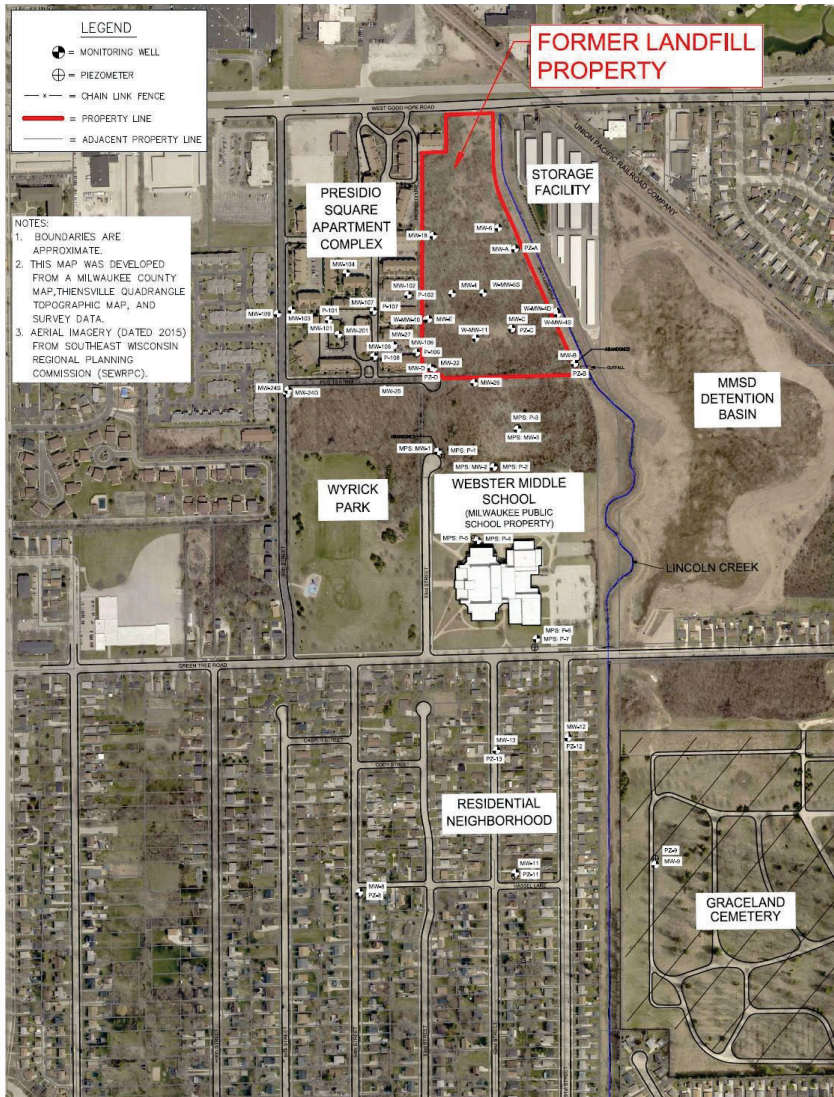
WHITEFISH BAY LANDFILL
5201 WEST GOOD HOPE ROAD
MILWAUKEE, WI



SITE HISTORY

- PROPERTY ACQUIRED IN 1960

- USED NORTHERN PORTION TO DEPOSIT:
 - ASH FROM VILLAGE INCINERATOR
 - ROADWORK CONSTRUCTION SPOILS
- FILLING OPERATIONS ENDED IN 1972
- ENVIRONMENTAL IMPACTS IDENTIFIED IN 1986 DURING DUE DILIGENCE ASSESSMENT
- WDNR WAS NOTIFIED & SUBSURFACE INVESTIGATION INITIATED



SITE INVESTIGATION 1989 – PRESENT

INITIAL ACTIVITIES (1989 – 2019)

- SOIL BORING AND MONITORING WELL INSTALLATION
- INDOOR AIR QUALITY ASSESSMENT AT THE SCHOOL
- SOIL GAS STUDY IN THE RESIDENTIAL AREA
- INVESTIGATED POTENTIAL MIGRATION OF GROUNDWATER IMPACTS TO LINCOLN CREEK
- POTENTIAL RECEPTORS IDENTIFICATION

SOURCE OF CONTAMINANTS

- VILLAGE ATTORNEYS AND POLICE DEPARTMENT INTERVIEWED:
 - NEIGHBORING PROPERTY OWNERS & FORMER VILLAGE STAFF
- REVIEWED AVAILABLE RECORDS
- CONCLUDED BASED ON THE AREAS OF SOIL IMPACTS & TYPES OF CONTAMINANTS:
 - RESULTS OF MIDNIGHT DUMPING (LIKELY OCCURRED IN 1960s)
- CHEMICALS TYPICALLY USED FOR:
 - METAL DEGREASING & DRY CLEANING

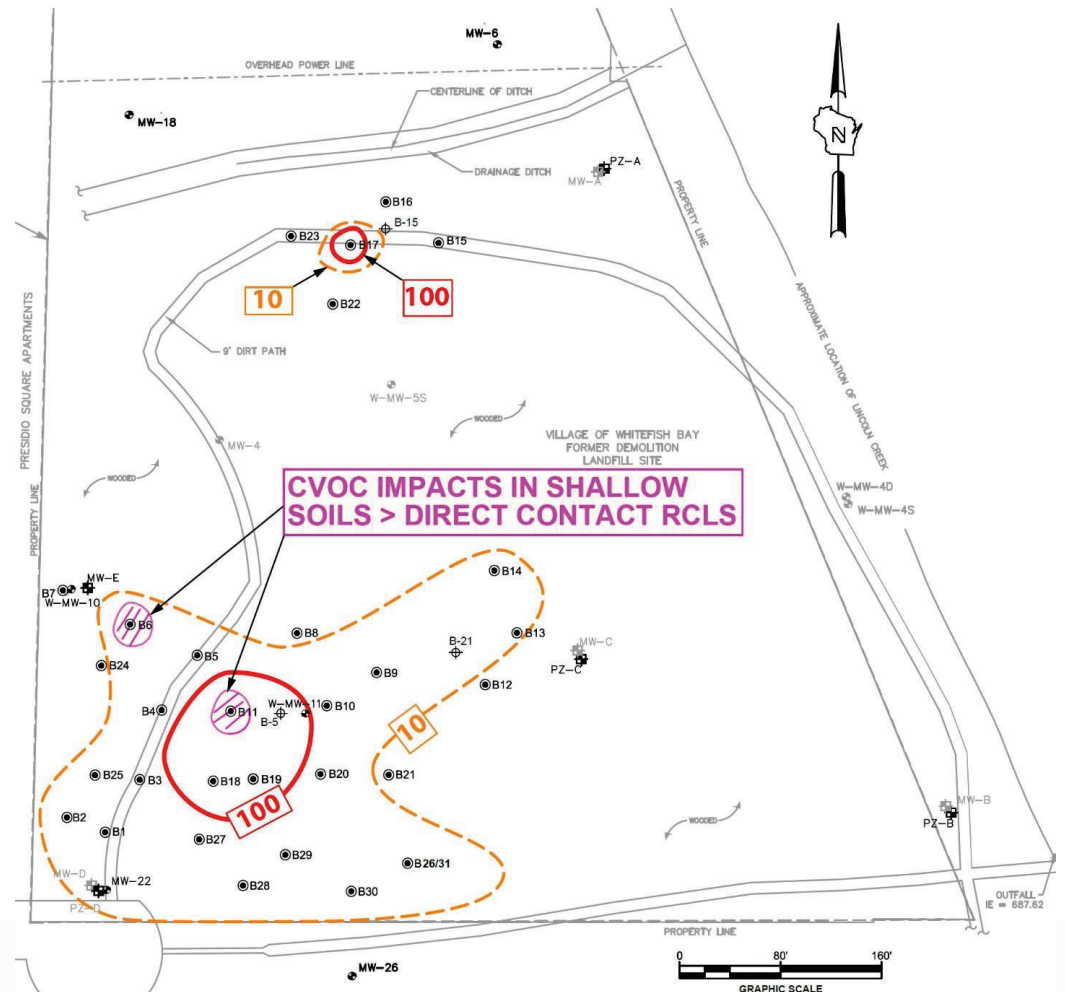
RESULTS OF THE SITE INVESTIGATION

- DELINEATED GROUNDWATER FLOW & CONTAMINANT DISTRIBUTION
- NO OFF-SITE SOIL IMPACTS
- NO IMMEDIATE VAPOR INTRUSION CONCERNS

WDNR REQUIRED ON-SITE SOURCE AREA INVESTIGATION 2013 – 2014

CHLORINATED VOCs

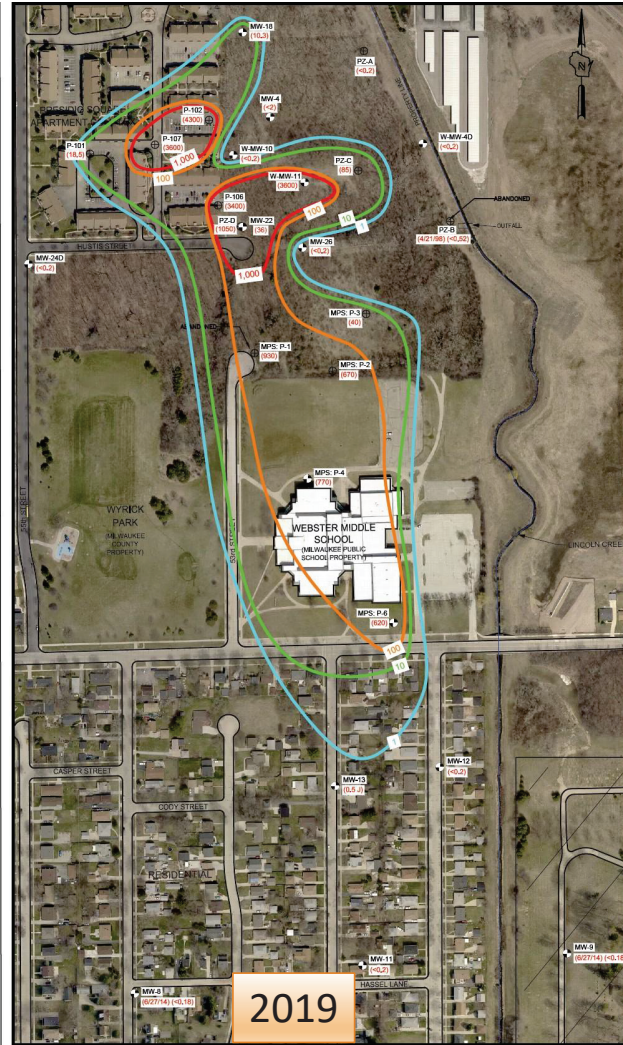
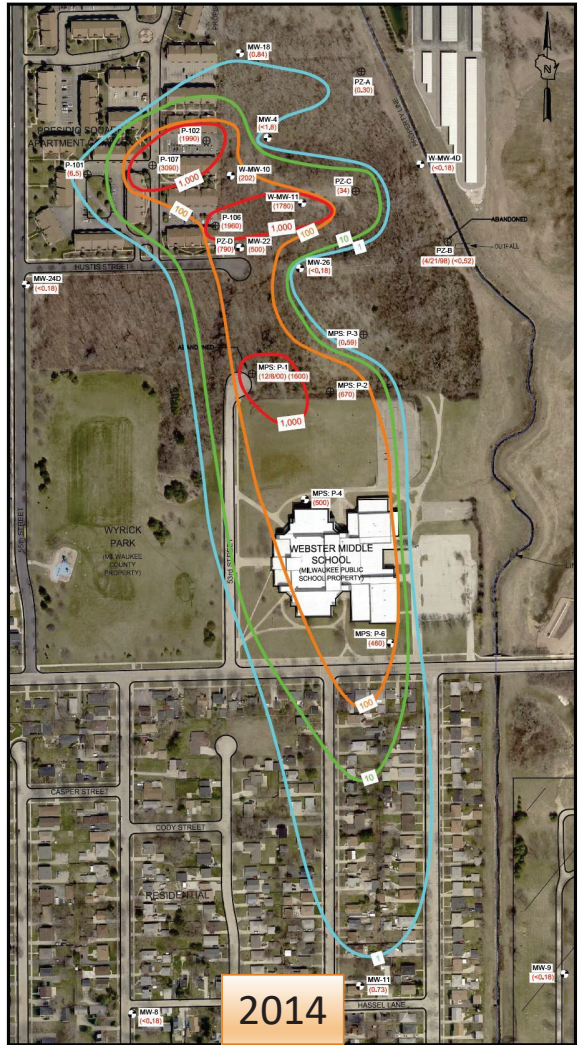
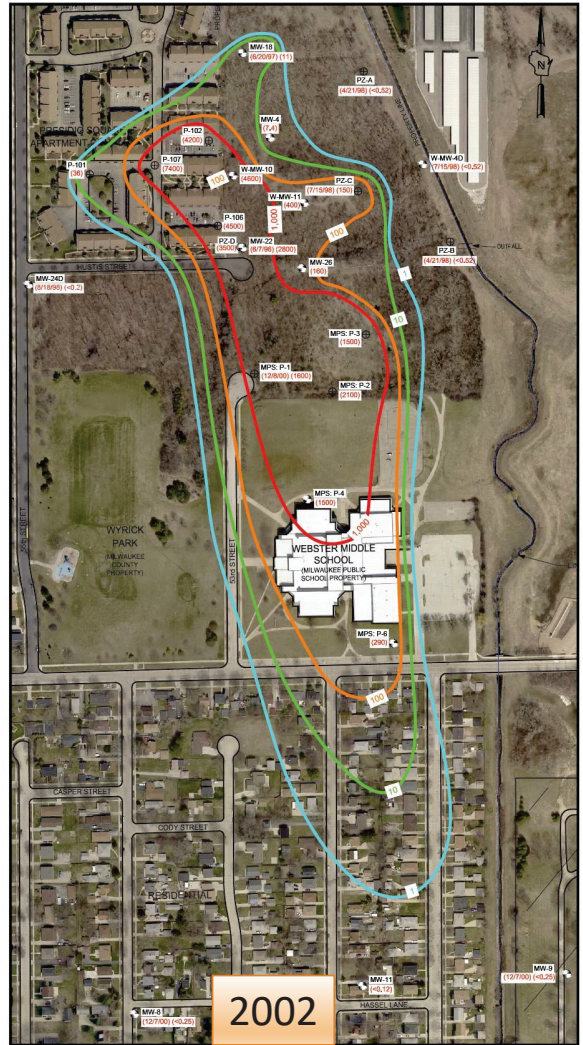
- PCE
- TCE
 - DCE
 - VC



RESULTS OF OFF-SITE INVESTIGATION

- NO PARENT COMPOUNDS (PCE OR TCE) AT OFF-SITE LOCATIONS
 - *LIKELY DUE TO THE ABSENCE OF SOURCE AREA OFF-SITE*
- NATURAL ATTENUATION PROCESSES ARE OCCURRING
 - *PRESENCE OF MICROBES & CONDUSIVE SUBSURFACE GEOCHEMISTRY*
- GROUNDWATER QUALITY IS STABLE OR IMPROVING
 - *WITH INCREASING DISTANCE DOWNGRADIENT FROM THE LANDFILL*
 - *WITH PASSAGE OF TIME AT THE LANDFILL*

MID-DEPTH ZONE (VINYL CHLORIDE)



WDNR REQUESTED SUPPLEMENTAL INVESTIGATION

RECENT ACTIVITIES (2023 – 2025)

➤ ADDITIONAL VAPOR TESTING

➤ SCHOOL BUILDING:

- TWO ADDITIONAL ROUNDS OF INDOOR AIR SAMPLING
- ONE ADDITIONAL ROUND OF SUB-SLAB VAPOR SAMPLING

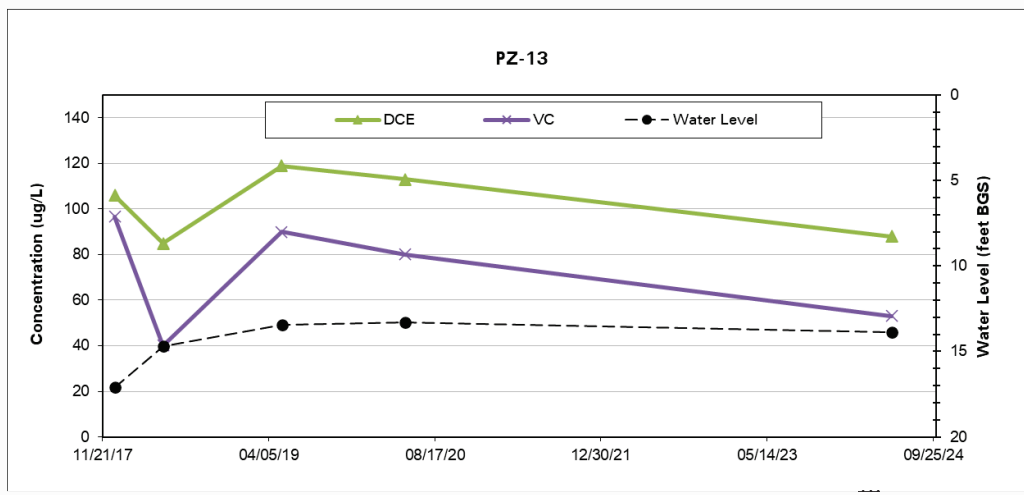
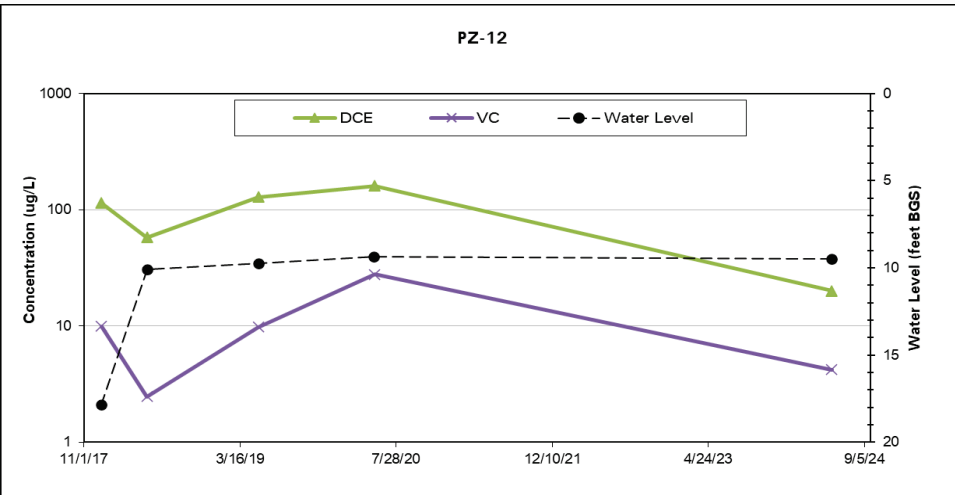
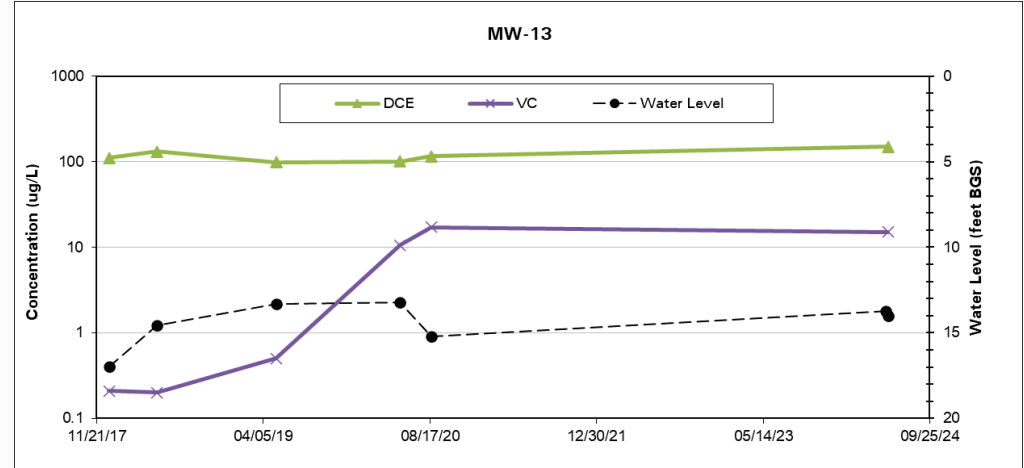
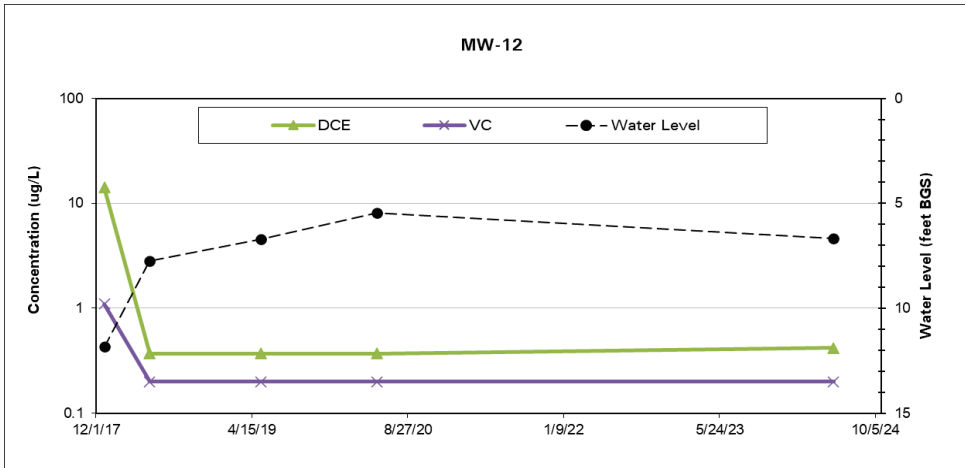
➤ RESIDENTIAL AREA SOIL VAPOR SAMPLING

➤ RESIDENTIAL SUB-SLAB VAPOR SAMPLING

➤ ADDITIONAL GROUNDWATER ASSESSMENT

- EMERGING CONTAMINANTS: PFAS AND 1,4-DIOXANE
- CHLORINATED VOCS

RESIDENTIAL AREA GROUNDWATER TRENDS



WDNR REQUIRED REMEDIATION

➤ SOURCE AREA REMEDIATION

➤ LANDFILL CAPPING

REMEDIAL ACTION NEXT STEPS

➤ REMEDIAL ACTION OPTIONS EVALUATION

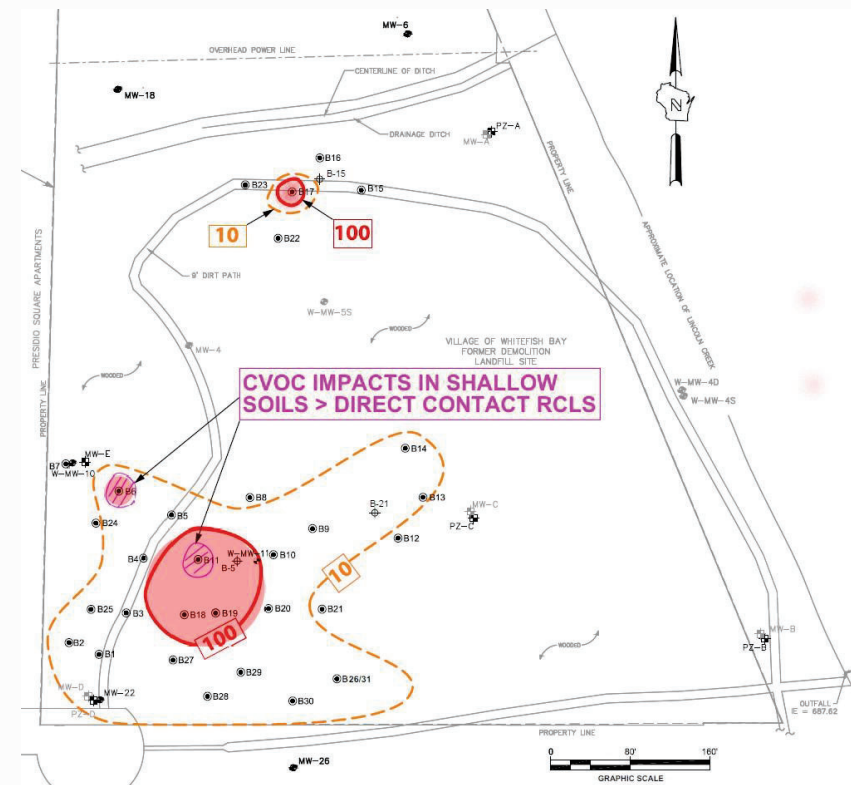
- PROPOSED SOURCE AREA REMEDIAL ACTION PLAN
- PROPOSED LANDFILL CAP PLAN
 - CURRENT CAP EVALUATION
- GROUNDWATER MONITORING PLAN
- LANDFILL CAP MAINTENANCE PLAN

➤ IMPLEMENTATION ACTIVITIES

- SOURCE AREA SOIL & GROUNDWATER REMEDIATION & MONITORING
- CAP CONSTRUCTION
 - CLEAR TREES FOR SOIL PLACEMENT
 - PLACE IMPORTED SOIL & GRADING
 - TOPSOIL & SEEDING

POTENTIAL SOURCE AREA REMEDIAL OPTIONS

- EXCAVATION & OFF-SITE DISPOSAL \$\$\$\$
- SOIL TREATMENT - IN PLACE \$\$\$
 - CHEMICAL OXIDANT
 - ENHANCED BIOREMEDIATION
 - BACKHOE MIXING
 - INFILTRATION GALLERY
 - GEOPROBE INJECTION



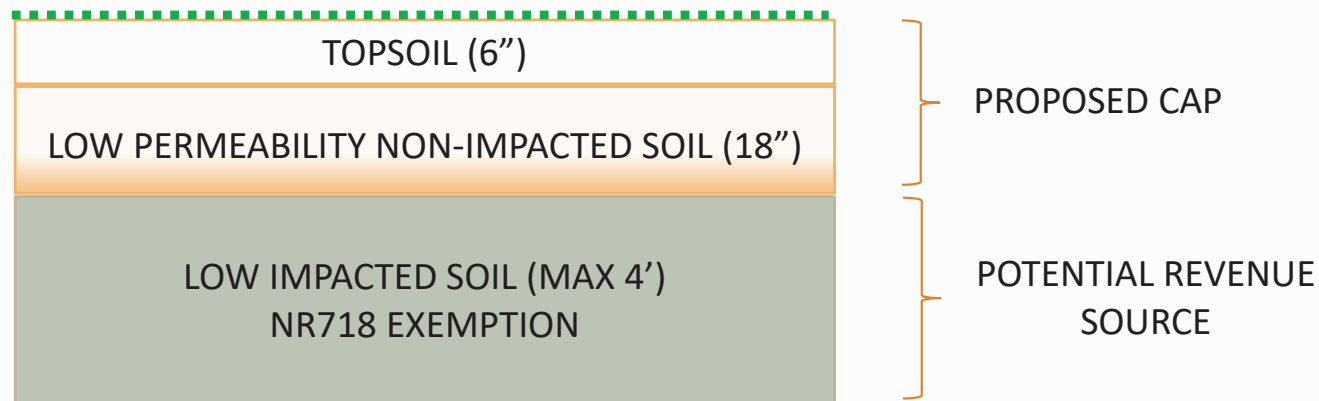
LANDFILL CAP PLACEMENT

- 18" NON-IMPACTED LOW PERMEABILITY SOIL AND 6" TOPSOIL
- ESTIMATED VOLUME = 35,000 CY
- PLACEMENT & GRADING



LADFILL CAP OPTION CAP OVER LOW IMPACTED SOIL

- IMPORT LOW IMPACTED SOIL (NR718 EXEMPTION NEEDED)
- SOIL FROM ON-GOING CONSTRUCTION SITES
- PHASE 1 AND OTHER ENVIRONMENTAL DATA NEEDED



FUTURE USE OPTIONS

- PUBLIC PARK
- SOLAR FARM
- COMMERCIAL DEVELOPMENT

