

# ***BAY MILLS INDIAN COMMUNITY SUMMARY OF CLEANUPS***

- Silverdome**
- Bay Mart Gas Station & C-Store**
- Superior Township Dump**



# ***SILVERDOME (FORMER MAINTENANCE YARD)***



## ***BACKGROUND***

- ❑ Response actions commenced in 2019.
- ❑ Combined effort by BMIC & MET.
- ❑ Cleanup conducted under Michigan Part 201.
- ❑ Two separate concerns:
  1. Discharges to the surface from outdoor storage of used oil and fuel.
  2. Chlorinated solvent concern under the garage.

## ***CONCERN #1***



1. One aboveground storage tank over secondary containment.
2. Secondary Containment with seven, distressed/leaking 55-gallon drums; two 30-gallon containers and two five-gallon pails.

## **CONCERN #1**



Liquid displacement inside the secondary containment from rain - discharge of liquids outside the secondary containment structures.

## CONCERN #1



Numerous abandoned 55-gallon drums in the surrounding area.



# ***INITIAL RESPONSE - CONTAINMENT***



Stop on-going releases with sorbents.

Move all drums to the central location and cover with plastic sheeting to avoid rainwater displacement.



# ***INITIAL RESPONSE - CONTAINMENT***



- Liquid transfer into 275-gallon totes
- Distressed drums placed into over-pack drums
- Sound drums staged over sorbents.

# ***INITIAL RESPONSE - REMOVAL***



- Liquid removal – Vac Truck provided by GFL Environmental.
- Concrete removal (BMIC) with disposal at GFL Dafter Landfill.



# ***SUBSURFACE INVESTIGATION***

Physical observations, PID soil headspace analysis and laboratory results indicated Limited soil and groundwater contamination.

## **Soil Contamination:**

- ❑ Characterized by several semi-volatile & volatile VOCs at concentrations exceed Michigan Part 201 Drinking Water & GSI criteria.
- ❑ Extends to unconfined groundwater – encountered from 1.5 to 3-feet bgs.

## **Groundwater Contamination:**

- ❑ Seasonal fluctuation from 1.5 to 3-feet bgs.
- ❑ Characterized by several volatile VOCs at concentrations exceed Michigan Part 201 GSI & SSVIAC soil gas criteria.

# ***REMEDIAL EXCAVATION***



- ❑ November 2020: Initial Excavation to remove visually impacted soil.
- ❑ Excavation terminated at the water table ~ 2.5-feet bgs.

## ***CONCERN #1 – SUMMARY***

- ❑ Approximately **57 tons** of contaminated soil was removed and disposed at GFL's Dafter Landfill.
- ❑ Discrete area of groundwater contamination exists.
- ❑ Area is delineated.
- ❑ Additional source excavation planned for Spring 2026 – depending on the depth to groundwater.

# SILVERDOME – CONCERN #2

Concern #2 is located beneath the concrete slab foundation of the Storage garage (“Silverdome”). Concern #2 was identified during investigation into the soil vapor pathway of Concern #1.

Tetrachloroethylene (was identified in soil vapor samples at elevated Levels (VIAP SLs).



## ***BUILDING INTERIOR***



- Historical vehicle repair.
- The source or spill event for the Tetrachloroethylene<sub>15</sub> has not been determined.

# ***REMEDIAL ACTIONS – STRUCTURE REMOVAL***



- Removal of the two structures.
- Removal of the concrete slab (landfill disposal).

# ***SITE SAFETY***



- ❑ Site Specific Safety Plan implemented:
  - 40-hour Hazwoper training required for all on-site workers.
  - Security fence.
  - Air Monitoring (particulates and dust).

# *REMEDIAL EXCAVATION*



- Excavation of soil under the concrete foundation foot print.
- Excavation extended below the water table.
- Excavation dewatering.

# ***REMEDIAL EXCAVATION***



- ❑ Dewatering system – GAC units and a Frac Tank.
- ❑ Treated water discharged to the BMIC WWTP.

# REMEDIAL EXCAVATION



- ❑ Excavation and soil transportation conducted by McKerchie Contracting.
- ❑ Soil disposed of at GFL Dafter Landfill

## ***CONCERN #2 - SUMMARY***

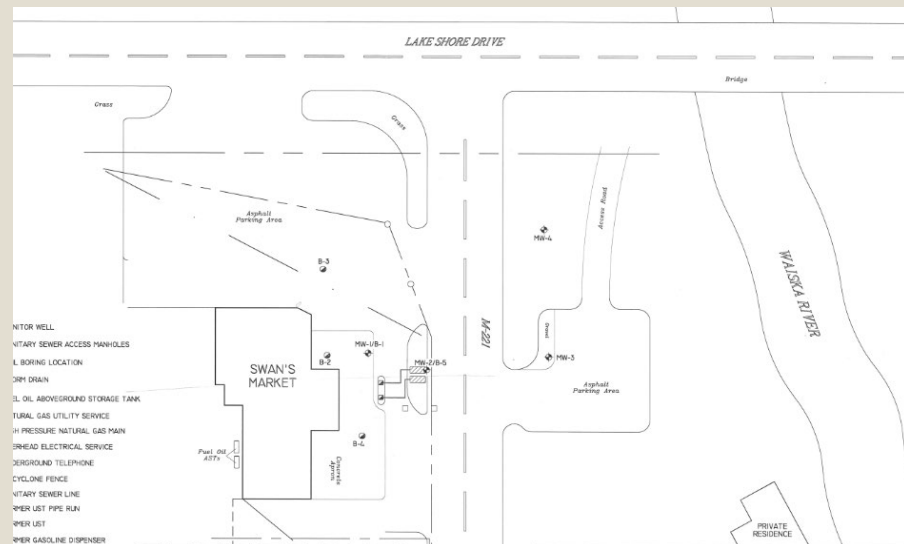
- Approximately **700 tons** of contaminated soil and concrete was removed and disposed at GFL's Dafter Landfill.
- Approximately **30,000 gallons** of contaminated groundwater was removed, treated and discharged to the BMIC WWTP.
- Soil and Groundwater verification samples all below criteria.
- No further action proposed for Concern #2.

# ***BAY MART GAS STATION & C-STORE***



# BACKGROUND

- ❑ 1946: The property was developed into a retail gas station and auto-repair facility. The station included two underground storage tanks (USTs) and two dispensers.
- ❑ 1996: The original building, the two USTs and two dispensers were removed from the ground.
- ❑ August 15, 1996: Confirmed Release #1 (C-0594-96) was reported under “Swan’s Market”.



# ***BAY MART GAS STATION & C-STORE***

- ❑ 1997: BMIC Purchased the facility under a Baseline Environmental Assessment (Petition #P97-00037-MA).
- ❑ The purchase was followed by construction of the current building with the installation of two new USTs and five dispensers.



# ***BAY MART GAS STATION & C-STORE***



- March 2018: A site assessment was conducted following modifications to the product supply lines.
- Contaminated soil (elevated lab data) was encountered adjacent to the diesel fuel dispenser.
- Confirmed Release #2: (C-0029-18) was reported on March 8, 2018.

# BAY MART GAS STATION & C-STORE



- ❑ Clean up of the confirmed releases is being conducted under Michigan Part 213.
- ❑ Confirmed Release #2 qualified for MUSTA funding.
- ❑ Comingled contaminant plumes.
- ❑ On-going investigation and remedial actions.

# ***2025 UST SYSTEM REPLACEMENT***

- ❑ BMIC conducted significant renovations to the property. This included:
  1. Complete removal of all existing USTs, lines, dispensers and canopy.
  2. Installation of new USTs, lines, dispensers and canopy.
- ❑ The work included removal and disposal of contaminated soil (“Soils of Opportunity”) and treatment disposal of groundwater.
- ❑ Landfill disposal costs for “Soils of Opportunity” were covered under MUSTA.

# *2025 REMEDIAL EXCAVATION*



All USTs, lines and dispensers were removed.

# 2025 REMEDIAL EXCAVATION



- ❑ Contaminated soil (“Soils of Opportunity”) was removed and transported to GFL’s Dafter Landfill.
- ❑ Contaminated groundwater was pumped, treated and discharged to surface water under a NPDES permit.

# ***2025 FUEL SYSTEM REPLACEMENT***



Dewatering was maintained until completion of the UST installation.

# 2025 FUEL SYSTEM REPLACEMENT



Dewatering was maintained until completion of the UST installation.

# ***2025 FUEL SYSTEM REPLACEMENT***



New dispensing area.

## ***SUMMARY & CONCLUSIONS***

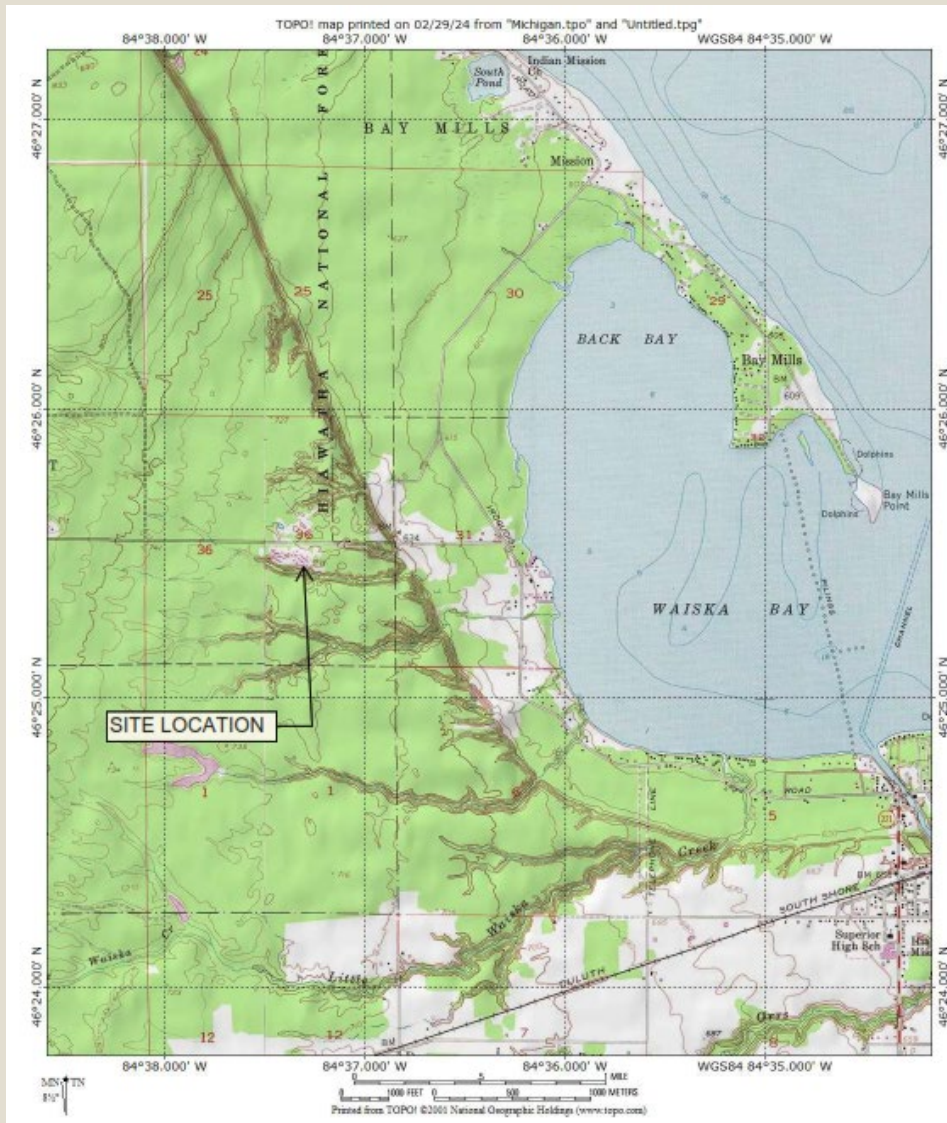
- ❑ Approximately **6,279 tons** of contaminated soil was removed and disposed at GFL's Dafter Landfill.
- ❑ Contaminated groundwater was pumped, treated and discharged to surface water for 25 days.
- ❑ April 14, 2026: Monitoring wells were replaced.
- ❑ April 21, 2026: Groundwater was sampled.
- ❑ All groundwater samples were reported as non-detectable.
- ❑ The Site will be petitioned for closure.

## ***FORMER SUPERIOR TOWNSHIP DUMP***



This property operated as an unregulated dump from 1940 to 1974.

# LOCATION



A 10-acre (approximate) abandoned open dump in the Huron National Forest (HNF)

The Site is located along the south side of Plantation Road approximately one-mile west of Lakeshore Drive in Superior Township, Michigan.



# **BACKGROUND**

HNF conducted investigations from 1999-2001.

- ❑ The HNF studies concluded that the dump is not abandoned properly (according to standards set by 40 CFR Section 257.3); garbage/debris at surface, on the ravine bank and scattered within the creek channel.
- ❑ HNF groundwater sampling identified concentrations of metals exceeding Michigan Part 201 cleanup criteria. Based on those findings, the Site was listed as a Part 201 facility (ID: 17000160).
- ❑ Investigation and cleanup is being conducted under Michigan Part 201.

# ***REMEDIAL INVESTIGATION***

- ❑ In 2023 BMIC entered in partnership with HNF through the tribal Forest Protection Act.
- ❑ In fall 2023 MET was contracted by BMIC, under the HNF grant, to conduct a Remedial Investigation/Feasibility Study (RI/FS).

## **RI SCOPE OF WORK**

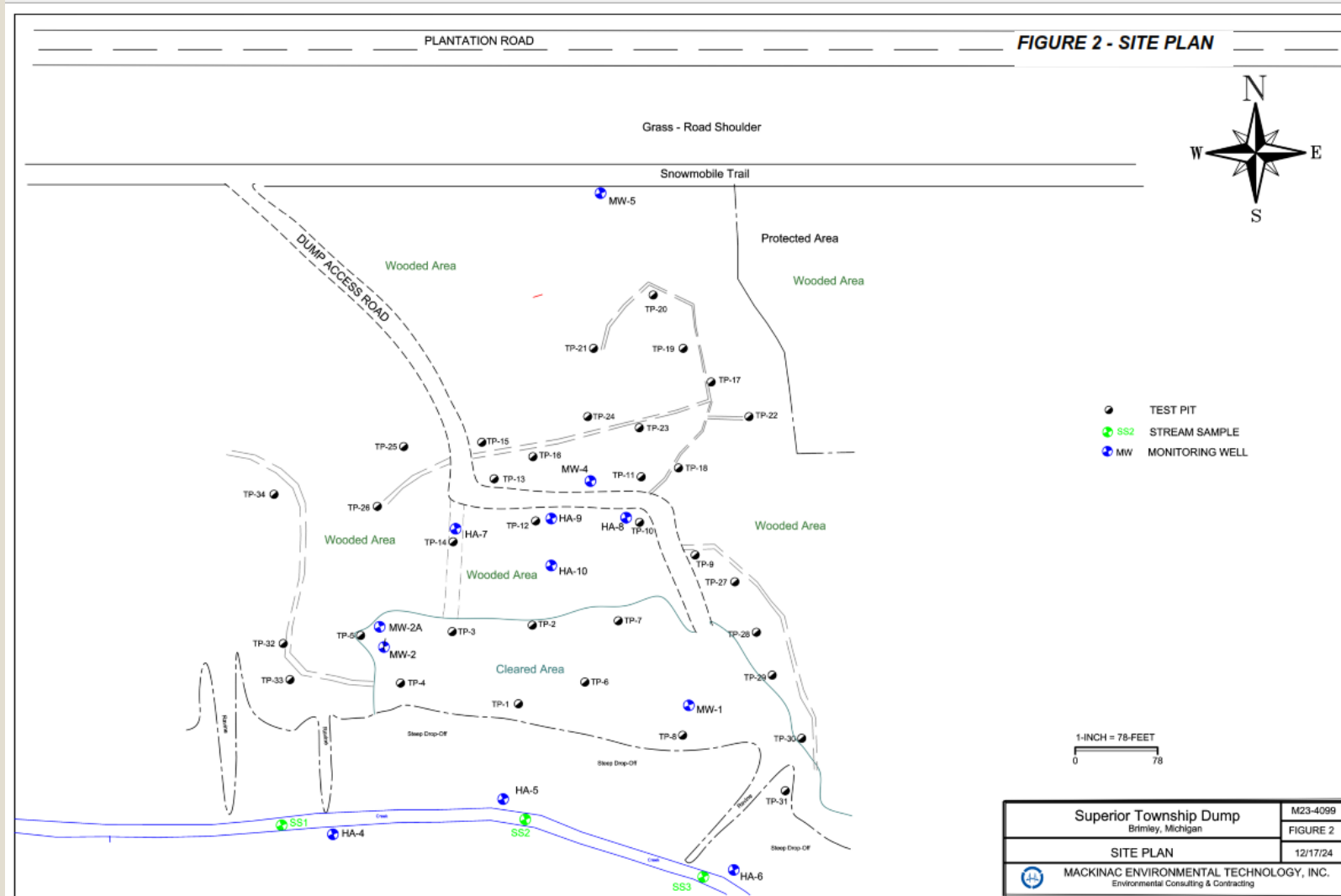
1. Test Pit Investigation
2. Groundwater Investigation
3. Surface Water Sampling

# ***TEST PIT INVESTIGATION***

## **April - June 2024: Test Pit Investigation:**

- Walk the Site and mark areas for clearing. Tree marking by HNF; tree and shrub clearing by BMIC.
- Conduct 34 Test Pits. The test pits commenced at the creek bank (center of the assumed dump area), and move north, south and west until debris is no longer encountered. The excavator was provided by BMIC.
- Each test pit was located with a GPS for inclusion on the Site Plan.

# SITE PLAN



# ***TEST PIT INVESTIGATION***



The creek is located beyond the excavator.

# ***TEST PIT INVESTIGATION***



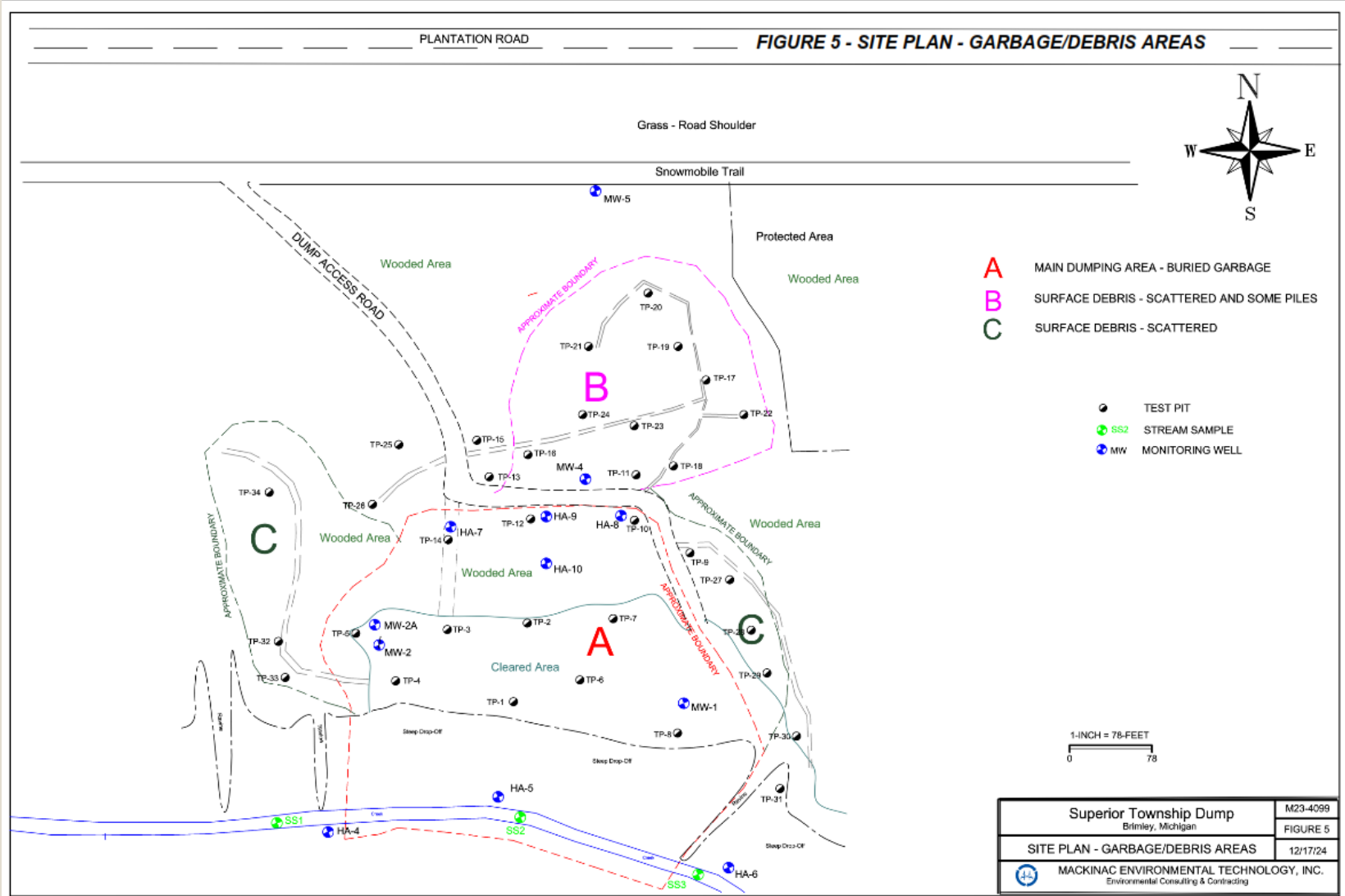
- ❑ Test Pit #2: Middle of clearing – At the north edge.
- ❑ Surface to 6': Solid Waste (plastics, glass, tires & metal debris); 6' to 8': Clay
- ❑ Perched groundwater is running into the excavation.

# ***TEST PIT INVESTIGATION***



- ❑ Test Pit #14: South of the access road
- ❑ Surface to ?: Solid Waste (plastics, glass & metal debris).
- ❑ Perched groundwater is running into the excavation.

# LOCATION OF GARBAGE AND DEBRIS



**Area A:** This area represents the Main Dump. It is characterized by surface debris and buried debris/garbage.



**Area B:** This area is located west and east along the main dump access road. It is characterized by scattered surface debris located throughout.



**Area C:** This area is located east and west of Area A. It is characterized by discrete, scattered surface debris.



# ***GROUNDWATER INVESTIGATION***

- ❑ Install seven shallow monitoring wells with a hand auger.
- ❑ Install two deep monitoring wells with a trailer-mounted drill rig
- ❑ Groundwater sampling – existing and new wells.





# ***GROUNDWATER INVESTIGATION***

32 groundwater water samples (HNF & MET) have been collected from the Site.

- VOCs & SCOVs: Reported as below method detection limits or criteria.
- Metals: GSI Criteria and Drinking Water Protection Criteria Exceedances.**
- PFAS – MW-1R: PFOA and PFOS were reported at concentrations exceeding EGLE Drinking Water/Groundwater levels and USEPA Enforceable Maximum Contaminant levels.**
- The groundwater investigation is on-going.

# ***SURFACE WATER INVESTIGATION***



Looking east along the creek. The solid waste is is located on the creek and along both banks.

# ***SURFACE WATER INVESTIGATION***

13 surface water samples (HNF & MET) have been collected from the Site. This includes five upstream, four mid-stream and four downstream,

- ❑ VOCs & SVOCs – All compounds were reported as below method detection limits.
- ❑ Metals: Several metals were reported at concentrations above the method detection limit; however, there is no discernible difference between the three locations.
- ❑ Other parameters: Sodium, Calcium, Ammonia as nitrogen. No discernible difference between the three locations.
- ❑ BOD, phosphorus, chloride, nitrogen nitrate, nitrogen nitrite and nitrogen nitrite-nitrate. All results were reported as BDL.

# ***FEASIBILITY STUDY***

- ❑ Option #1: Do nothing.
- ❑ Option #2: Security fencing and restrictive covenant.
- ❑ Option #3: Remove solid waste from the creek and ravine.
- ❑ Option #4: Remove exposed solid waste in the upland area and excavate buried solid waste in the creek and ravine.
- ❑ Option #5: Leave upper area solid waste in place and cap with sediment and a synthetic liner.
- ❑ Option #6: Excavation and landfill disposal of solid waste:
  - 6a - Haul and transport to GFL Dafter.
  - 6b - Haul and transport at Wayne Disposal.

## ***OVERALL OBJECTIVE***

HNF & BMIC Review and Discussion concluded that the objective of the cleanup is to fully remove solid waste and restore the creek, riparian buffer, and upland areas.

- ❑ Coastal Forest Restoration: Remove 7,200 tons (18,000 cubic yards) of solid waste, which degrades nearshore habitats important for flood risk reduction.
- ❑ Aquatic Connectivity: Remove in-stream debris that causes barriers for fish and aquatic organisms.
- ❑ Riparian Restoration: Directly restore 5 acres of riparian habitat.
- ❑ Floodplain Restoration: Reconnect 10 acres of riparian floodplain.
- ❑ Stream Restoration: Restore 0.25 miles of creek bank and protect 1.5 downstream miles from continued and potential impact.

# ***APPROACH***

- ❑ Rather than recommend one specific option, the team decided to proceed with the cleanup working up through the options as the budget allows, since they build on one another.
- ❑ This will mean working in a staged approach, starting with the creek and creek bank.
- ❑ Work may start and stop. Temporary storage of excavated debris may be necessary on the site until funding enables hauling off-site for recycling or disposal.
- ❑ A Request For Proposals (RFP) was prepared, with input by BMIC and HNF, and was submitted to three contractors.
- ❑ A contractor was selected; work should commence in late summer 2026.