

Tittabawassee River, Saginaw River & Bay Site

Midleground Island EPA's Proposed Cleanup Plan

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Public Meeting March 10, 2020



Agenda

- Recommended cleanup option
- Brief background
- Key findings
- Discussion of options
- Next steps
- Q & A

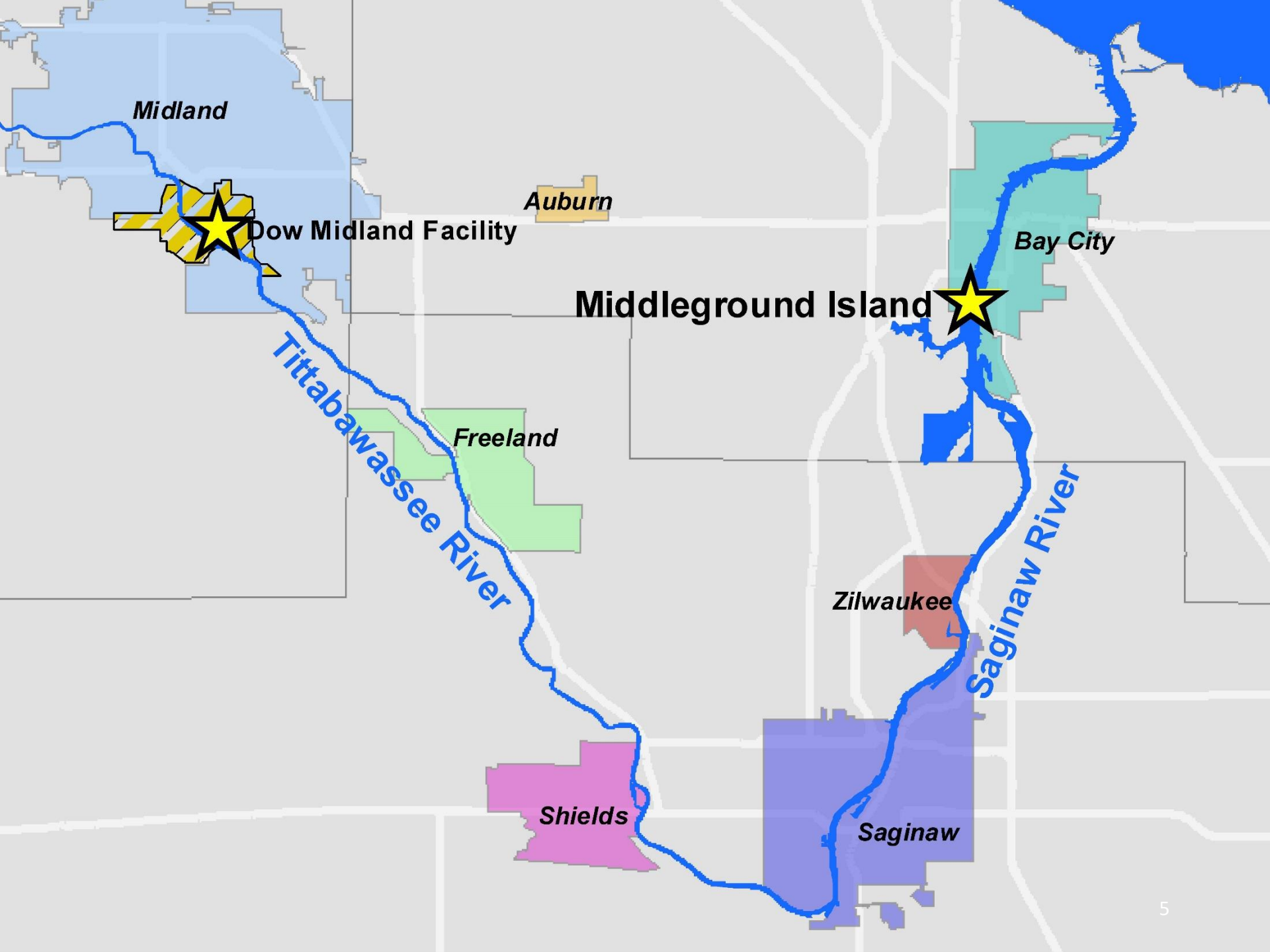
EPA's Recommended Cleanup Option

- Removal and Backfill
 - Remove contaminated soil in residential yards that exceeds 250 parts per trillion (ppt) of dioxin
 - Replace with clean soil and restore yards



Overview

- Middleground Island (MGI) is part of the larger Tittabawassee River, Saginaw River & Bay site
- MGI is in the Saginaw River approximately seven miles upstream (south) of Saginaw Bay
- Cleanups are proposed for residential properties that exceed EPA's cleanup goal



MGI – Current Land Use

- About 175 acres and 67 property parcels
- Current land use
 - Upstream (south) end – largely residential
 - Middle – disposal/former disposal, low use, and some commercial
 - Bay City Middlegrounds Landfill; operated 1956-1984
 - Former Army Corps sediment disposal facility; operated 1973-1984
 - Downstream (north) end – largely recreational
 - Bigelow Park
 - Boys and Girls Club
 - Rowing Club
 - Multiuse trails

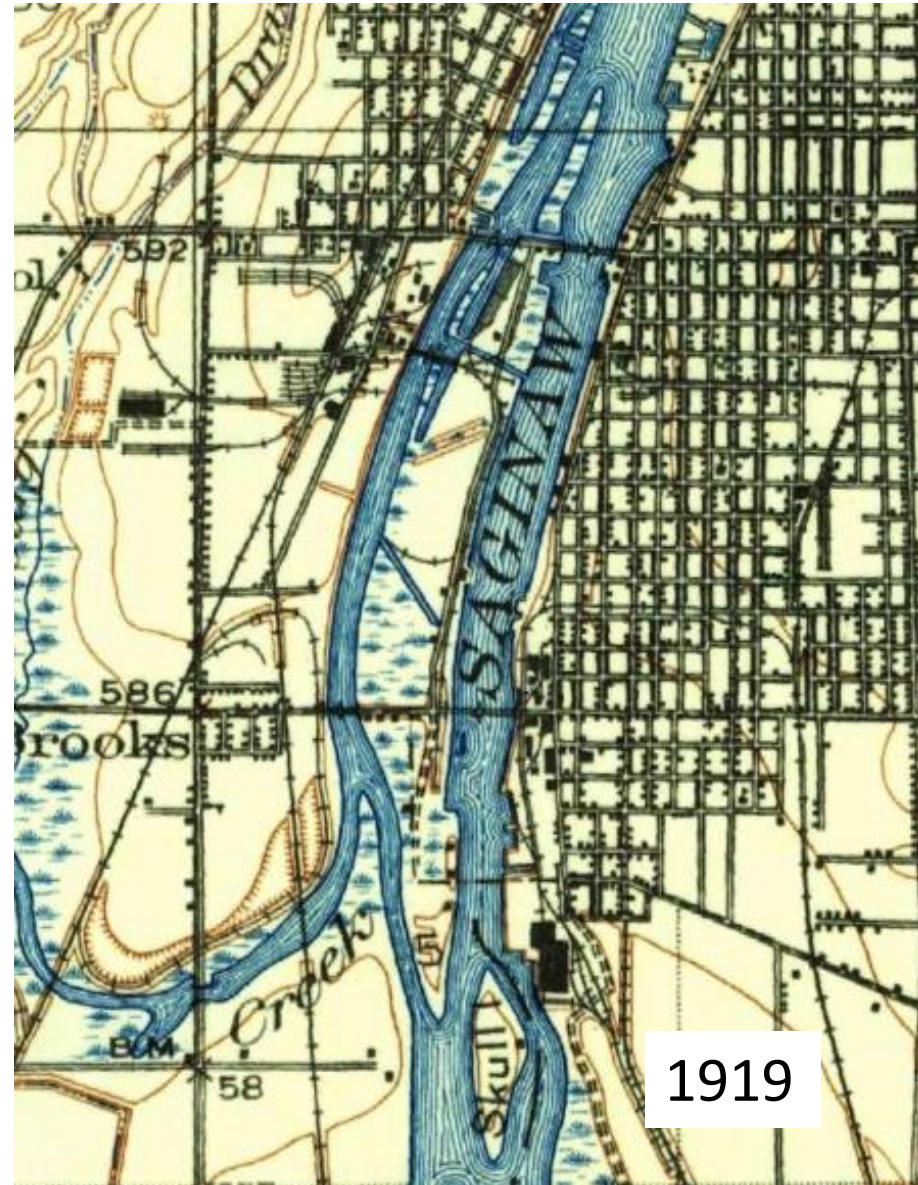
MGI Residential Land Use

- About 41 acres of the 175-acre island consists of residential properties or lots that could be residential in the future
 - Currently 37 residences
 - Home construction believed to start in 1950's



MGI Key Findings

- Dioxins have been found in MGI soil
 - 2018 and 2019 sampling
- Dioxins found in MGI soil are believed to be from:
 - Releases from Dow's plant in early 1900s
 - Historical use of dredge materials as fill on the island



MGI Key Findings (cont.)

- 17/45 sampling units (SUs) in the residential area exceed EPA's 250 ppt residential cleanup goal
 - Residential SUs ranged from 14 – 1290 ppt
- Non-residential areas are all well below EPA's 2000 ppt non-residential cleanup goal
 - SUs ranged from 53 – 757 ppt
- About 15 acres need cleanup
 - ~ 35,000 CY in place; ~46,000 CY to truck

Potential for Exposure

- The term “dioxins” refers to a large family of similar chemicals
- EPA has concluded that dioxins may cause cancer or other health effects, depending on exposures
- The primary pathway for exposure is through ingestion
 - American diet
 - Site-related ingestion can occur when people accidentally eat a small amount of dirt (hand to mouth contact with dirty hands or eating something with dirt on it)
- EPA’s proposed cleanup will limit people’s exposure to dioxins in Middleground Island soil

Cleanup Options

- **Alternative 1, Clean Cover:** A clean soil cover would be placed over contaminated soil and vegetated. Long-term controls, such as maintenance plans and land use restrictions, would be needed at each property.
- **Alternative 2, Removal and Backfill:** Contaminated soil would be dug up, clean soil would be placed, and the property would be replanted. Contaminated soil would be hauled away to an approved location.

Common Elements

- Property-specific design plans will be needed for each eligible property
- Work may require temporary roads on the island and temporary staging areas for equipment and materials
- EPA and EGLE would monitor the cleanups
- A health and safety plan will ensure worker and community safety while work is underway
- A traffic management plan will be needed

EPA's Evaluation Criteria

- Effectiveness
- Implementability
- Cost

Alternative	Effectiveness	Implementability	Cost
Alt. 1: Clean Cover	Low to High	Easy to implement	\$750,000
Alt. 2: Removal and Backfill	High	Easy to moderately difficult to implement	\$1,700,000 – \$2,100,000

Effectiveness Considerations

- Both alternatives are expected to help protect human health, meet the cleanup goals, and comply with laws and regulations
- Both alternatives would have short-term impacts such as limitations on property use, heavy equipment around properties, and noise that may be disruptive during the cleanup
- Both alternatives would require most existing vegetation to be cleared away

Effectiveness Considerations (cont.)

- Both alternatives are expected to result in truck traffic and potential traffic safety issues and air emissions from the transport
 - Alternative 1 could require about 750 truckloads to deliver the cover materials
 - Alternative 2 could require about 1100 truckloads to haul away the contaminated soil and about 1100 truckloads to bring in clean replacement soil
- There are worker safety concerns with both alternatives
 - Alternative 2 results in workers handling larger amounts of contaminated soil and more use of construction equipment.
- Alternative 1 may be less reliable in the long-term because it requires future homeowners to understand and comply with restrictions on the clean cover.

Implementability Considerations

- Community acceptance will be evaluated after public comments are received.
- Agreements from owners must be obtained before conducting work on their property
 - Some owners may be reluctant to allow the long-term restrictions that Alternative 1 requires.
- EPA and EGLE will need to approve the final location for excavated soil
- Traffic management will be one of the biggest safety and implementation challenges

Vehicle Access

- Only vehicle access is via Salzburg Ave. and Lafayette St. bridges
- Evergreen Drive is a narrow two-lane road
 - There are currently no traffic controls to turn on or off



Traffic Management

- A traffic management plan will need to be developed and followed
 - Maintain access for property owners and emergency responders
 - Safe access to and from Evergreen Drive
 - Extensive communication (local residents, community, and city/county officials)
- Pre-construction conditions will be documented
- Any damage will be repaired
- Dust and mud on the roadway will be managed

Public Comment Period

- Before EPA finalizes the plan we need to evaluate public comments
- Public comment period
 - February 12 through March 30, 2020
- Submit comments
 - Orally – here tonight
 - Written – submit here or via mail
 - Email to russell.diane@epa.gov

Next Steps

- EPA, working with EGLE, will review and respond to public comments
 - The plan may change based on comments
- EPA, working with EGLE, will finalize the plan
- Dow will prepare for the cleanup
 - Design each cleanup plan working with affected property owners
 - Prepare the traffic management plan and work with stakeholders
 - Prepare the health and safety plan and work with stakeholders
- EPA expects Dow to implement this work as soon as possible