

REUSE ASSESSMENT

Waste, Inc. Landfill Site, Michigan City, Indiana

FINAL
MARCH 2012



OVERVIEW

The Waste, Inc. Landfill Superfund Site (Waste, Inc. site or site), located in Michigan City, Indiana, occupies a 32-acre area situated between U.S. Route 12 and Trail Creek. EPA and the site's responsible parties have implemented remedial actions at the site. Operation and maintenance activities are ongoing.

Michigan City (city) owns the site property and has completed a preliminary recreational reuse plan for the site as part of a larger master planning process for the Trail Creek Corridor. The EPA Superfund Redevelopment Initiative in Region 5 is providing technical support in the form of a reuse assessment to identify site features, remedy components and reuse suitability zones to inform future park design and ensure protectiveness of the site's remedy. This document summarizes the findings of the reuse assessment and recommendations from the Waste Inc. Reuse Assessment working session held on November 7th, 2011.



Context Map

TRAIL CREEK CORRIDOR GOALS

In 2011, with support from consultants Weaver Boos, the city developed the Trail Creek Corridor Open Space Study, which outlines the following goals.

- Develop a cohesive, public recreational amenity within the Trail Creek corridor that is a local asset and regional destination, accessible by the surrounding community and region.
- Identify trail routing options along Trail Creek creek and integrate proposed and existing trails.
- Develop activity nodes and access points for public use.

SITE REUSE GOALS

The study identifies the Waste, Inc. site as a priority activity node and outlines the following reuse goals for the site.

- Develop a regional park that may include amenities such as a dog park, adventure course and frisbee golf course.
- Establish parking to support a regional park at the site.
- Convert the abandoned rail-line south of the site into a multi-use trail to connect the existing greenway trail.
- Provide creek access, primitive camping areas and a fishing station at the site.



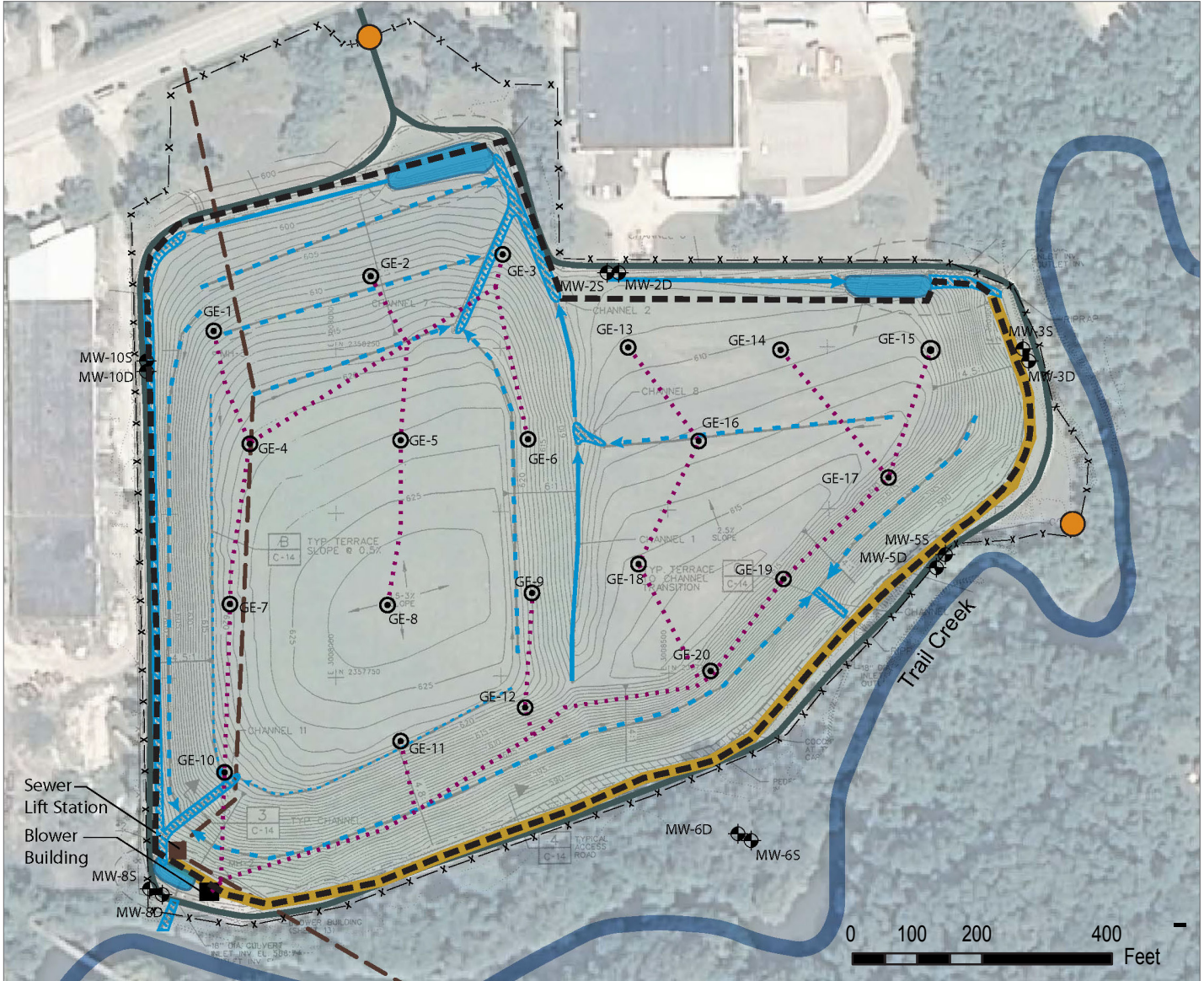
Waste, Inc. Site Reuse Concept Plan (prepared by Weaver Boos)

REUSE PLAN

Site owner Michigan City has developed a recreational reuse concept plan for the Waste Inc. Landfill site to serve as a catalyst for the Trail Creek Corridor's development. The city intends to implement the reuse plan in phases beginning in 2013 with the construction of a park at the Waste Inc. site.










Remedy Components

Based on the Record of Decision (1994), the site includes the remedial features highlighted on the map below. Remedial considerations are also included that may influence future recreational reuse options at the site.






SURFACE FEATURES

Access to the following remedy components must be maintained; some elements may be disturbed or modified if replaced to an equally protective state as approved by EPA.





-  Landfill Cap
(multi-layer landfill cover consists of a flexible membrane liner, covered with an 18-inch soil cap).
-  Stormwater Retention Basin
-  Riprap-lined Channel
-  Grass-lined Channel
-  Terrace (sloped drainage to channels)
-  Landfill Gas Well
-  Ground Water Monitoring Wells
-  Blower Building and Landfill Gas Venting Stack
-  Sewer Lift Station

SUBSURFACE FEATURES

No disturbance permitted to the following remedy components.

-  Landfill Gas Collection Lines
(4-6 feet below ground surface)
-  Leachate Collection Trench
(10-15 feet below ground surface; drains to sewer line)
-  Sewer Line
(10-30 feet below ground surface)

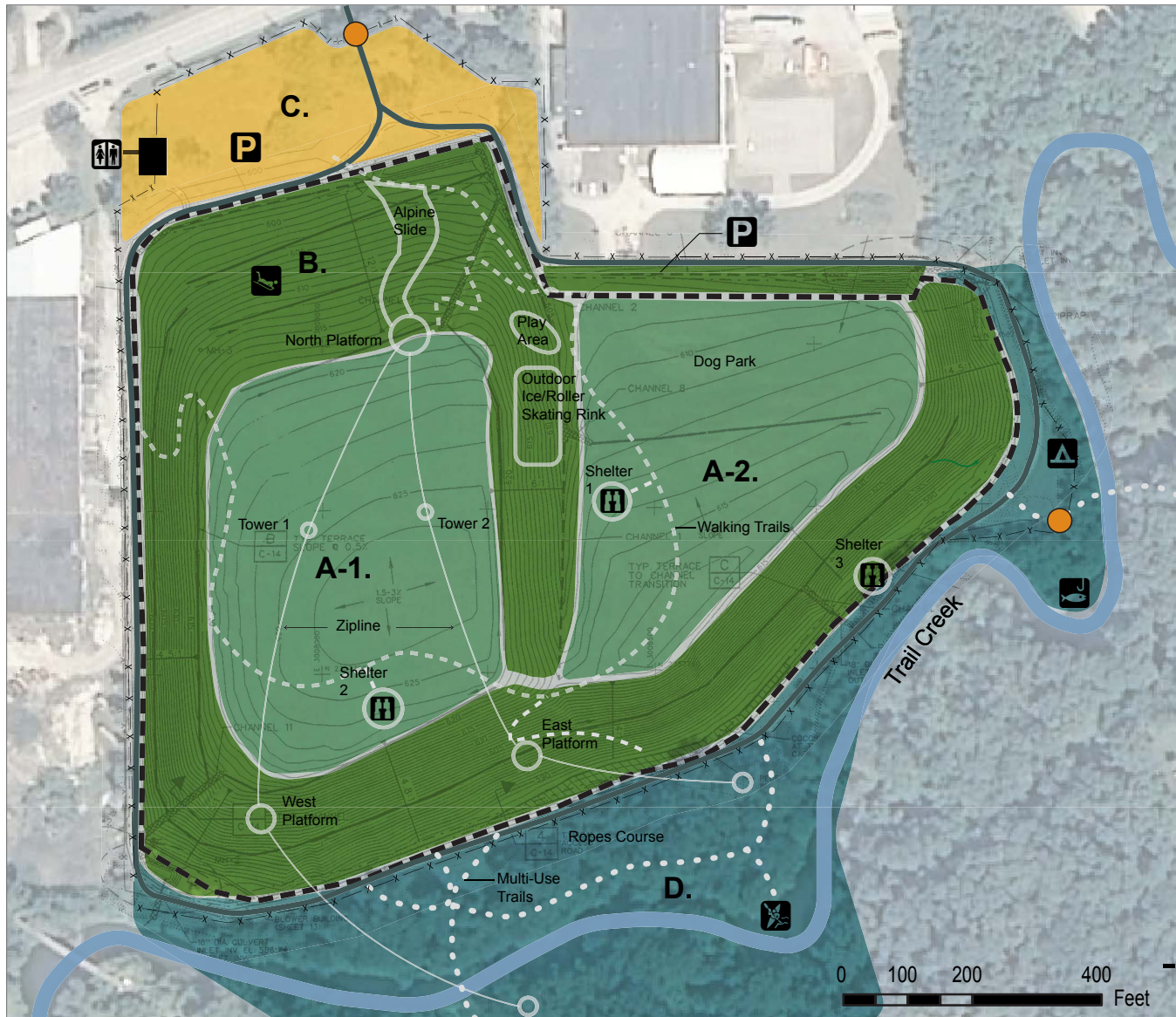
ADDITIONAL FEATURES

-  Site Access Road
-  Gated Access Point
-  Existing Fenceline
-  Contours (1 foot interval)

Notes: This map is intended for planning purposes only; all boundaries and locations are approximate. Site remedy components adapted from the Remedial Action Completion Report for Waste Inc. Landfill (prepared by Montgomery Watson, November 1997).

Reuse Suitability

The map below highlights reuse zones based on grades, physical features and site remedy components. Elements of the city's proposed concept plan are highlighted in white along with recreational symbols. Specific considerations for each reuse zone are included on the following page.



REUSE ZONES

- A** **Flat areas within capped landfill area**
(remedial constraints include maintaining cap, landfill gas collection lines, wells and drainage features; disturbance considerations)
- B** **Steep areas within capped landfill area**
(remedial constraints include maintaining cap, landfill gas collection lines, wells and drainage features; disturbance considerations; grading and erosion considerations)
- C** **Areas suitable for structural development**
(no remedial constraints)
- D** **Riparian areas outside capped landfill area**
(maintain access to wells and stormwater outfall)

PROPOSED AMENITIES

- Walking trails
- Multiuse trails
- Zipline
- Sledding hill / Alpine slide
- P** Parking
- Restrooms
- Overlook / Shelter / Interpretive exhibit
- Primitive campsites
- Fishing station
- Canoe / Kayak Launch

Notes: This map is intended for planning purposes only; all boundaries and locations are approximate. Site remedy components adapted from the Remedial Action Completion Report for Waste Inc. Landfill (prepared by Montgomery Watson, November 1997). Proposed amenities are adapted from Waste Inc. and Kreuger Memorial Park, Trail Creek Corridor Illustrative Master Plan (original prepared by Weaver Boos and Hitchcock Design Group).

REUSE CONSIDERATIONS

The following reuse considerations can inform park design and help to ensure the protectiveness of the site's remedy. The reuse considerations correspond to each of the reuse zones from the reuse suitability map on the previous page.

Reuse Zone A - Flat Areas Within Capped Landfill Area

- Maintain integrity of cap, landfill gas collection lines and extraction wells.
- Maintain drainage features to manage stormwater runoff and prevent ponding or erosion of cap.
- Ensure long-term access to above ground remedy components for operation & maintenance (O&M). (some elements may be disturbed/modified to facilitate reuse plan if replaced to equivalent or better protection, as approved by EPA).

Recommendations:

- Consider modifying location of zipline north platform within Zone A to avoid landfill gas wells, collection lines and drainage features.
- Ensure replacement of cap if footings extend below 18 inches.
- Evaluate stability of landfill to support platforms and towers.

Reuse Zone B - Steep Areas within Capped Landfill Area

- Maintain integrity of cap and landfill gas collection lines and extraction wells.
- Maintain drainage channels/terraces to prevent erosion of cap in steep areas.
- Ensure long-term access for site O&M at above ground wells, site access road, blower building and sewer lift station.

Recommendations:

- Consider alternate locations for skating rink and play area outside of Zone B to avoid re-grading in steep slope areas.
- Ensure appropriate modifications/replacement of drainage channel at parking area proposed in Zone B.

Reuse Zone C - Areas Suitable for Structural Development

- No remedial constraints for structural development.
- Maintain access to site from Route 12; ensure long-term access to ground water monitoring wells for O&M.

Recommendations:

- Consider re-locating proposed ice/roller skating rink in Zone C to the east of the site access road.

Reuse Zone D - Riparian Areas

- Maintain access to ground water monitoring wells and stormwater outfall at Trail Creek for O&M.

Recommendations:

- Ensure proposed structures for zipline platforms, ropes course and fishing station meet flood plain construction requirements.

CONCLUSIONS & ACKNOWLEDGEMENTS

CONCLUSIONS

As the city moves forward with the implementation of a reuse plan for the Waste Inc. site, the reuse suitability zones and remedial considerations outlined in the reuse assessment offer a flexible tool that can help to inform the city's current reuse planning effort, as well as future reuse concepts that may emerge.

While, additional discussions and agreements are needed among the city, EPA and the Waste Inc. PRP group to advance a reuse plan, the site is well-positioned to serve as a catalyst for recreation and economic development along the Trail Creek Corridor and Michigan City's North End.

ACKNOWLEDGEMENTS

The following organizations and entities contributed to the findings of the reuse assessment:

- Michigan City Planning & Redevelopment Department
- Sanitary District of Michigan City
- Michigan City Redevelopment Commission
- Weaver Boos
- Weil McLain / Waste Inc. PRP Group
- Indiana Department of Environmental Management
- EPA Region 5



ADDITIONAL INFORMATION

For additional information on the Waste Inc. Landfill site remedial process or reuse assessment, please contact:

Dion Novak Remedial Project Manager, EPA Region 5
(novak.dion@epa.gov / 312-886-4737)

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