

Allied Landfill Superfund Site

*Feasibility Study
Addendum*

Kalamazoo, Michigan

June 24, 2015

Agenda

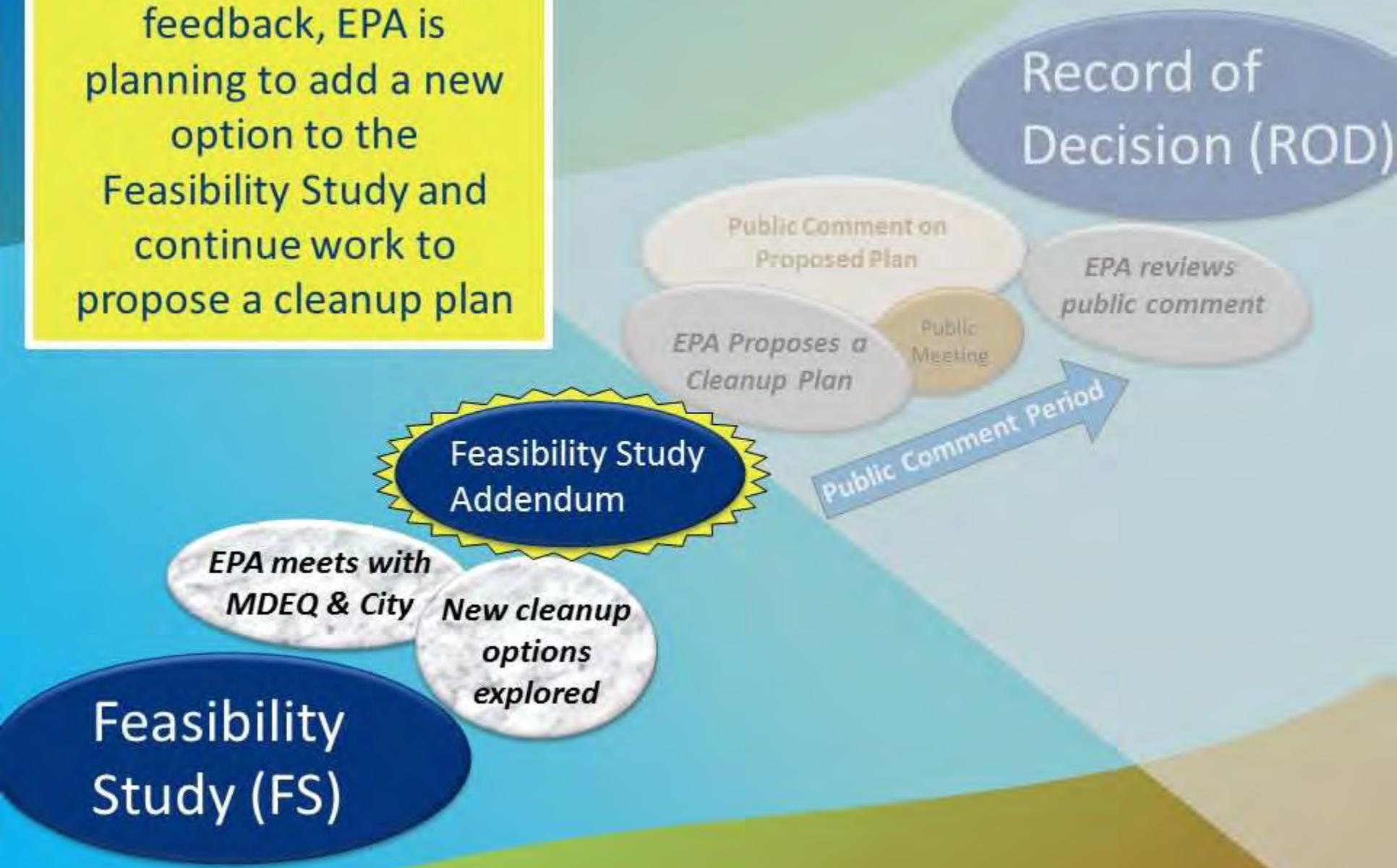


- Feasibility Study Addendum
 - Redevelopment/Reuse Potential of new alternative
 - Updated Costs
- Groundwater Report
- Next Steps



Feasibility Study Addendum

Based on community feedback, EPA is planning to add a new option to the Feasibility Study and continue work to propose a cleanup plan



Record of Decision (ROD)

Public Comment on Proposed Plan

EPA reviews public comment

EPA Proposes a Cleanup Plan

Public Meeting

Public Comment Period

Feasibility Study Addendum

EPA meets with MDEQ & City

New cleanup options explored

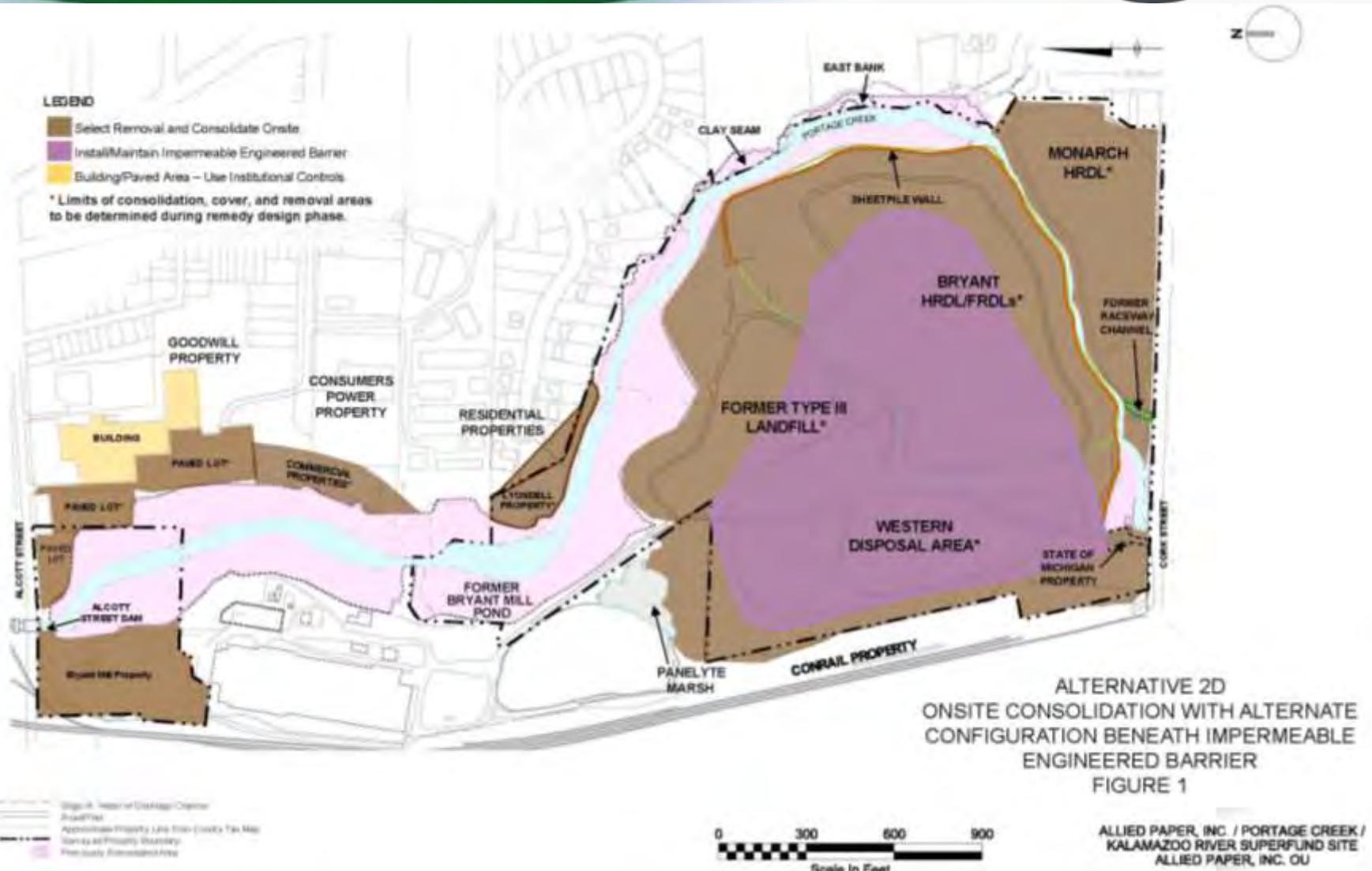
Feasibility Study (FS)

Guiding Principles



- Protectiveness
- Productivity
- Accessibility
- Connectedness

Alternative 2D



3-D Representation of Alternative 2D



Cost Summary



Summary of Remedial Alternative Costs

OU1 Feasibility Study Report—Allied Paper, Inc.-/Portage Creek-/Kalamazoo River Superfund Site

Alternative	Estimated Capital Cost	Estimated O&M Cost	Estimated Periodic Cost	Total Present-worth Cost
Alternative 1	\$0	\$0	\$110,000	\$110,000
Alternative 2A	\$38,000,000	\$6,700,000	\$110,000	\$44,000,000
Alternative 2B	\$38,000,000	\$5,000,000	\$110,000	\$43,000,000
Alternative 2C	\$65,000,000	\$5,000,000	\$110,000	\$70,000,000
Alternative 2D	\$57,000,000	\$5,800,000	\$110,000	\$63,000,000
Alternative 3	\$238,000,000	\$0	\$110,000	\$238,000,000
Alternative 4	\$154,000,000	\$5,000,000	\$110,000	\$159,000,000

Elevation Zones

Elevation Zones

Floodzone

- Elevations: 780-794 Feet
- Limitations: 100-year Flood Zone
- Access: Trail, greenway, boating

Intermediate Zone

- Elevations: 795 - 809 Feet
- Limitations: Commercial, industrial or recreational uses.
- Access: vehicle, potential rail access.

Highland Zone

- Elevations: 810-866 Feet
- Limitations: Elevated capped area with side slopes; development limitations, cap maintenance requirements.
- Access: Potential pedestrian and recreational access.

Other Features

- Topography
- + 800' Spot Elevations (feet above sea level)
- Parcels
- Surface Water
- Allied Landfill Site Areas
- Rail Line

Note: This map is for planning purposes only; all locations and boundaries are approximate.



Current View from Cork Street



February 2015



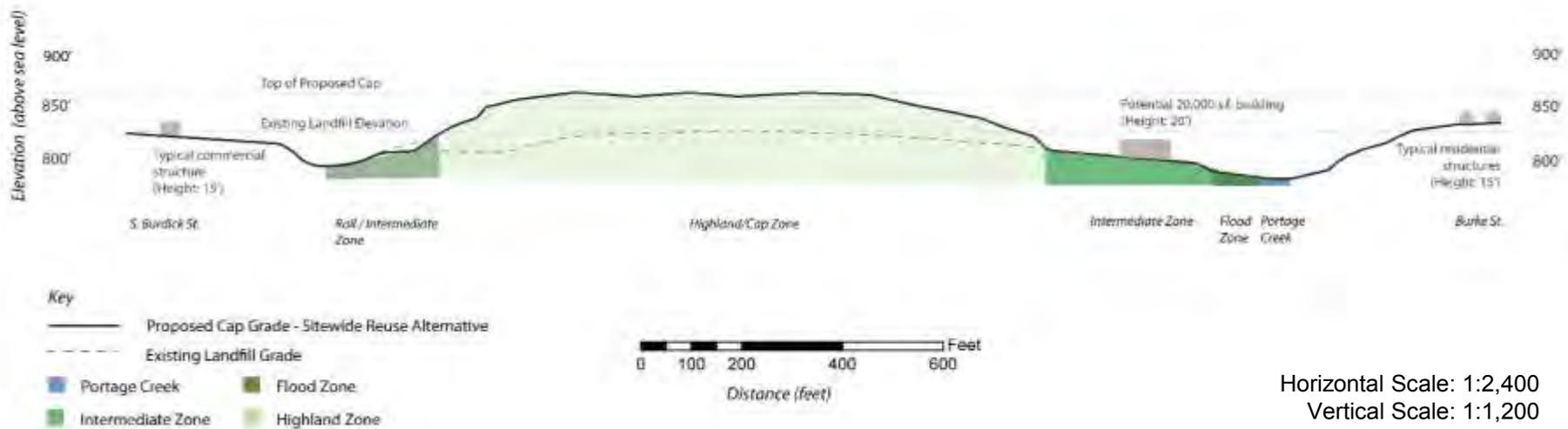
April 2009

Site Profile

Section Diagram

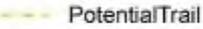
S. Burdick St. to Burke St.

- Proposed cap anticipated at 41' above existing landfill elevation.



Access and Connections

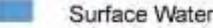
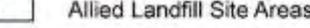
Access and Connections

-  Existing Access Point
-  Potential Access Point
-  Arterial Street
-  Bus Route
-  Potential Trail
-  Potential Road
-  Potential Bridge Location

Topography and Elevation Zones

-  Flood Zone
-  Intermediate Zone
-  Highland Zone

Other Features

-  Parcels
-  Surface Water
-  Allied Landfill Site Areas
-  Rail Line



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Reuse Zones

Reuse Zones

- A Commercial/Industrial/Recreational (30 acres total)**
- Few limitations
 - Contaminant excavation
 - Backfilled and re-graded
 - Institutional controls limit future use to commercial/industrial or recreational uses.
- B Recreation/Open Space (27 acres)**
- Remedial Considerations
 - Consolidation and capping
 - Sloped areas and elevated grade (41 feet above existing grade)
 - Institutional controls prevent disturbance of cap and remedial features.
- C Portage Creek Greenway (25 acres including creek channel)**
- Flood zone limitations
 - Portage Creek 100-Year Flood Plain
 - Previously remediated areas (Bryant Mill Pond Removal Action)
 - Institutional controls limit future use to recreation/open space

Other Features

- Rail Line
- Topography
- + 800' Spot Elevations (feet above sea level)
- Parcels
- Surface Water
- Allied Landfill Site Areas

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Reuse Suitability

Potentially Suitable Uses

- A Commercial/Industrial/Recreational (30 acres total)**
- Commercial office/R&D
 - Alternative energy generation (solar, wind)
 - Commercial retail
 - Indoor recreation facility
 - Skate park
 - Playground
 - Climbing wall
 - Trail along rail line (ADA-accessible)

- B Recreation/Open Space (27 acres)**
- Scenic look out and hiking trail
 - Mountain bike park
 - Luge run
 - Zip Line
 - Alternative energy generation (methane gas capture)

- C Portage Creek Greenway (25 acres including creek channel)**
- Multi-use greenway trail (ADA-accessible)
 - Educational exhibits on the history of paper industry and site cleanup
 - Environmental education and stewardship programming

Other Features

- Existing Access Point
- Potential Access Point
- Arterial Street
- Bus Route
- Potential Trail
- Potential Road
- Potential Bridge Location
- Parcels
- Surface Water
- Allied Landfill Site Areas



Reuse Suitability Considerations

Zone	Size	Limitations	Elevation	Access	Potentially Suitable Uses
A. Commercial/Industrial/Recreational	30 acres total	Few Limitations	Intermediate Zone	Vehicular (with bus route access), rail, pedestrian	<ul style="list-style-type: none"> - Hockey/skating rink - Skateboard park - Climbing wall - Playground - Commercial-Office/R&D/Retail - Renewable energy
B. Recreation/Open Space	27 acres	Remedial Limitations	Highland Zone	Pedestrian, bicycle	<ul style="list-style-type: none"> - Scenic look-out - Hiking trail - Mountain bike park - Luge run - Zip line - Renewable energy
C. Portage Creek Greenway	25 acres	Flood Zone Limitations	Flood Zone	Pedestrian, bicycle, canoe/kayak	<ul style="list-style-type: none"> - ADA-accessible greenway trail - Educational exhibits, stewardship programming

Increase Economic Development Potential

The sitewide reuse alternative:

- Increases economic development potential for the Portage Creek corridor by adding an additional 30 acres for commercial reuse (Zone A).
- Offers potential to compliment existing nearby commercial retail.
- Creates opportunities to leverage emerging clusters in medicine, pharmaceuticals and food systems.



Existing commercial retail on Cork St. (above); Surrounding Land Use Map (right); Portage Creek Corridor Reuse Plan (below)



Increase Recreation and Open Space

The proposed sitewide reuse alternative:

- Increases access to recreation and open space by adding an additional 27 acres of open space (Zone B).
- Potential to accommodate a range of active recreational uses that take advantage of accessible steeper terrain.
- Examples include: sledding hill, gravel walking trails, zipline, playground and skatepark.



Increase Greenway Trail Access

The proposed sitewide reuse alternative:

- Increases recreational trail access along the Portage Creek Corridor by adding approximately 6,000 feet of linear greenway (Zone C).
- Accommodates multi-use, accessible trail system with regional connections to Downtown Kalamazoo and Portage.
- Provides opportunity for creek access, educational exhibits and stewardship programming.





Groundwater Study

Groundwater



- 2014 Sampling Event
 - 32 Samples
 - 7 Additional Wells
- Conceptual Site Model
 - Portage Creek Influences Shallow Groundwater
 - Upward Gradient

Groundwater



Report Conclusion:

- PCBs are not migrating off-site from Allied Landfill.
- A migration pathway beneath the central waste mass at Allied Landfill and the downgradient City municipal wellfields screened in the deeper regional aquifer is not currently apparent.



Next Steps

Record of
Decision (ROD)

*EPA reviews
public comment*

Public Comment on
Proposed Plan

*EPA Proposes a
Cleanup Plan*

Public
Meeting

Public Comment Period

**Feasibility
Study
Addendum**

New
Option

After adding the new redevelopment option to the Feasibility Study, EPA will propose a cleanup plan

Next Steps (from April Meeting)



- Public Feedback ✓
 - Collected by City of Kalamazoo
- Publish Groundwater Report ✓
- Add New Alternative to Feasibility Study
 - Poster Session/Presentation (*today*)
- EPA Issue Proposed Plan (*expected Summer 2015*)
- EPA Selects Remedy (Record of Decision) (*Late 2015?*)



Questions?