

Brown to Green:

Maximizing Opportunities for Brownfield Revitalization and Green Space Restoration

Ohio Brownfield Conference, April 6, 2016

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Brown to Green Overview

- Many brownfield sites are located in urban areas where there is little green space and few recreational opportunities.
- This presentation provides examples of how the assessment and cleanup of brownfields provides opportunities to bring nature and green spaces back into the community.

Featured Event



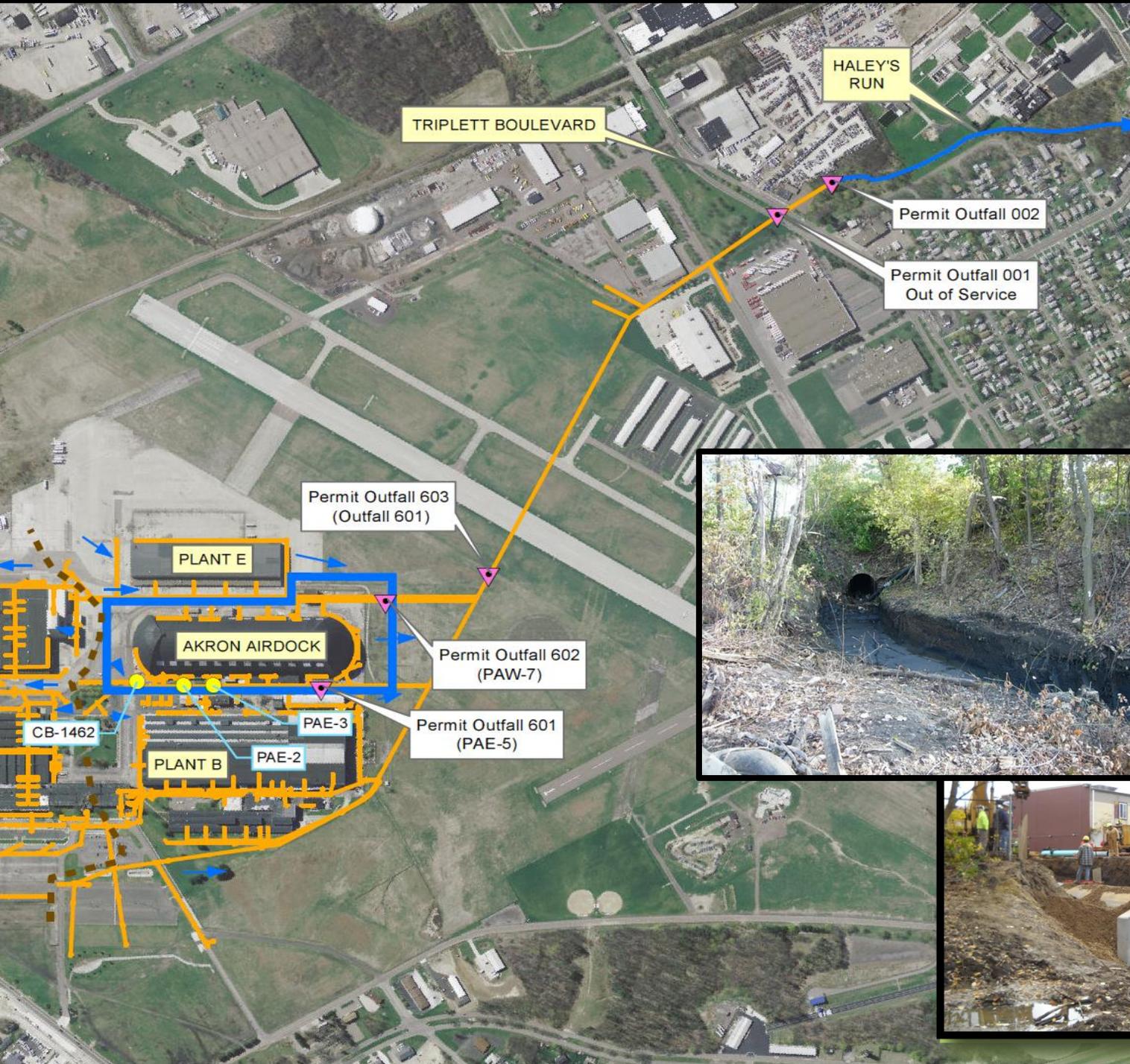
Adam's and Haley's Run Clean Up

April 16, 2016



Lake Erie Watershed begins in Akron Airdock Property

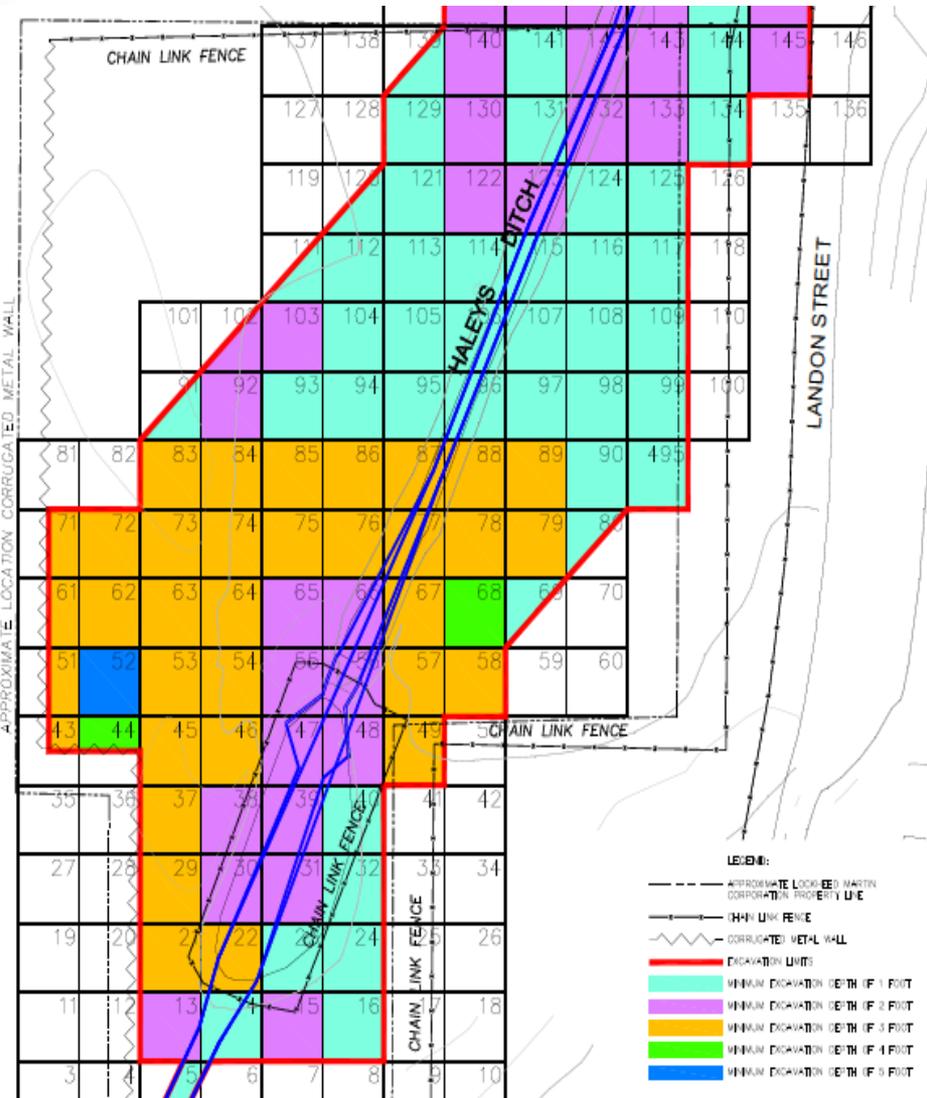




Permit Outfall Locations



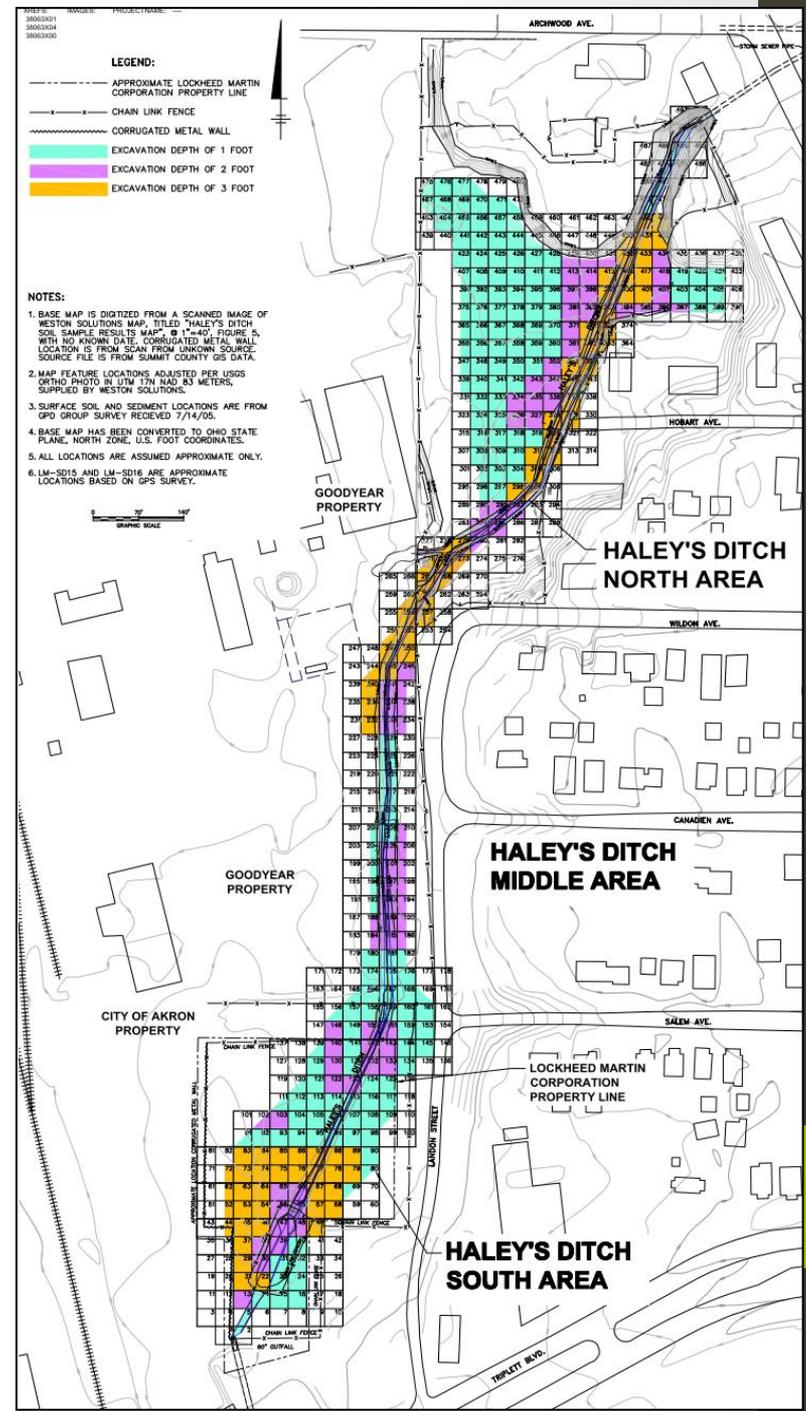
Haley's Run Characterization Data



- Collected more than 500 soil and sediment samples from 150 locations in and adjacent to Haley's Run
- A number of samples showed PCB concentrations greater than 1 mg/kg; and 4 sampling locations exceeded 50 mg/kg
- Soil and sediment with PCB concentrations over 1 mg/kg removed
- 1 mg/kg is the U.S. EPA PCB unrestricted use level

Remediation Created Opportunity for Restoration

- Lockheed Martin voluntarily pursued a restoration option
- Remediation project limits dictated restoration limits
- Soils and sediments removed along 1,800 feet of Haley's Run
- 3,500 tons to TSCA landfill (PCBs > 25 ppm)
- 29,000 tons to non-TSCA landfill



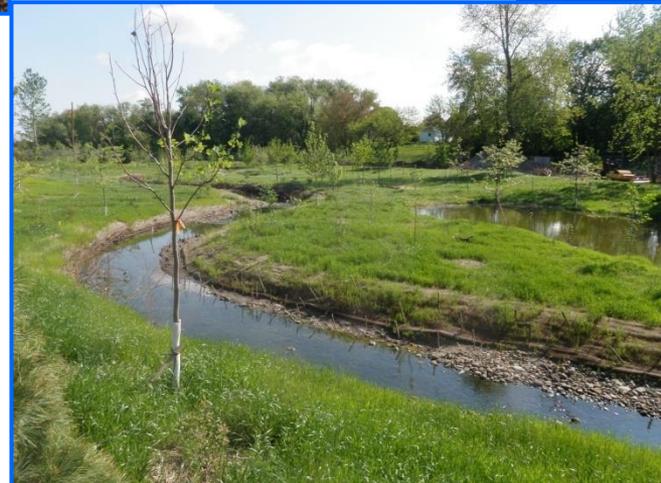


Refine Subgrade

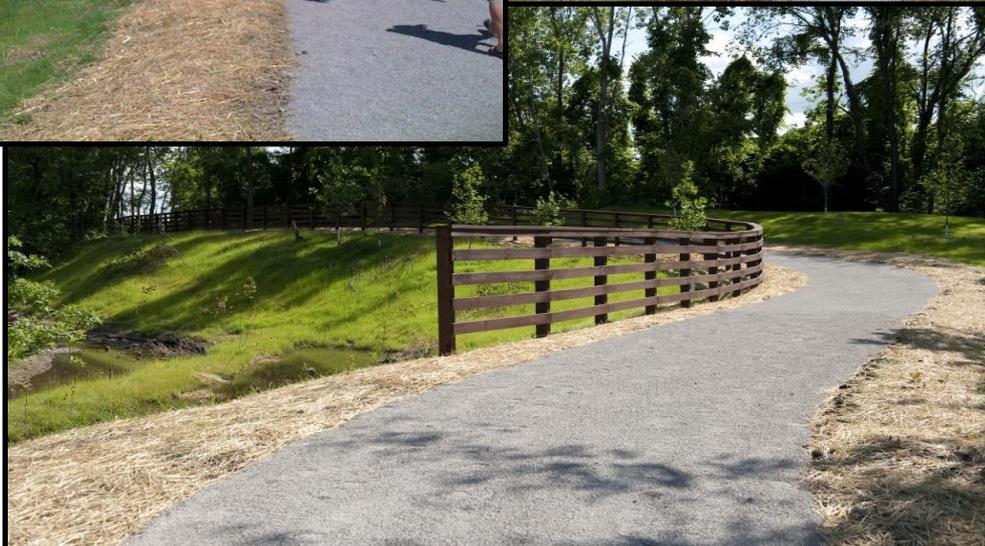


Restore

Stabilize and Plant Natives



Haley's Run Restoration and Greenway Trail



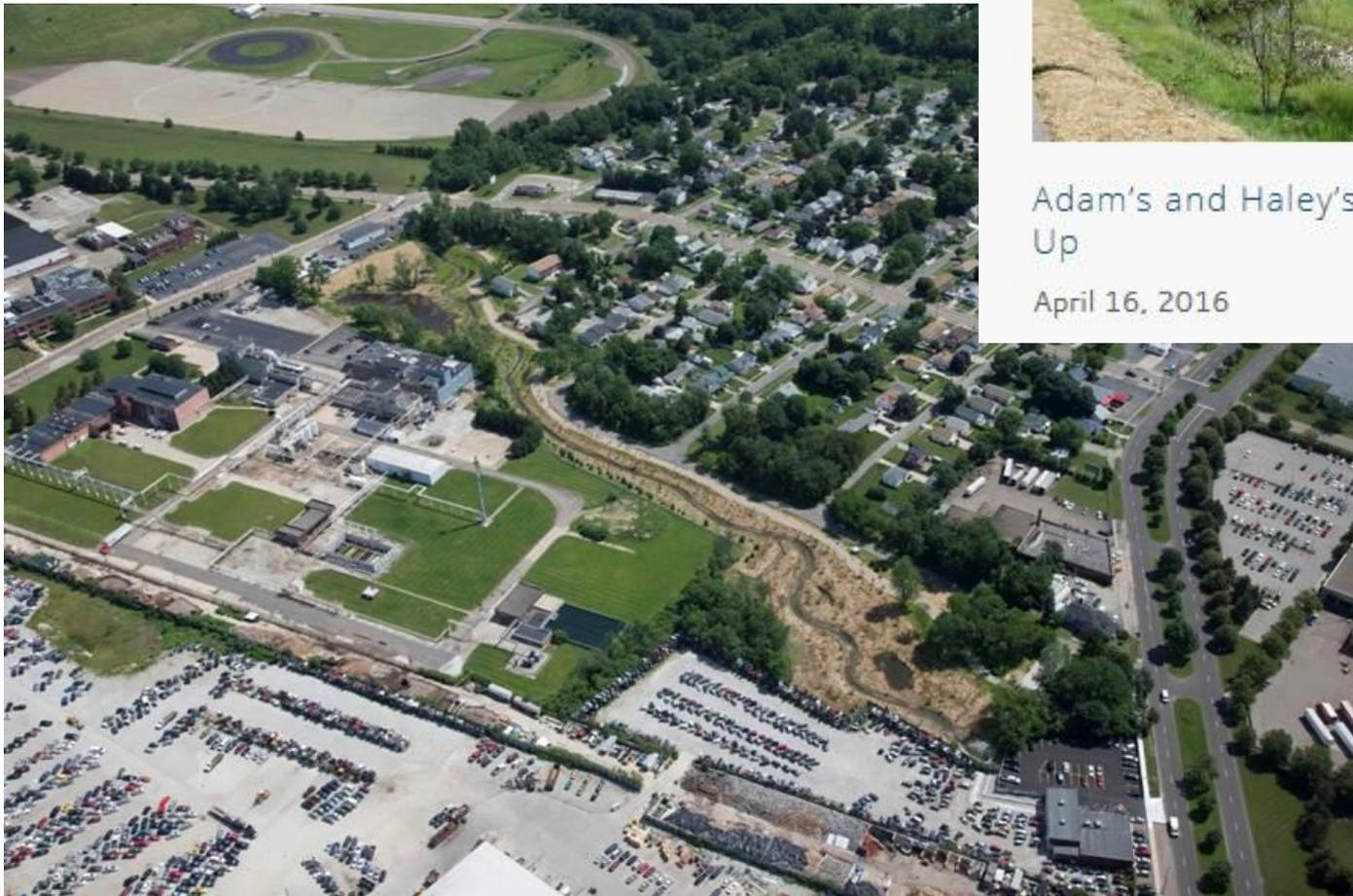
Brown to Green

Featured Event



Adam's and Haley's Run Clean Up

April 16, 2016





250 0 250 500 Feet



Western Reserve
Land Conservancy
OUR LAND. OUR LEGACY.

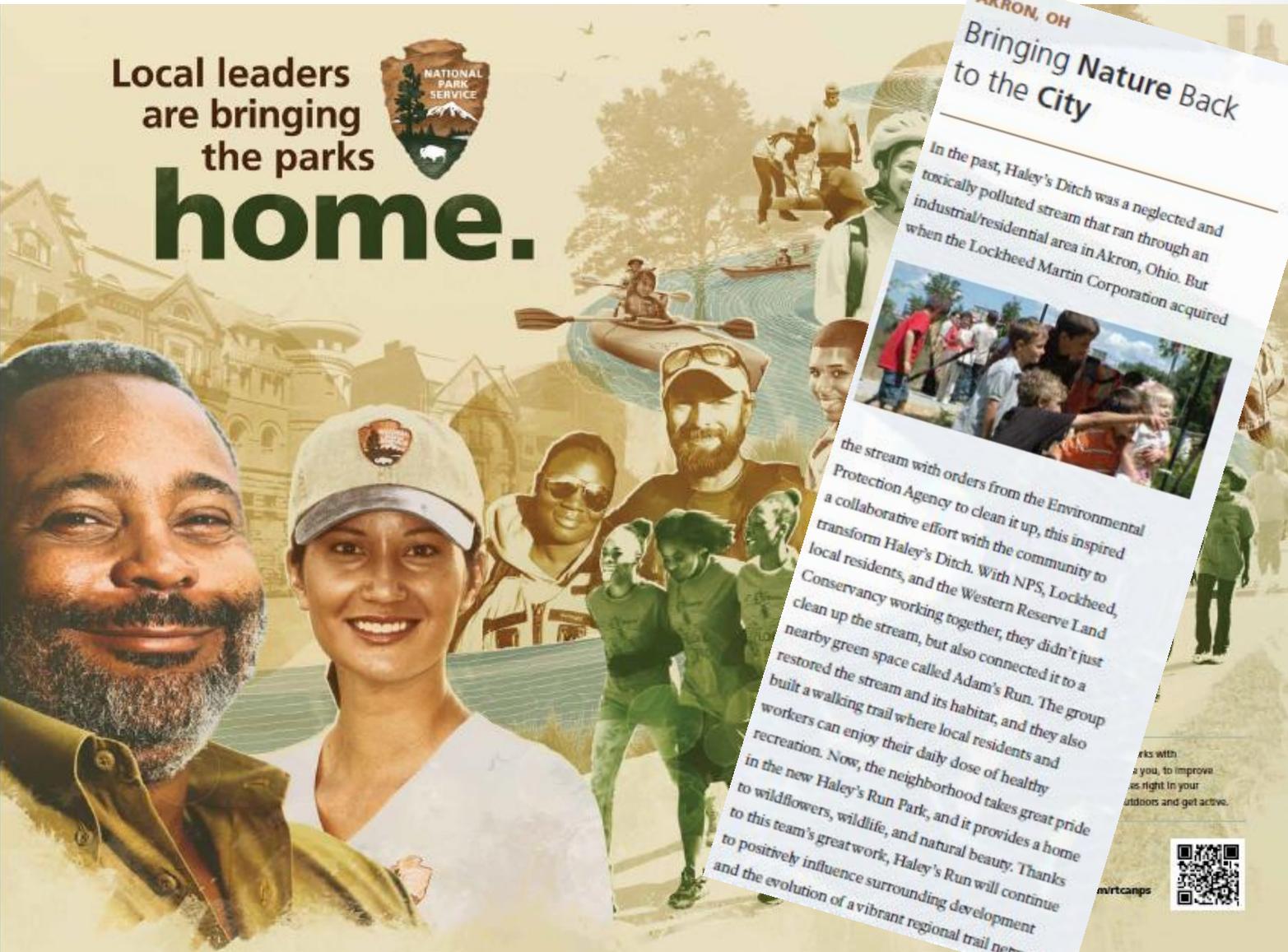
- Adams & Haleys Run Project Area
- Proposed Trail
- Summit County Proposed Trails
- Trailhead
- Existing Trails
- NHD - Streams/Rivers

2006 Aerial Photo (OSIP)
Map Created 6/22/2012 em

National Recognition

National Parks Service
U.S. Department of the Interior

Local leaders
are bringing
the parks
home.



AKRON, OH

Bringing Nature Back to the City

In the past, Haley's Ditch was a neglected and toxically polluted stream that ran through an industrial/residential area in Akron, Ohio. But when the Lockheed Martin Corporation acquired



the stream with orders from the Environmental Protection Agency to clean it up, this inspired a collaborative effort with the community to transform Haley's Ditch. With NPS, Lockheed, local residents, and the Western Reserve Land Conservancy working together, they didn't just clean up the stream, but also connected it to a nearby green space called Adam's Run. The group restored the stream and its habitat, and they also built a walking trail where local residents and workers can enjoy their daily dose of healthy recreation. Now, the neighborhood takes great pride in the new Haley's Run Park, and it provides a home to wildflowers, wildlife, and natural beauty. Thanks to this team's great work, Haley's Run will continue to positively influence surrounding development and the evolution of a vibrant regional trail network.

works with
you, to improve
as right in your
outdoors and get active.



Conservation and Recreation Assistance
for Your Community



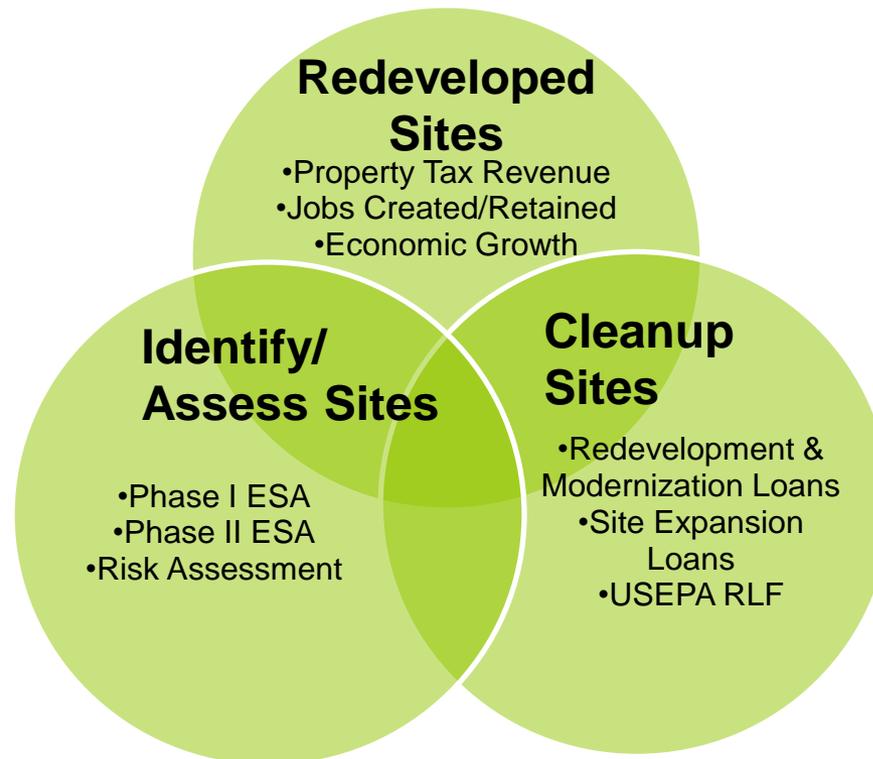
Cuyahoga County Brownfield Programs/Projects

- Program History/ Strategy
- Zoning
- Projects to Date
 - Assessments
 - Brownfield Loans
 - USEPA Loan/ Subgrants
- Brown to Green Projects



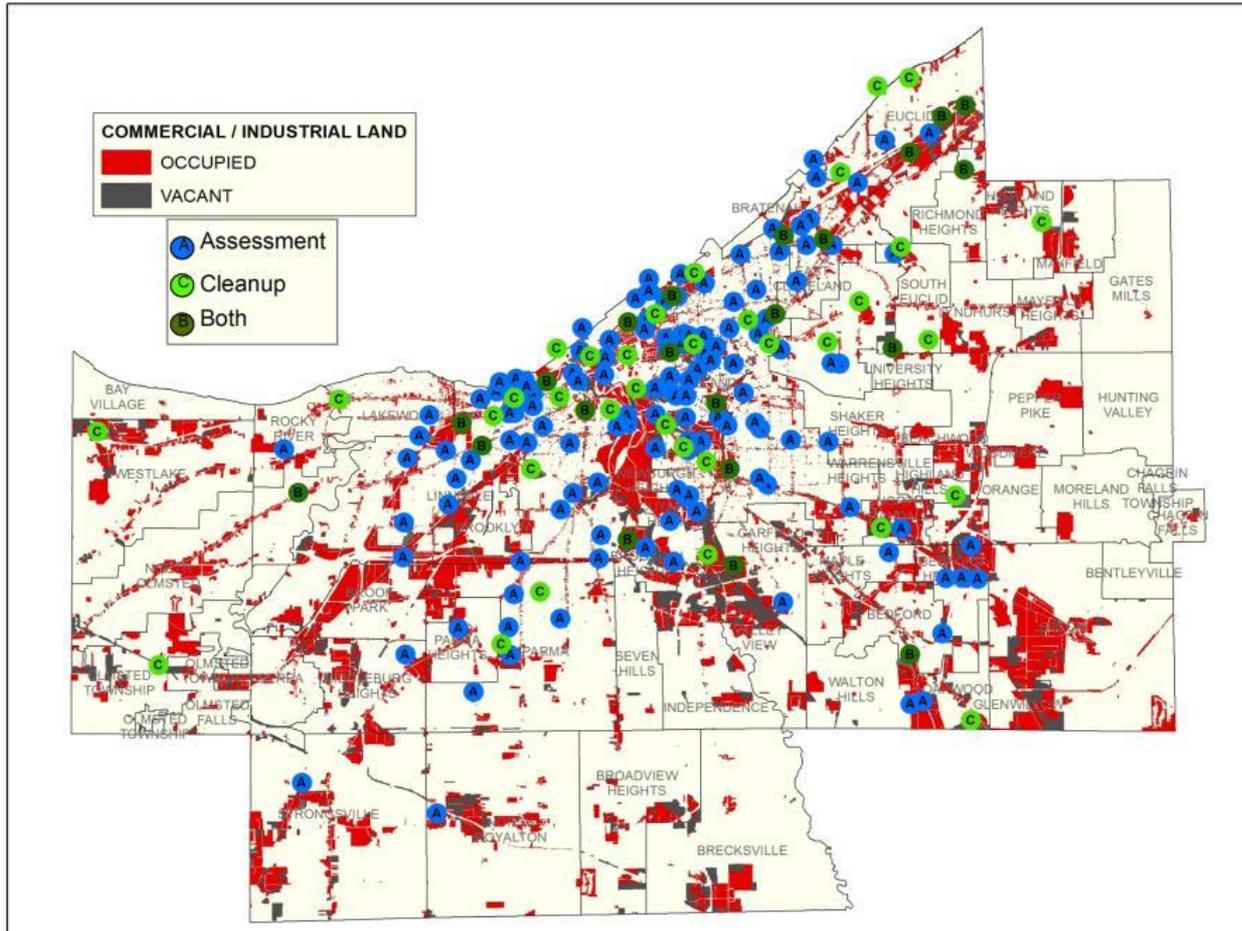
Brownfield Redevelopment Strategy

Provide assistance and expertise in returning brownfield sites to viable community and economic assets, while protecting the County's remaining open spaces.



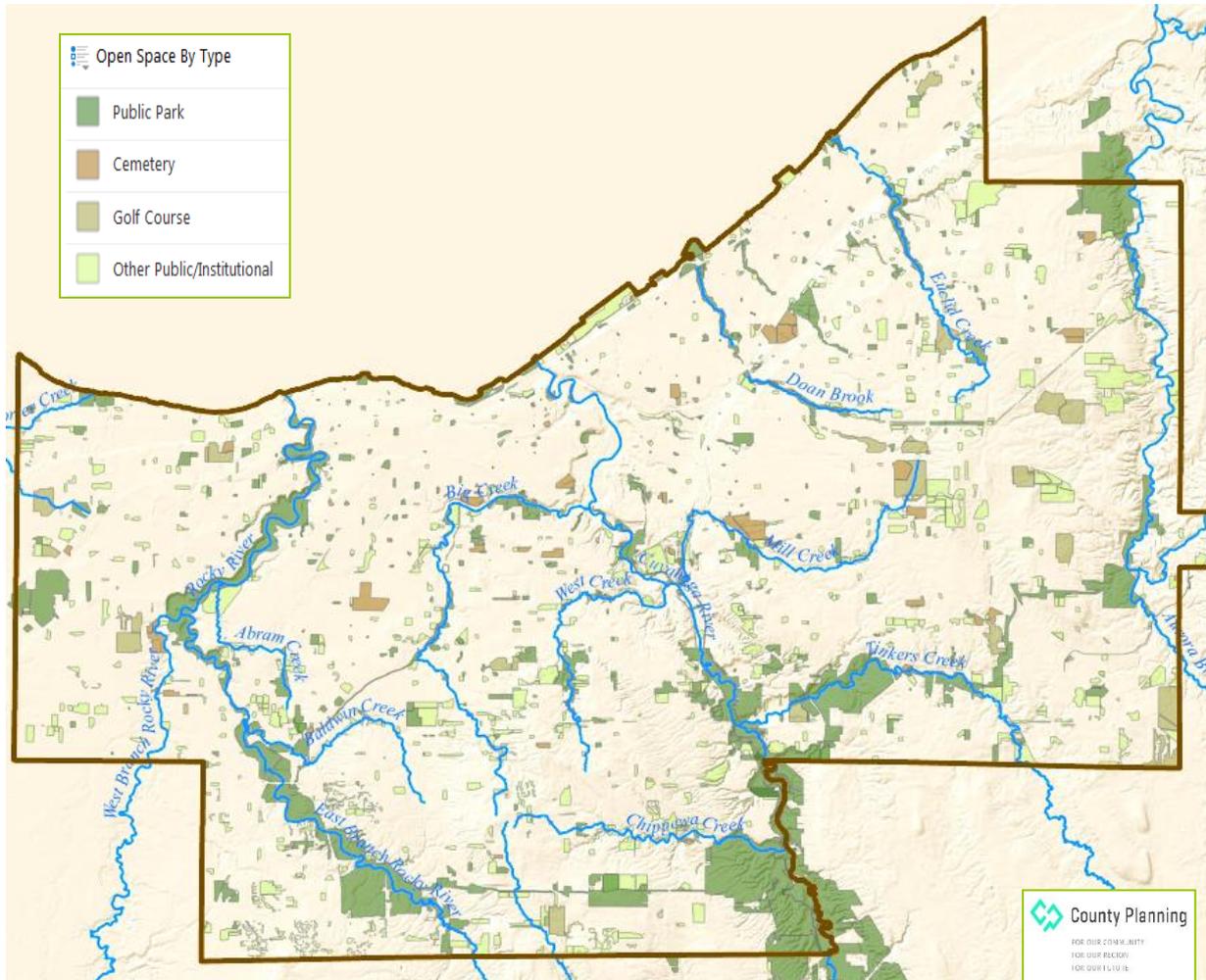


Cuyahoga County Brownfields Addressed to Date:





Cuyahoga County Greenspace



County Brownfield Projects 1998-2016

Number of Projects	Brownfield Program	Amount Invested
180	Environmental Site Assessments	\$ 4,708,490
40	Brownfield Redevelopment Fund Loans	\$33,258,920
15	USEPA Brownfield Revolving Loan Fund	\$ 5,130,415
10	Clean Ohio Assistance/Revitalization Fund	\$18,365,422
2	HUD BEDI/Section 108 Loan	\$10,000,000
247	TOTAL FUNDING ASSISTANCE	\$71,463,247

County Assessment Funds

Assessment Project	Total \$\$ Spent	Percent total \$\$	# Sites	Percent total# Sites	# Acres	Percent total Acres
Commercial	\$2,280,607.07	48.44%	93	51.67%	356.22	8.29%
Housing-Retail	\$579,892.61	12.32%	22	12.22%	46.44	1.08%
Industrial	\$620,039.53	13.17%	19	10.56%	215.12	5.01%
Retail	\$244,256.68	5.19%	12	6.67%	29.95	0.70%
Mixed Use	\$134,366.29	2.85%	5	2.78%	28.51	0.66%
Green (Parks/Playgrounds/Recreational)	\$505,938.19	10.75%	13	7.22%	125.57	2.92%
Public Facilities	\$164,418.64	3.49%	9	5.00%	3443.77	80.17%
To Be Determined sites	\$178,971.24	3.80%	7	3.89%	49.91	1.16%
TOTALS	\$4,708,490.25	100.00%	180	100.00%	4295.19	100.00%



Cuyahoga County Smaller Scale Mixed Reuse

Housing/ Offices/ Retail/ Athletic Facility & Green Roof





Cuyahoga County Food Production Reuse

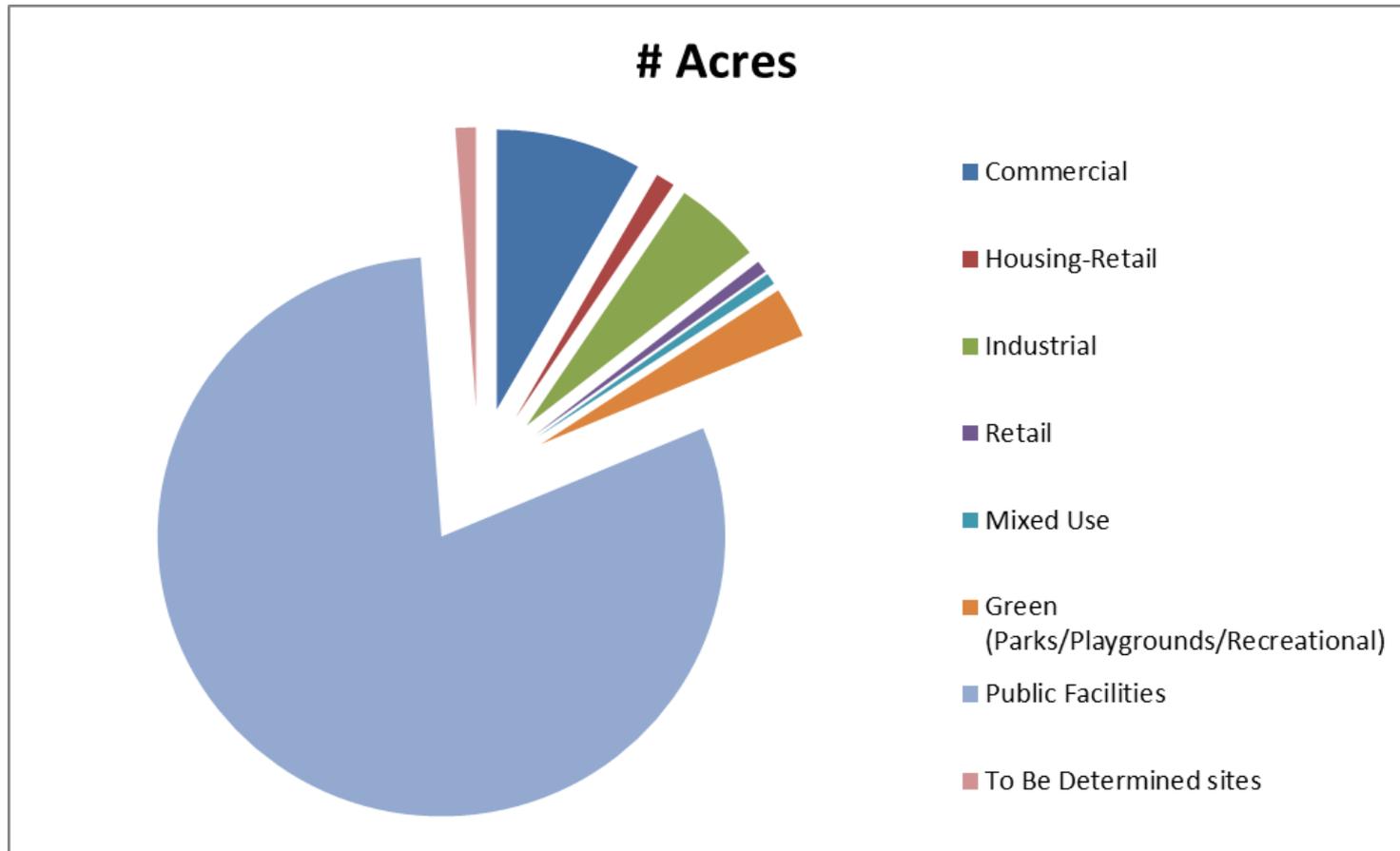




Large Scale Mixed Use Project

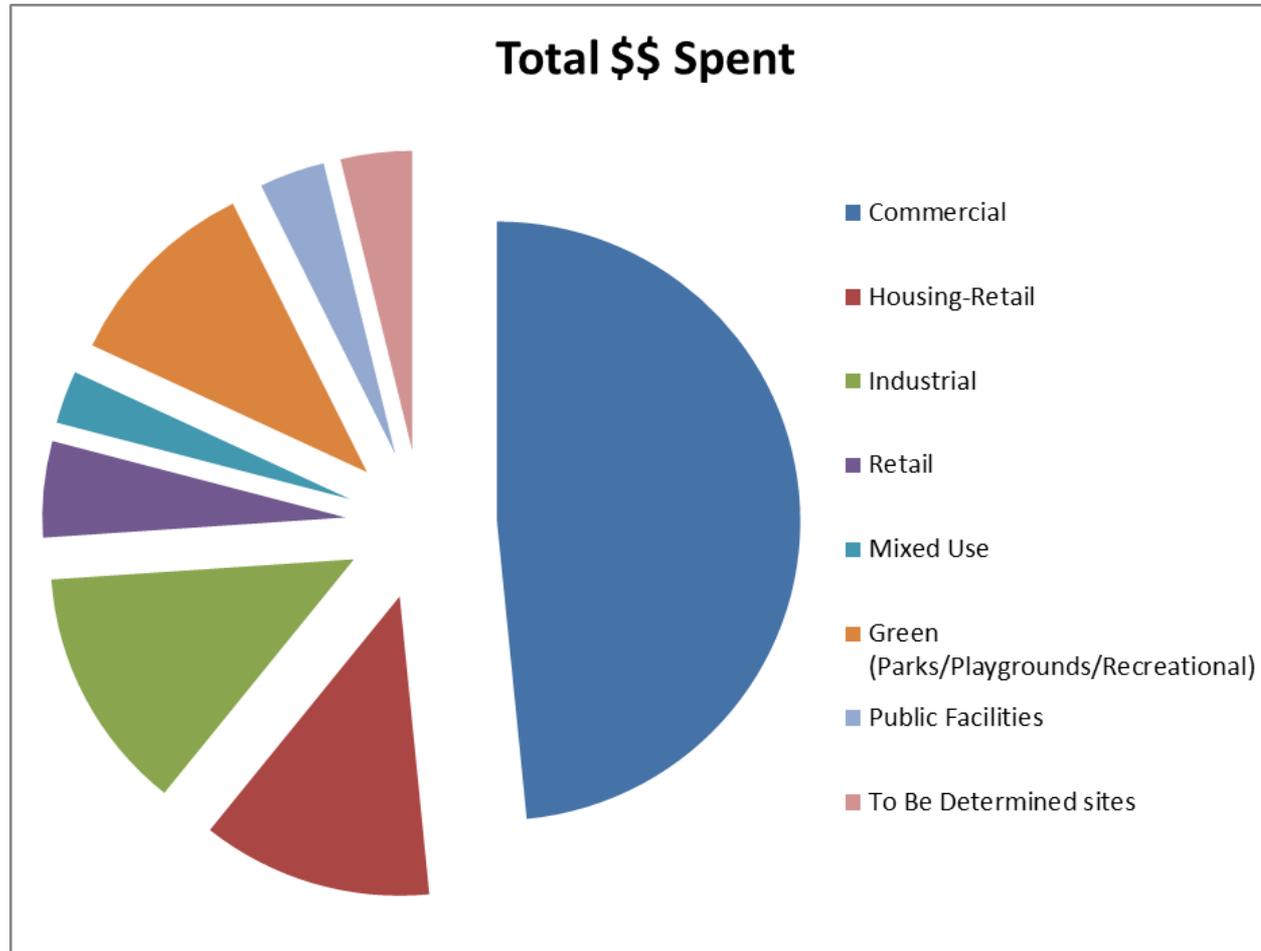


Green Reuse= 126 Acres Assessed



Green (Parks/Playgrounds/Recreational)	125.57	2.92%
TOTALS	4295.19	100.00%

Green = \$505,938 (11%)



Assessment Project	Total \$\$ Spent	Percent total \$\$
Green (Parks/Playgrounds/Recreational)	\$505,938.19	10.75%
TOTALS	\$4,708,490.25	



Brown to Green Brownfield Assessments

Green Space (Parks/Playgrounds/Recreational)

Site Name	City	Acres	Amount
Mann Park	East Cleveland	1.24	\$18,970.00
East Cleveland Playground Testing and Health Monitoring	East Cleveland	2.5	\$5,000.00
26102 Chardon	Richmond Heights	0.5	\$37,300.00
Ruby's Marathon	Middleburg Heights	0.53	\$21,946.08
Bridge Square Community Park	Cleveland	0.07	\$59,879.26
Colombo Park	Parma Heights	0.8	\$52,242.42
Riverside Landing	Cleveland	6.1	\$23,891.40
Rivergate	Cleveland	10	\$50,000.00
Puritas Oatey Wetlands	Cleveland	5.2	\$5,323.03
3061 East 63rd Street - Meyer's Dairy	Cleveland	2.63	\$6,153.00
5506 Dolloff	Cleveland	0.3	\$20,412.00
Dike 14 Confined Disposal Facility	Cleveland	88	\$170,000.00
NEORSD West Basin Woodland/Central	Cleveland	7.7	\$34,821.00
TOTALS = 14 Sites	5 Communities	125.6	\$505,938.19

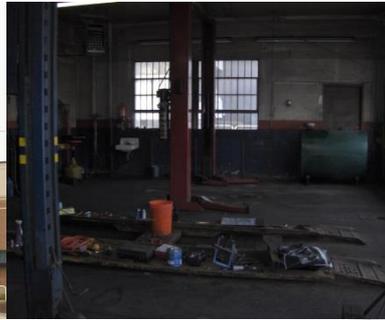


Cuyahoga County

Brown to Green

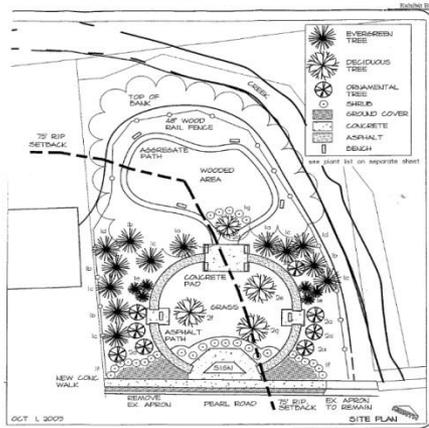
- Pocket Parks
- Farmers Markets
- Community Gardens
- Playgrounds
- Trails

Vacated Service Station to Pocket Park Middleburg Heights





Suburban Gas Station to Pocket Park



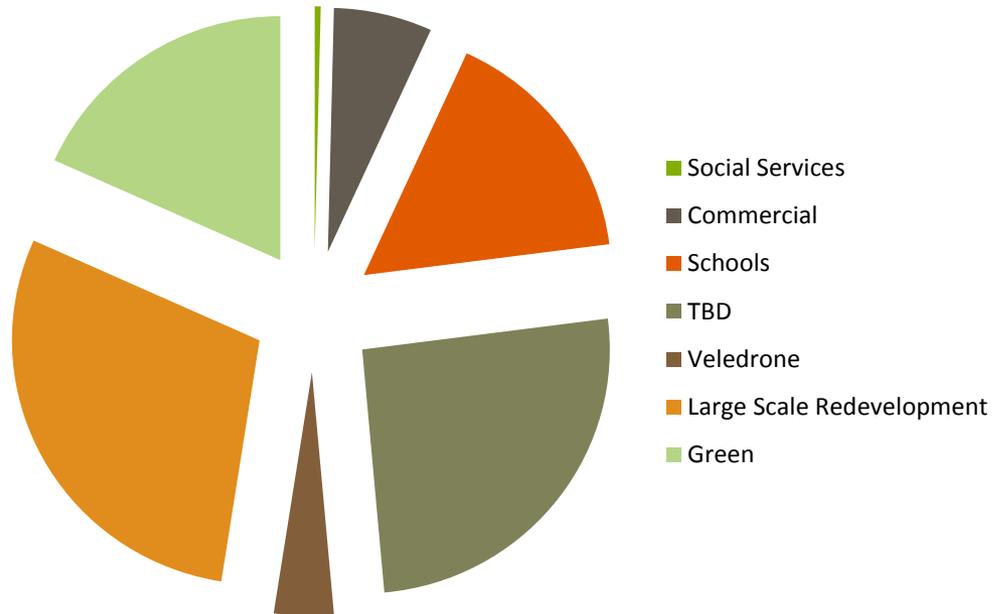
Cuyahoga County Assistance to East Cleveland : “Green Spaces”- Playgrounds/ Urban Farms





USEPA BRLF Funded Clean-up

#	Reuse Category	Amount	Percentage
1	Social Services	\$20,000.00	0.39%
3	Commercial	\$330,132.02	6.43%
7	Schools	\$828,473.93	16.15%
2	TBD	\$1,313,484.10	25.60%
1	Veledrone	\$200,000.00	3.90%
1	Large Scale Redevelopment	\$1,500,000.00	29.24%
3	Green	\$938,324.88	18.29%
15	Total	\$5,130,414.93	\$ 1.00





USEPA BRLF Funded Clean-up

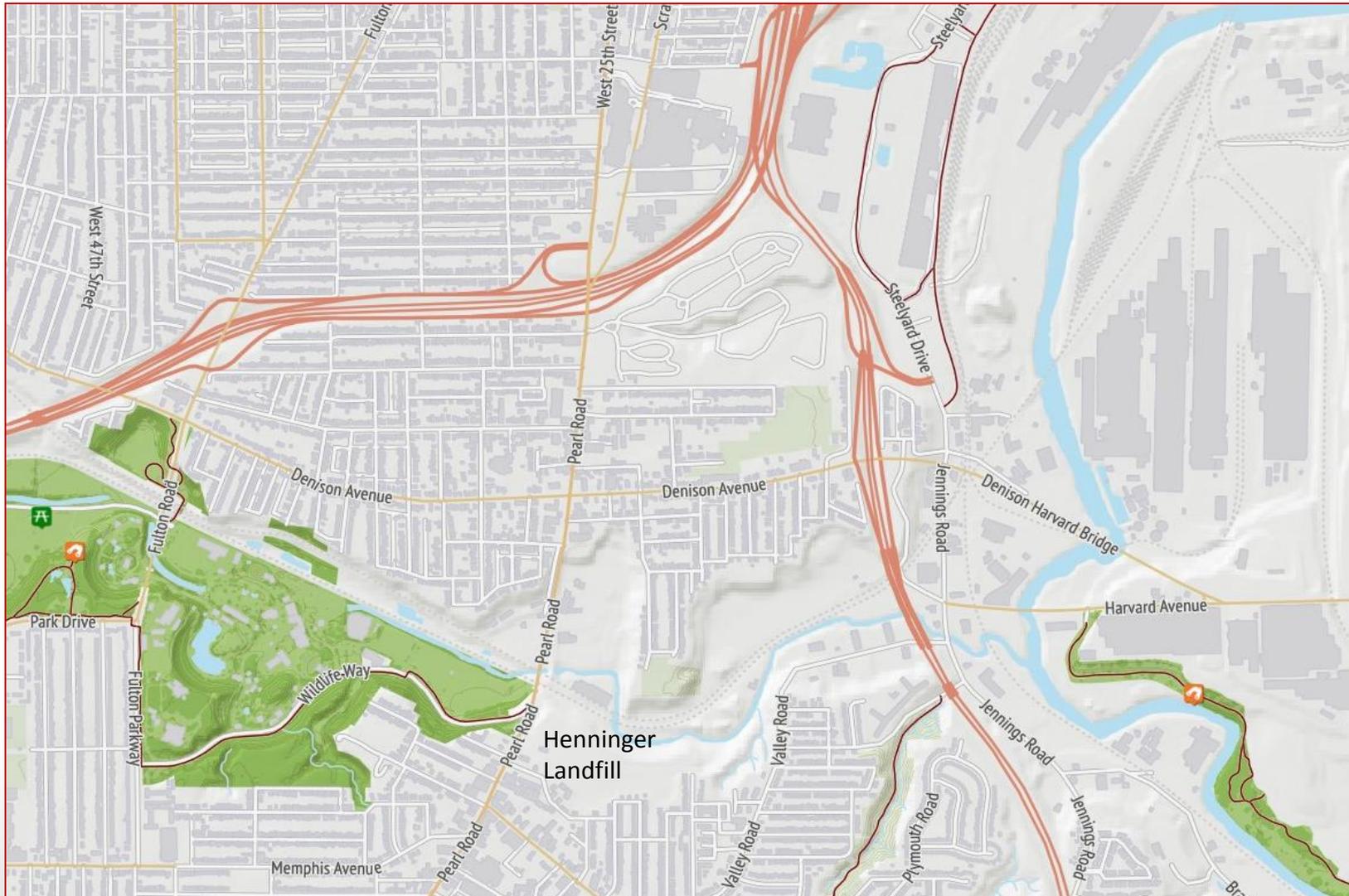
GREEN REUSE Sites	USEPA \$\$
Chardon Road	\$200,000.00
Dike 14	\$538,324.88
Emerald Valley-Henninger	\$200,000.00
3 sites- 20 % Funds	\$938,324.88

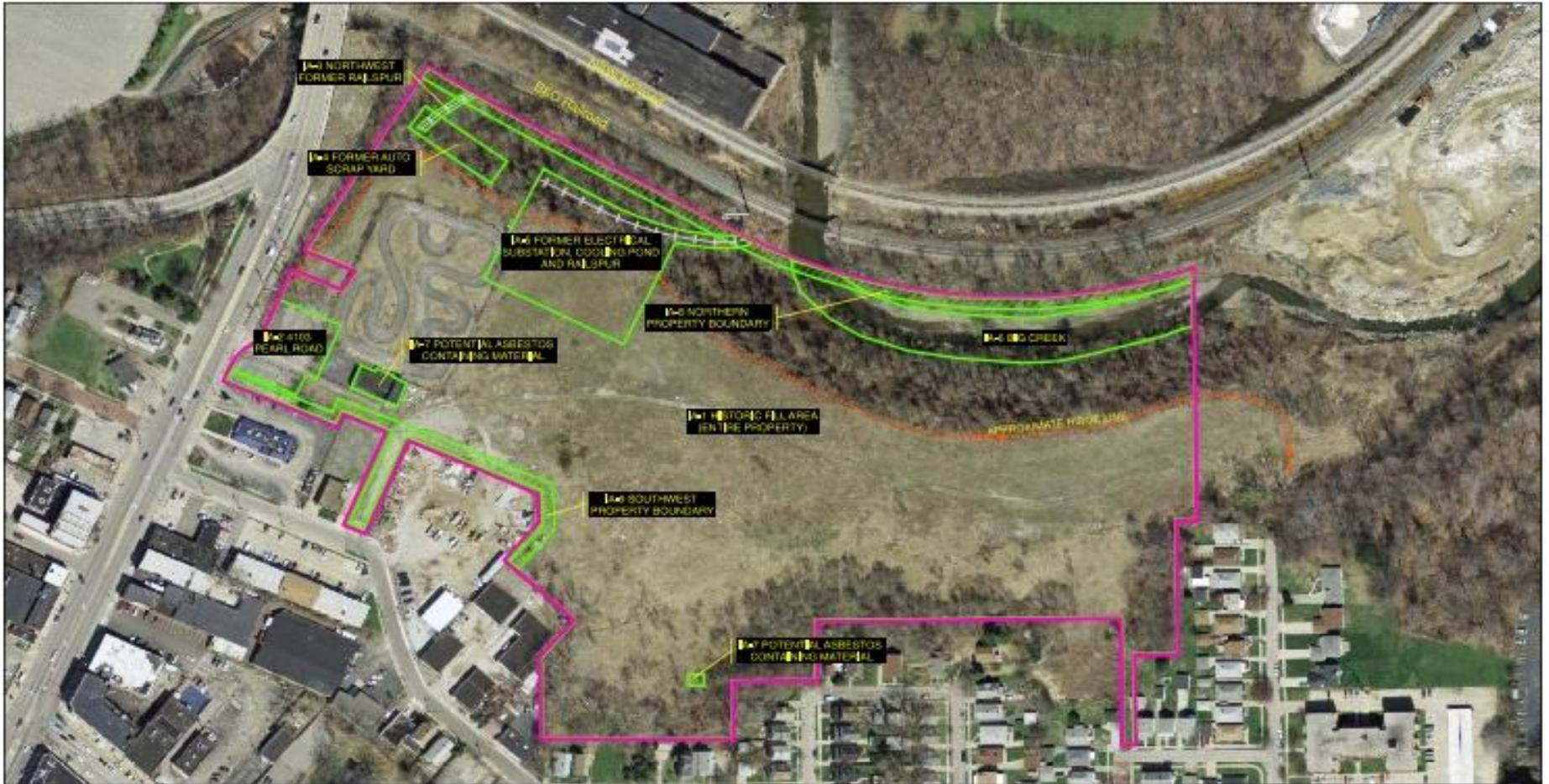


USEPA Brownfield Revolving Loan Fund Projects



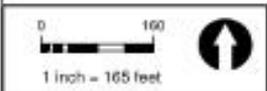
Henninger Landfill Redevelopment





Legend

- HISTORIC RAIL SPURS
- IDENTIFIED AREAS DUE TO OFF-PROPERTY LOCATIONS
- PROPERTY BOUNDARY
- IDENTIFIED AREAS
- APPROXIMATE TOP OF RIDGE



URS

Henninger Landfill Redevelopment
Pearl Road, Cleveland, Ohio

IDENTIFIED AREAS MAP

DRAWN BY: BME	DESIGNED BY: SP	PROJECT NO: 12617473	DATE: 3-8-14	DRAWING NO: 3
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Emerald Valley-Henninger Big Creek Redevelopment- Current Uses



Former Homeless Encampment



View of Henninger Landfill from west
side of Pearl Road looking east

Emerald Valley-Henninger Big Creek Revitalization - Into the Future

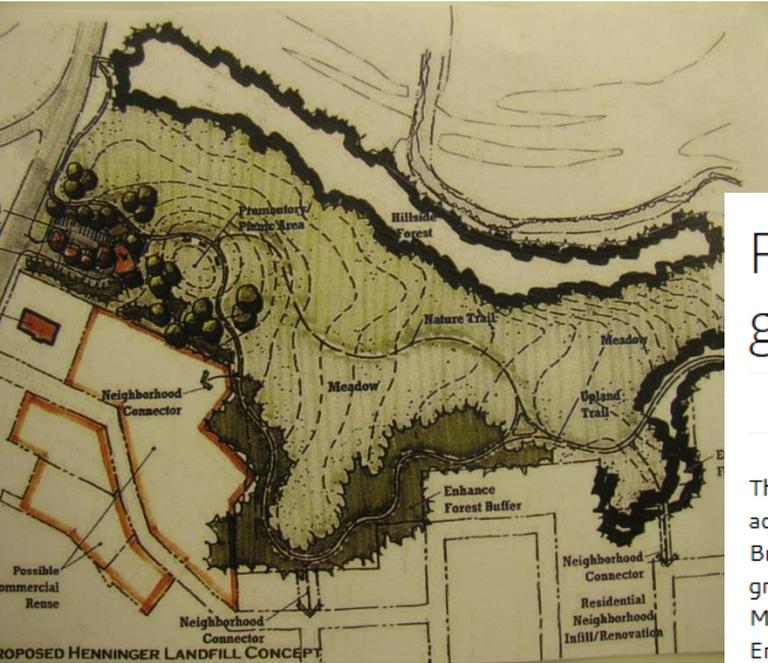


Upper Meadow, looking east on
Henninger Landfill property



Looking east, view of Lower Big
Creek adjacent to property

Emerald Valley-Henninger Big Creek Redevelopment Plans from **Brown** to **Green**



Former landfill becomes part of Big Creek's green corridor

🕒 August 19, 2015 📄 Conservation Stories, News

The nonprofit Western Reserve Land Conservancy has acquired a 28-acre former landfill in Cleveland's Old Brooklyn neighborhood and plans to make it part of a growing green corridor that includes the Cleveland Metroparks Zoo, Brookside Reservation and the Ohio & Erie Canal Towpath Trail.

The Land Conservancy has secured a [Clean Ohio Conservation Fund](#) grant to acquire the former Henninger Landfill and adjacent properties along Big Creek, just east of the zoo and West 25th Street. The parcel could eventually become a key link between the zoo property and the Towpath Trail.



Plans call for public use of the property, and project partners are working together to make the vision a reality.

The project protects 1,015 linear feet of Lower Big Creek, and improving its water quality will support the improvement and ultimate delisting of the Cuyahoga River as an Area of Concern (AOC).

The Evolution from Dike 14 to Cleveland Lakefront Nature Preserve



Blue

**One of Cleveland's
Premier Destinations!**



**Doan Brook and the
Lake Erie Shore
1907 - 1920**



70153 DOAN BROOK..GORDON PARK, CLEVELAND, OHIO.

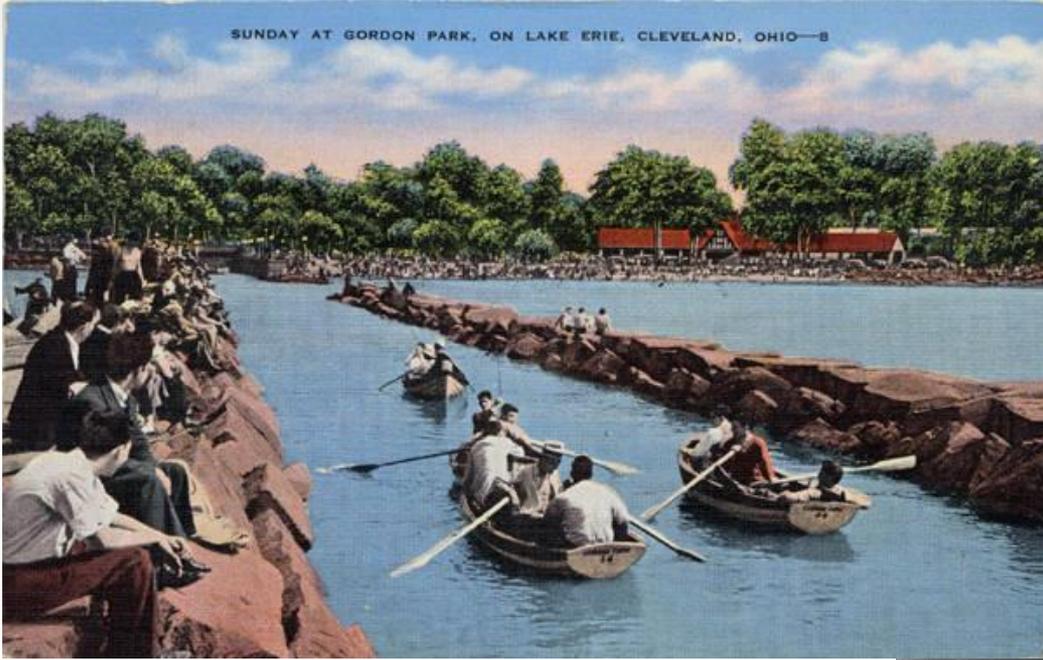
Gordon Park was originally the private estate of Mr. William Gordon, who willed it to become a public park at the time of his death, 1892. The next year, Gordon Park opened with facilities for fishing, boating, bathing, and picnicking.



Boating in Gordon Park, Cleveland, Ohio

Doan Brook
in the 1920's

SUNDAY AT GORDON PARK, ON LAKE ERIE, CLEVELAND, OHIO—B



1941
Boat Races Every
Sunday

1964
Doan Brook/Lake Erie
Field Trip Spot

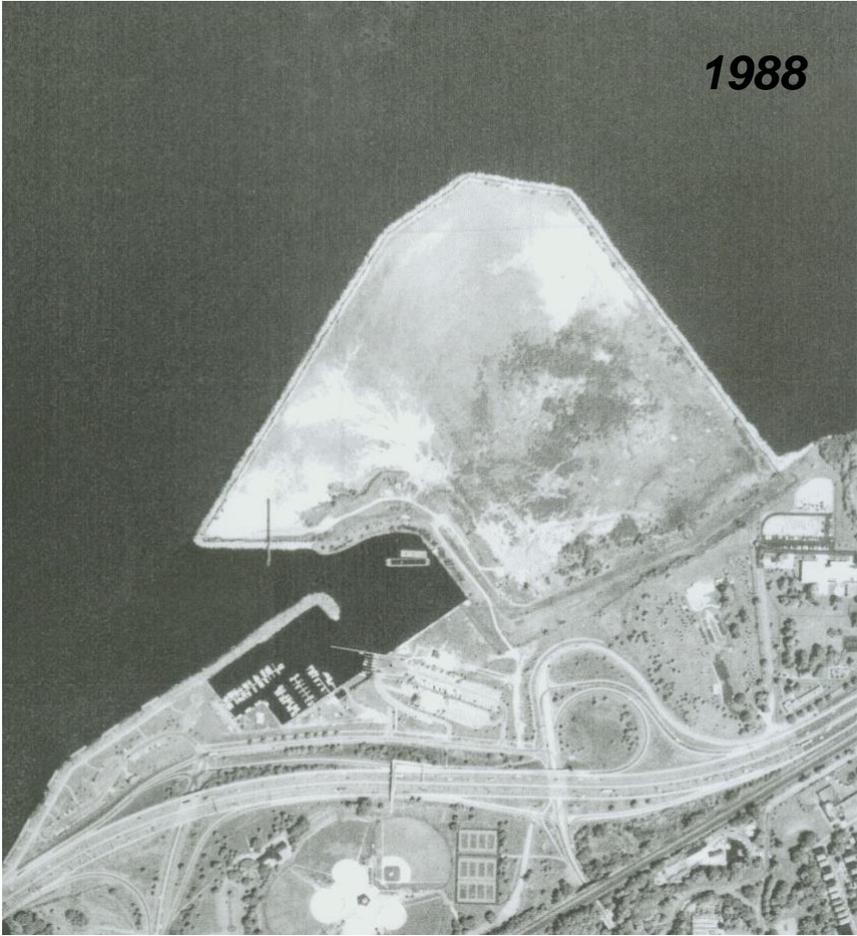


Brown

- In 1962, **two ships from the U.S. Steel Fleet** were sunk to create a break wall for the construction of a marina.
- An 8 acre solid waste landfill, known as the **“Cleveland Lakefront Dump”** created.



Creating the Land Mass



Green



Left alone, vegetation began to grow and migratory birds and other wildlife began to inhabit and migrate through Dike 14.



- As a result of the natural transformation of from a CDF to a natural area along Lake Erie:
 - Diverse array of migratory birds and other wildlife inhabit Dike 14
 - People want to use it for recreational and educational purposes
- However, is future use of Dike 14 as a Nature Preserve safe for people and wildlife?



Initial Funding

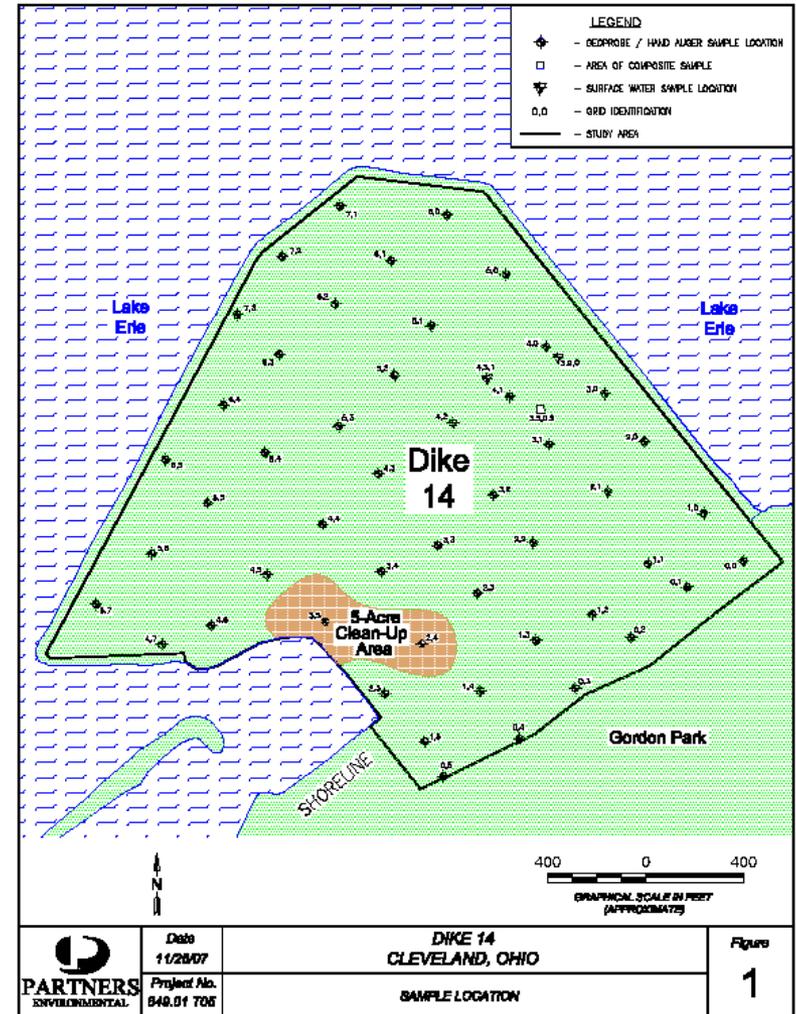


- Brownfield funding was sought by the Cuyahoga SWCD to support the development of the Dike 14 CDF as a nature preserve.
- In 2006 the Cuyahoga SWCD was awarded a USEPA Brownfield Assessment Grant for Hazardous Substances
- Partners Environmental Consulting, Inc. and Davey Resource Group were selected to perform the work.
- The Background Soil Determination was completed with monies remaining in the grant and with the support of the Ohio EPA.



So...was it found to be safe?

- Overall, the results showed that Dike 14 could be used safely as a Nature Preserve.
- Most of 88-acre property will require **no** cleanup.
- With the exception of an approximately 5-acre area associated with the former landfill portion of the Dike, the Property is safe for recreational uses and wildlife. Low levels of chemicals of concern in the 5-acre area include PCBs, PAHs, and lead.



Important Birding Area

Why is this Site important?

It's the only natural area along the Cleveland Lakefront, and the only accessible natural area between Huron to the west and Mentor Marsh to the east. It is an important bird migration stopover site.



5 Acre Remediation

US EPA Brownfield Grant

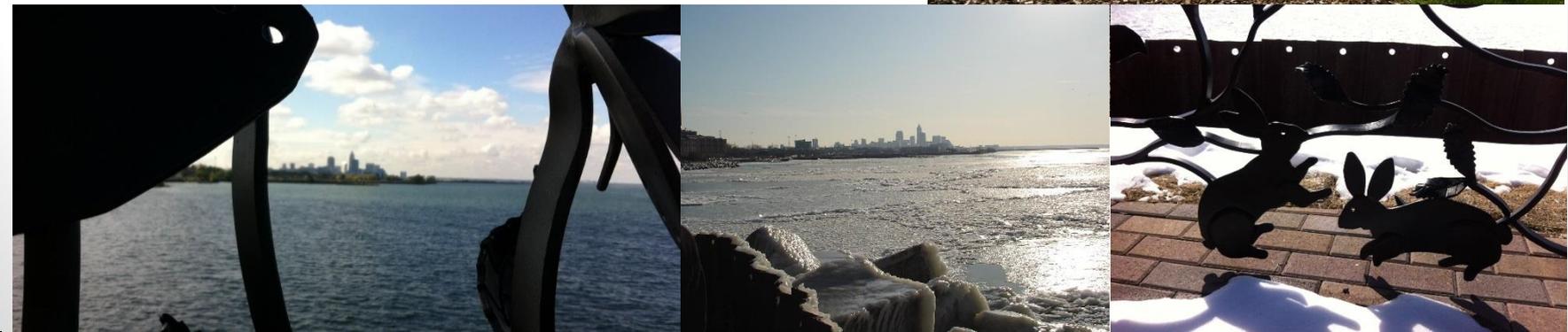
- Partnerships:
 - Port of Cleveland
 - Cuyahoga County
 - USEPA
 - Ohio EPA
 - Cuyahoga Soil and Water Conservation District
- Capped site with 40,000 cubic yards of newer dredge material
- Remediation area seeded with diverse native seed mix

DIKE 14- CLEVELAND LAKEFRONT NATURE PRESERVE



Promoting Environmental Initiatives and Public Access to the Lakefront

- Opened to the public daylight hours for passive recreation in February 2012
- Previous sediment disposal site that nature transformed into 88-acre wildlife haven
- To date more than 77,000 visits from 41 states and 15 countries
- Opportunity for eco-tourism
- 1.2 miles of shoreline & 2.5 miles of trails
- AAPA 2012 Environmental Improvement Award



Questions?

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