Making an Old Icon New Again: Keeping the Character and Enhancing the Environment at the Akron Airdock

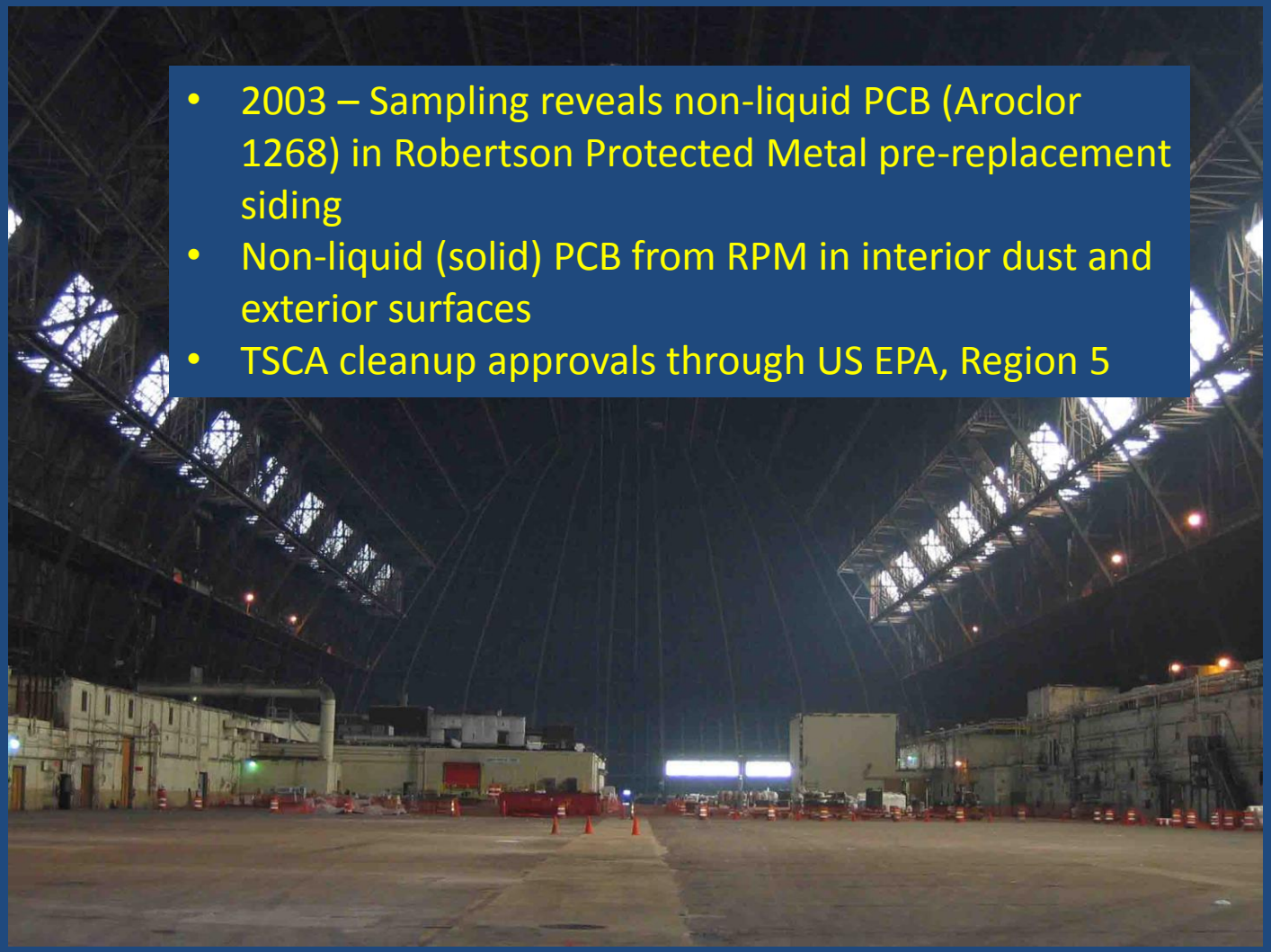
Ohio Brownfield Conference
April 2014

Project Area

Original Use (1930-40s)

Airdock Overview

- Completed construction in 1929 (Goodyear)
- One of the largest open floor spaces under one roof without columns. (364,000 ft^2)
  - 1,175 feet long
  - 325 feet wide
  - 211 feet high
- Two 600 ton doors at either end open to allow airship entry / exit
- Owners: Goodyear (1929-1987), Lockheed Martin (1987-2005), Summit County Port Authority (2005-present)



- 2003 – Sampling reveals non-liquid PCB (Aroclor 1268) in Robertson Protected Metal pre-replacement siding
- Non-liquid (solid) PCB from RPM in interior dust and exterior surfaces
- TSCA cleanup approvals through US EPA, Region 5

Later Use (1950s-2000s)

Exterior Remediation

PCB Source – Airdock RPM Siding

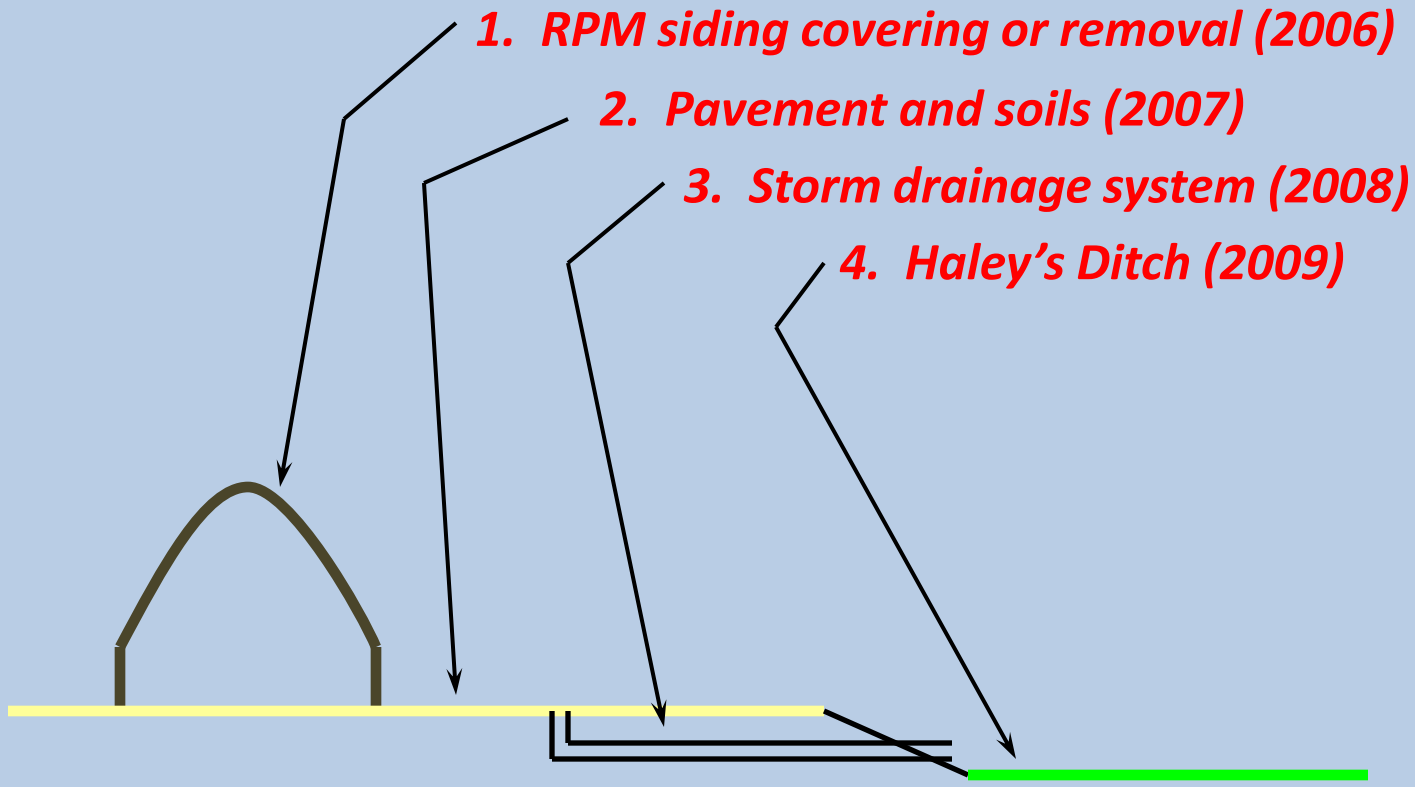
- Contains solid PCB 1268 (3-4%) Exfoliated as small particles
- Washed into soil, over pavement, into storm drains and to Haley's Ditch

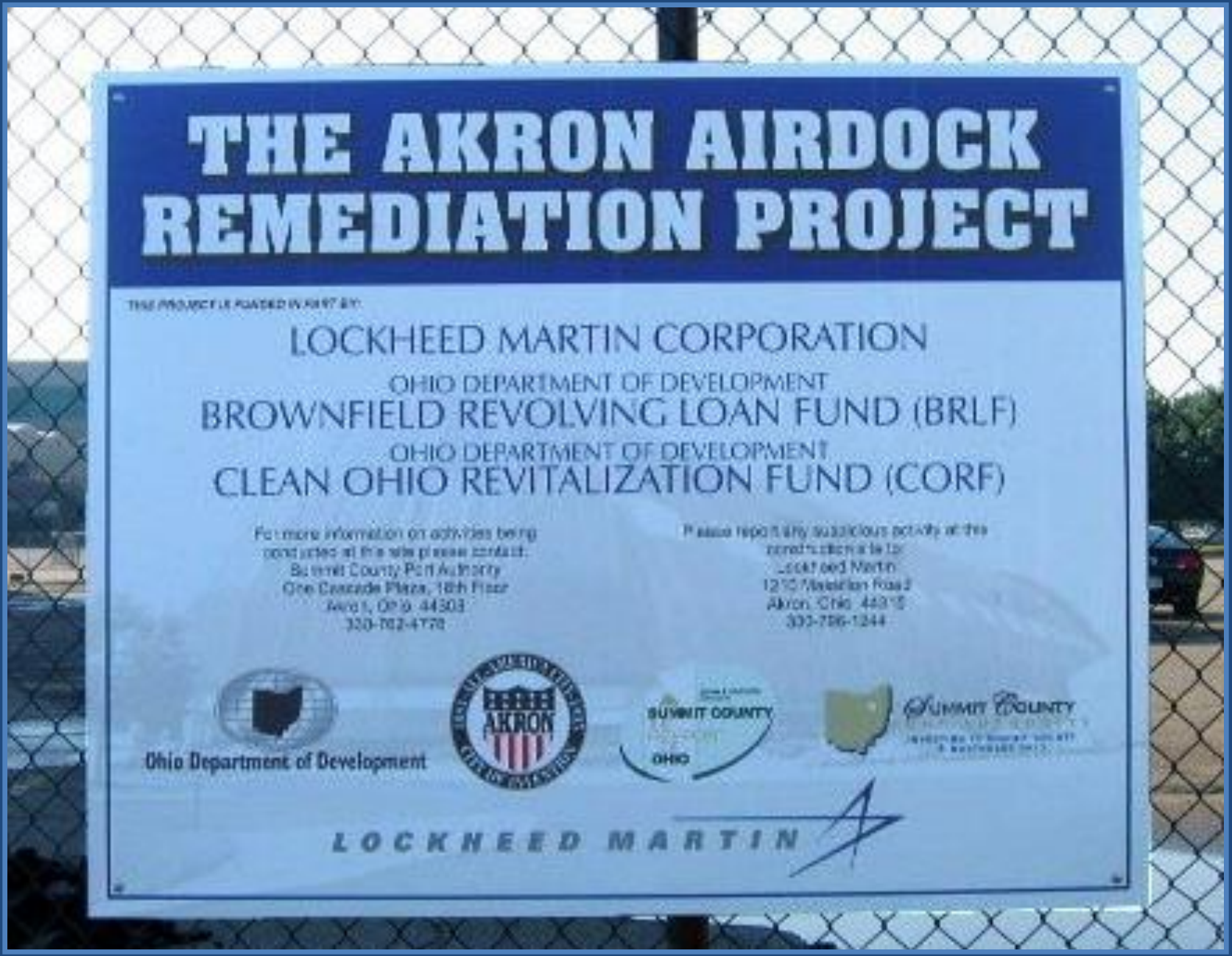
Regulatory Agencies Involved:

- US EPA Region 5, Chicago
- Ohio EPA, Northeast District Office

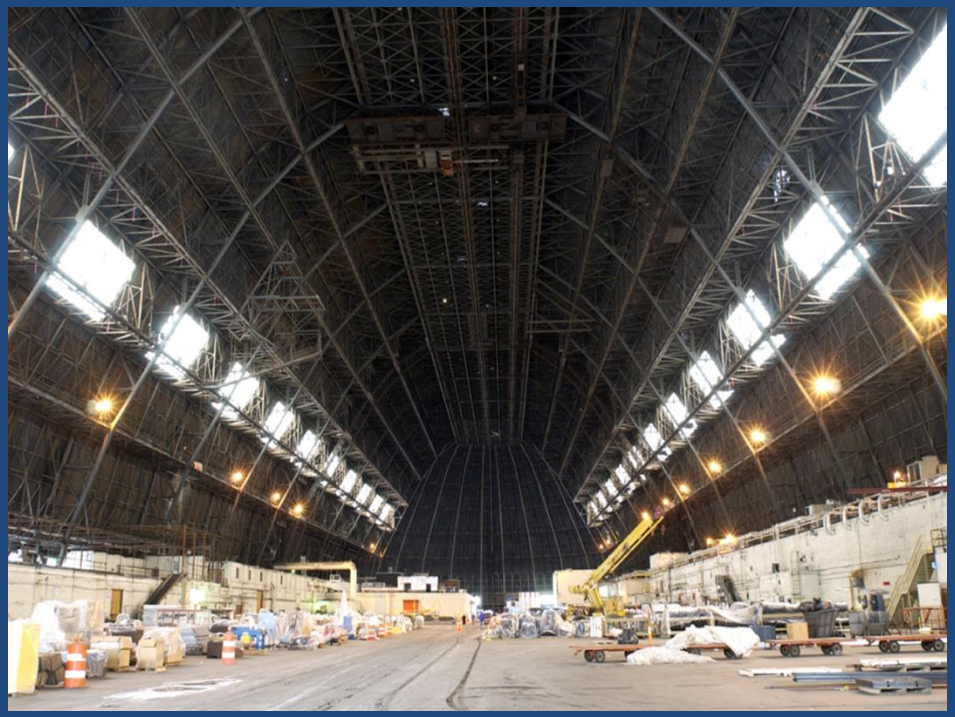
Exterior Cleanup Approach

Work from source outwards:



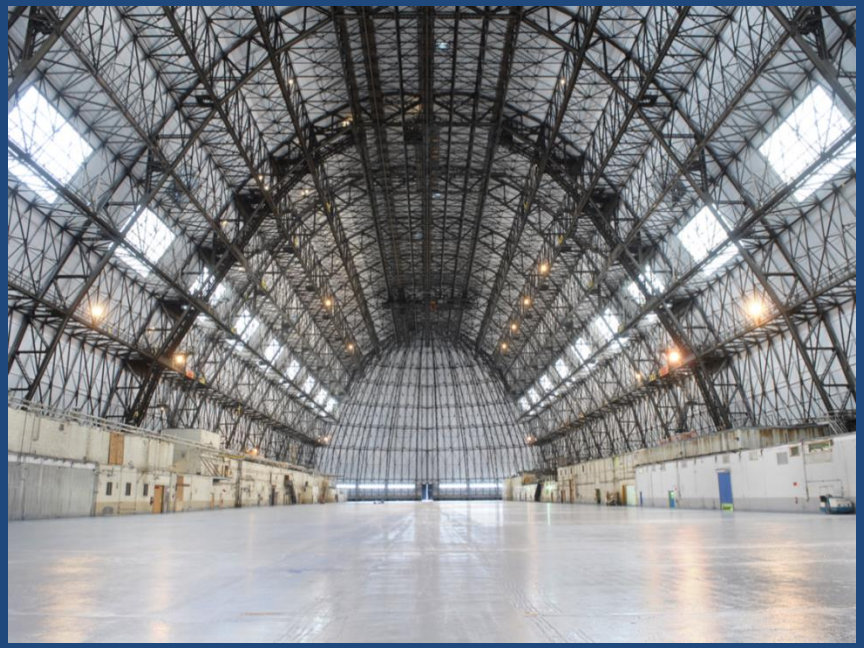

THE AKRON AIRDOCK REMEDIATION PROJECT
LOCKHEED MARTIN CORPORATION
OHIO DEPARTMENT OF DEVELOPMENT
BROWNFIELD REVOLVING LOAN FUND (BRLF)
OHIO DEPARTMENT OF DEVELOPMENT
CLEAN OHIO REVITALIZATION FUND (CORF)
Ohio Department of Development
AKRON
SUMMIT COUNTY
OHIO
SUMMIT COUNTY
LOCKHEED MARTIN

Airdock Interior Cleanup



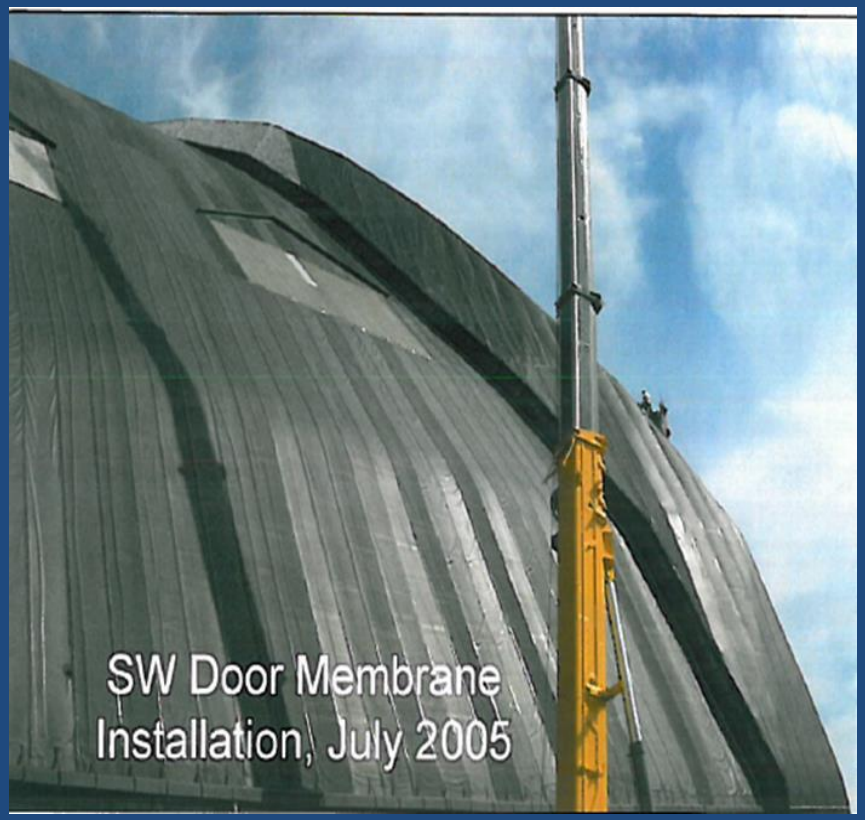
Before

After Cleaning and Coating



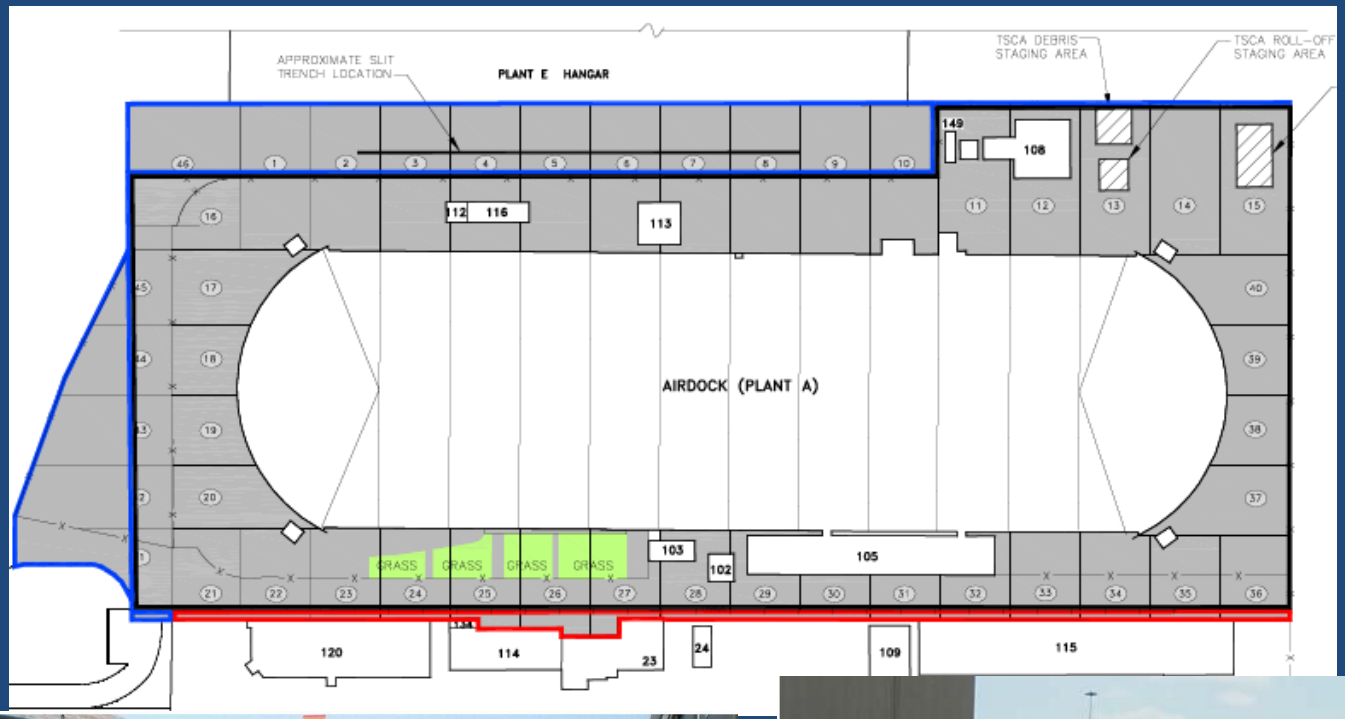
Airdock Exterior Remediation

Installed Rubber Membrane Over Roof and Replaced Rain Gutters



Airdock Exterior Remediation

Replaced Robertson Protected Metal Siding With Aluminum Siding


APPROXIMATE SLIT TRENCH LOCATION
PLANT E HANGAR
TSCA DEBRIS STAGING AREA
TSCA ROLL-OFF STAGING AREA
AIRDOCK (PLANT A)
GRASS
GRASS
GRASS
GRASS
149
108
112
116
113
103
102
105
120
114
23
24
109
115

VAP NFA / CNS Issued 2011

- On-Property Soil Excavation and Off-Site Disposal
- Industrial Use Restriction
- Potable Groundwater Use Restriction
- Risk Mitigation Plans
- Stormwater Monitoring

Off Property Assessment and Remediation

Storm Drainage System

- Removed debris and cleaned storm sewer system from Airdock to Triplett Boulevard
- Replaced part of storm sewer at Haley's Run Outfall

HALEY'S OUTFALL BEFORE

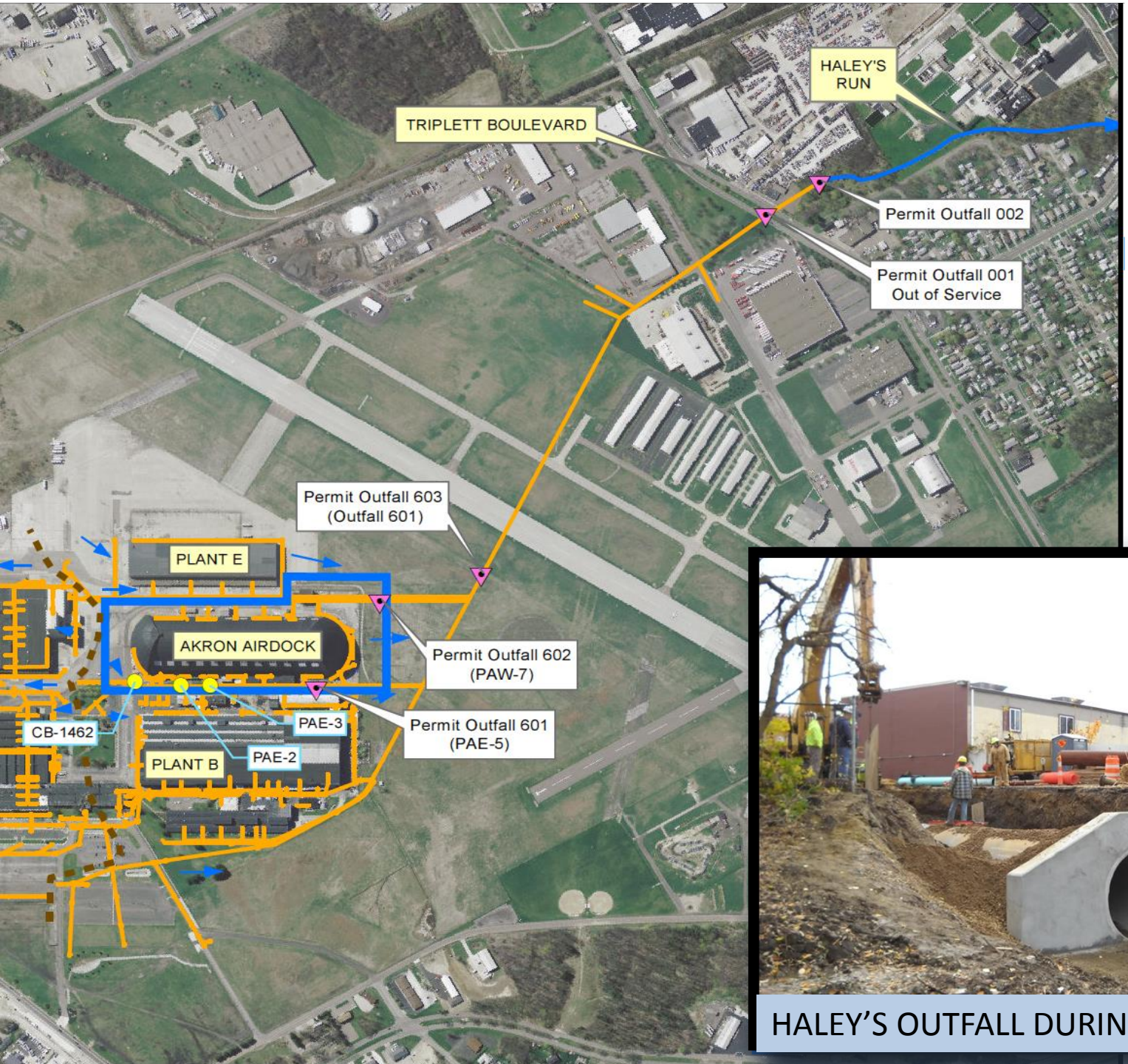
Stormwater Monitoring & NPDES

HALEY'S OUTFALL DURING

- Remedial activities completed to mitigate future emanation of PCBs to Haley's Run.
- Post-remediation stormwater monitoring program to evaluate emanation of residual PCBs from the Property.

Individual National Pollutant Discharge Elimination System (NPDES) permit effective June 1, 2009 to regulate and monitor stormwater discharges of PCBs into Haley's Run.

Permit Outfall Locations

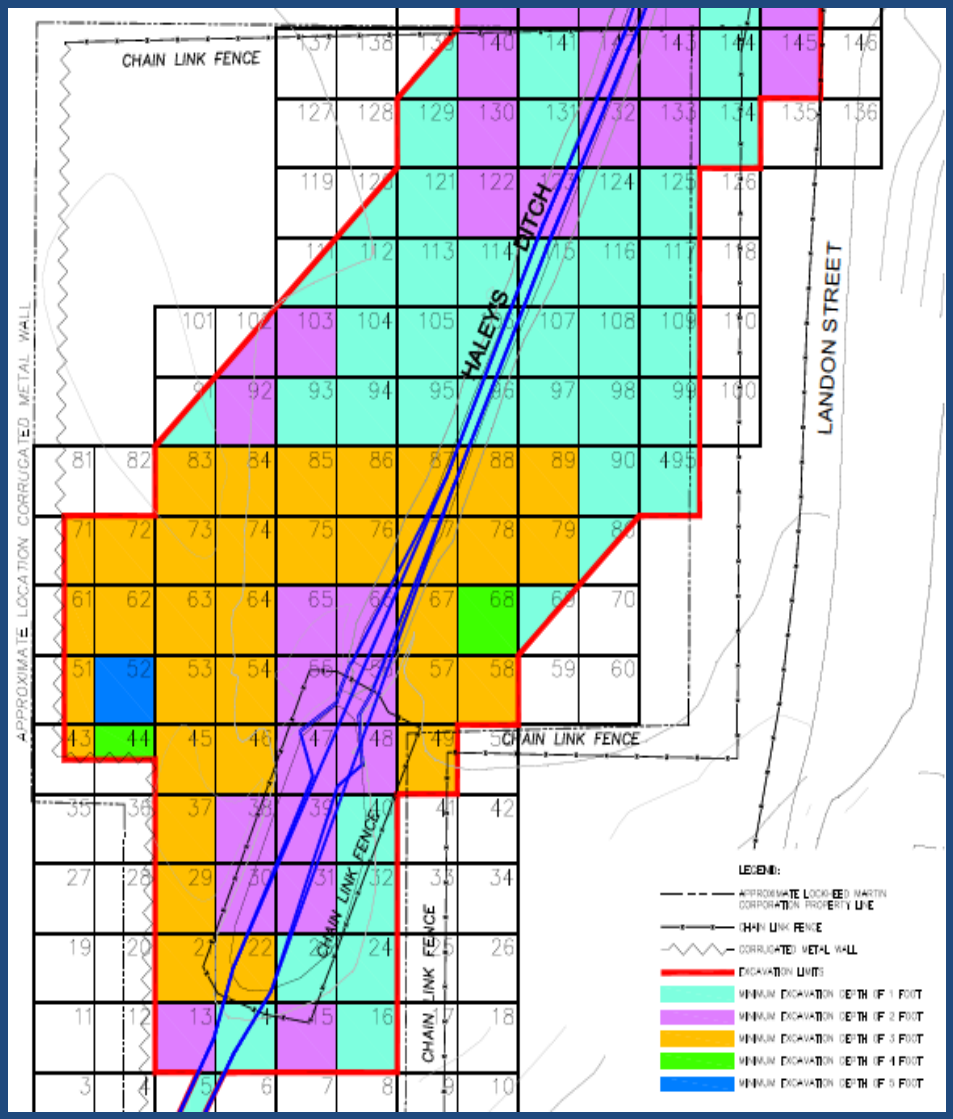


HALEY'S OUTFALL DURING

Stormwater Monitoring Demonstrates:

- Stormwater discharges are in compliance with the individual NPDES permit.
- 40 monthly sampling events conducted did not detect PCBs associated with the Akron Airdock at Haley's Run outfall.
- Remedy eliminated the discharge of PCBs from the Akron Airdock to stormwater discharging into Haley's Run.
- Effective July 1, 2013, the NPDES permit was terminated.

Haley's Run Characterization Data

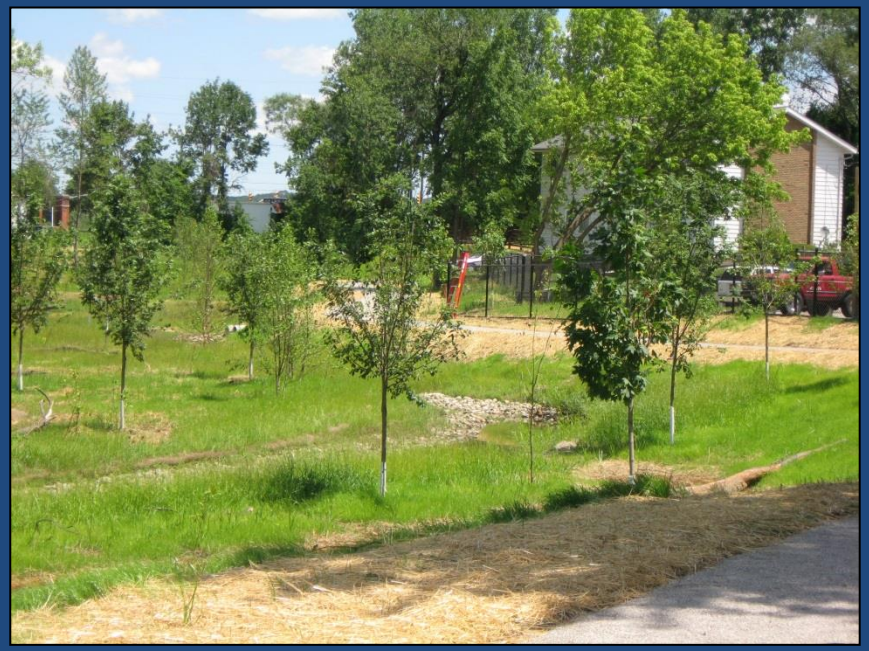


- Collected more than 500 soil and sediment samples from 150 locations in and adjacent to Haley's Run
- A number of samples showed PCB concentrations greater than 1 mg/kg; and 4 sampling locations exceeded 50 mg/kg
- Soil and sediment with PCB concentrations over 1 mg/kg removed
- 1 mg/kg is the U.S.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

Haley's Run Remediation

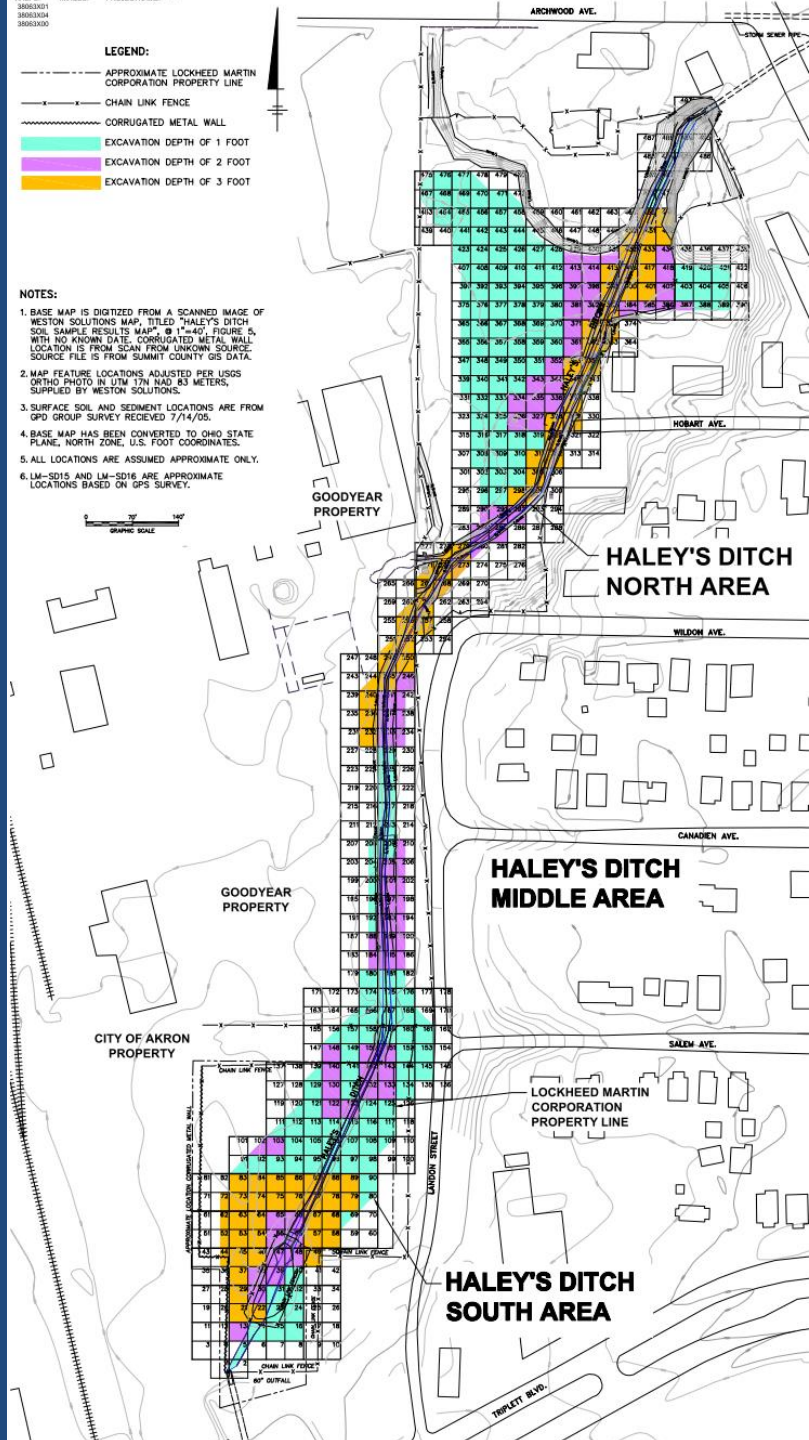
- Project Area ~ 5 acres
- Excavated 350 grids (25' x 25')
- Soils and sediments removed along 1,800 feet of Haley's Run
- 3,500 tons to TSCA landfill (PCBs > 25 ppm)
- 29,000 tons to non-TSCA landfill
- 365 verification samples

Haley's Run Remediation Created Opportunity to Restore an Urban Ditch to a Natural Stream



Remediation Created Opportunity for Restoration

- Lockheed Martin voluntarily elected to pursue a restoration option
- Remediation project limits dictated restoration limits
- Required excavation provide opportunity
- Several Constraints



Existing Morphology and Habitat Condition

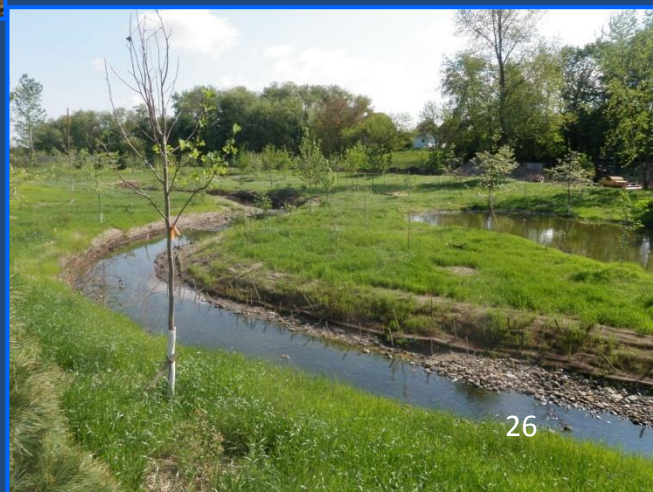
- IBI 30 non-attainment WWH
- 12 Fish Species

- QHEI 55.25
- Entrenched channels- no floodplain access
- Poor Morphology- Channelized

Prior to Remediation and Restoration

Refine Subgrade

Restore



Stabilize and Plants Natives

Haley's Run Restoration

Design Start	November 2008
Start	September 14, 2009
Complete	June 29, 2010

Restoration Features

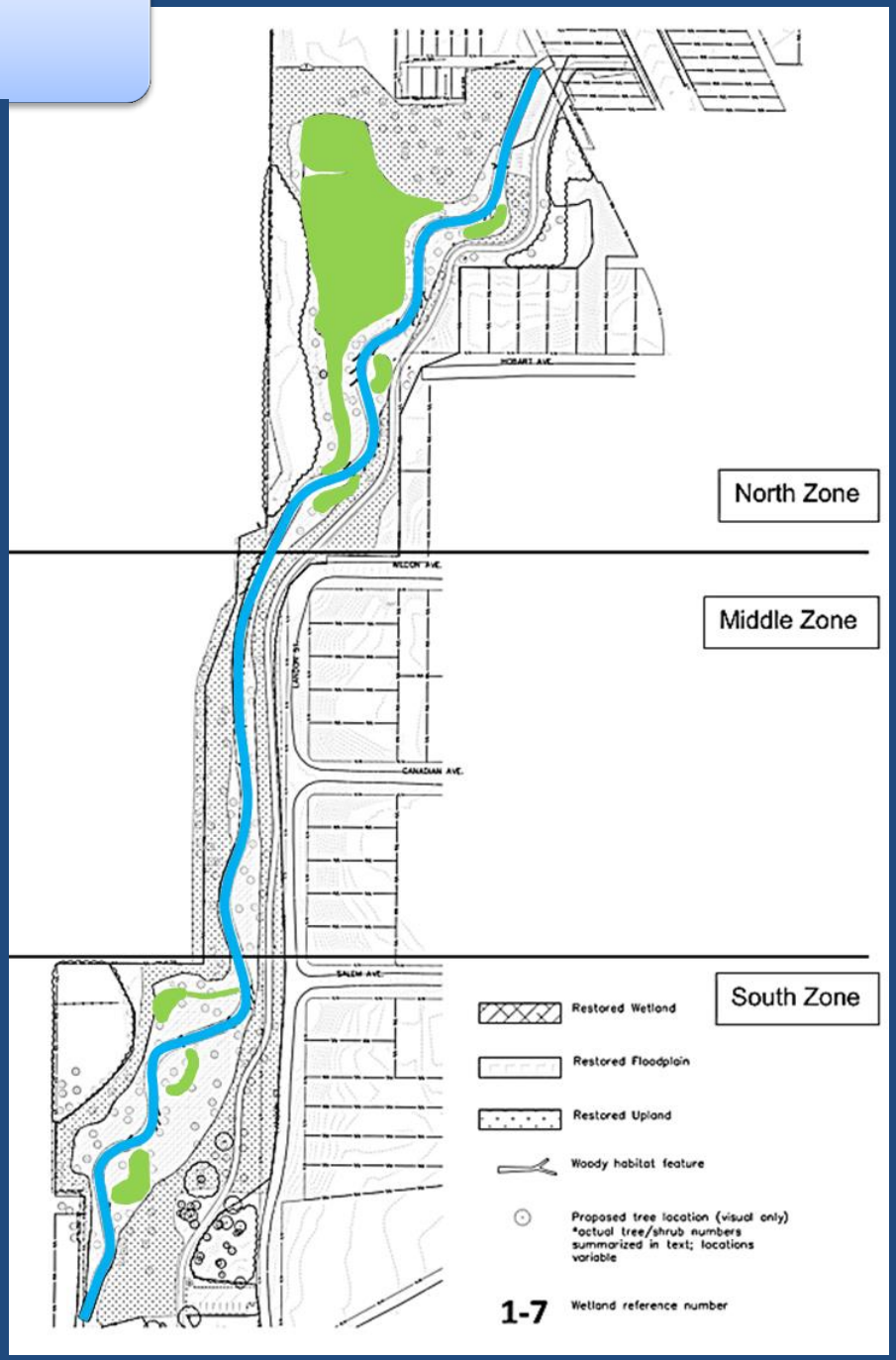
Restored Stream Length	2,073 l.f.
Acres of Wetland Restored	1.2 acres
Fish Habitat structures	13

Woody Plants

Number of Deciduous Trees	375
Pine Trees	77
Number of Shrubs	625

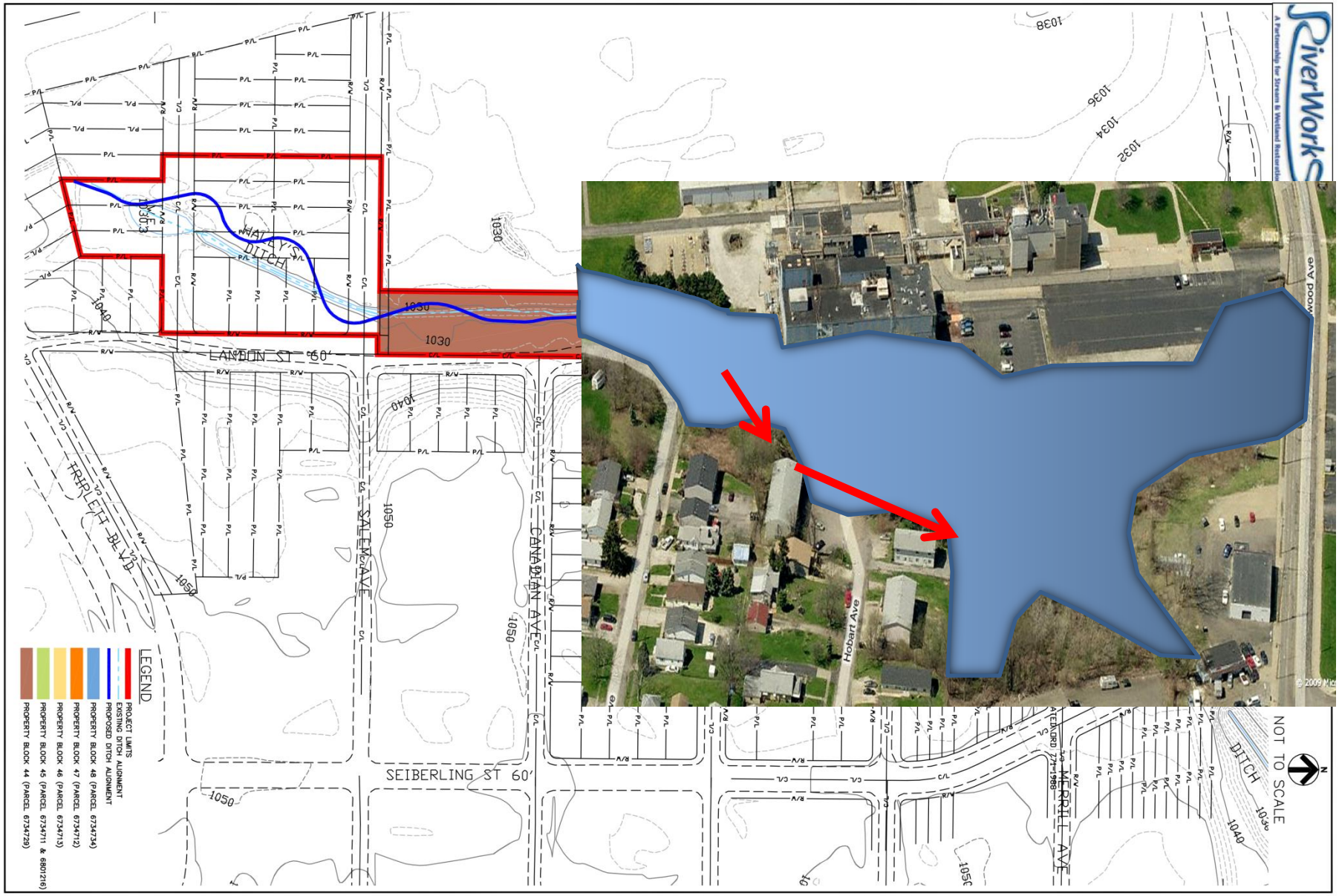
Materials

Topsoil	5719 CY (229 truckloads)
Gravel/ Cobble	1049 tons
Bank run	1301 tons
Fill dirt	7221 tons
304 aggregate for trail	1825 tons



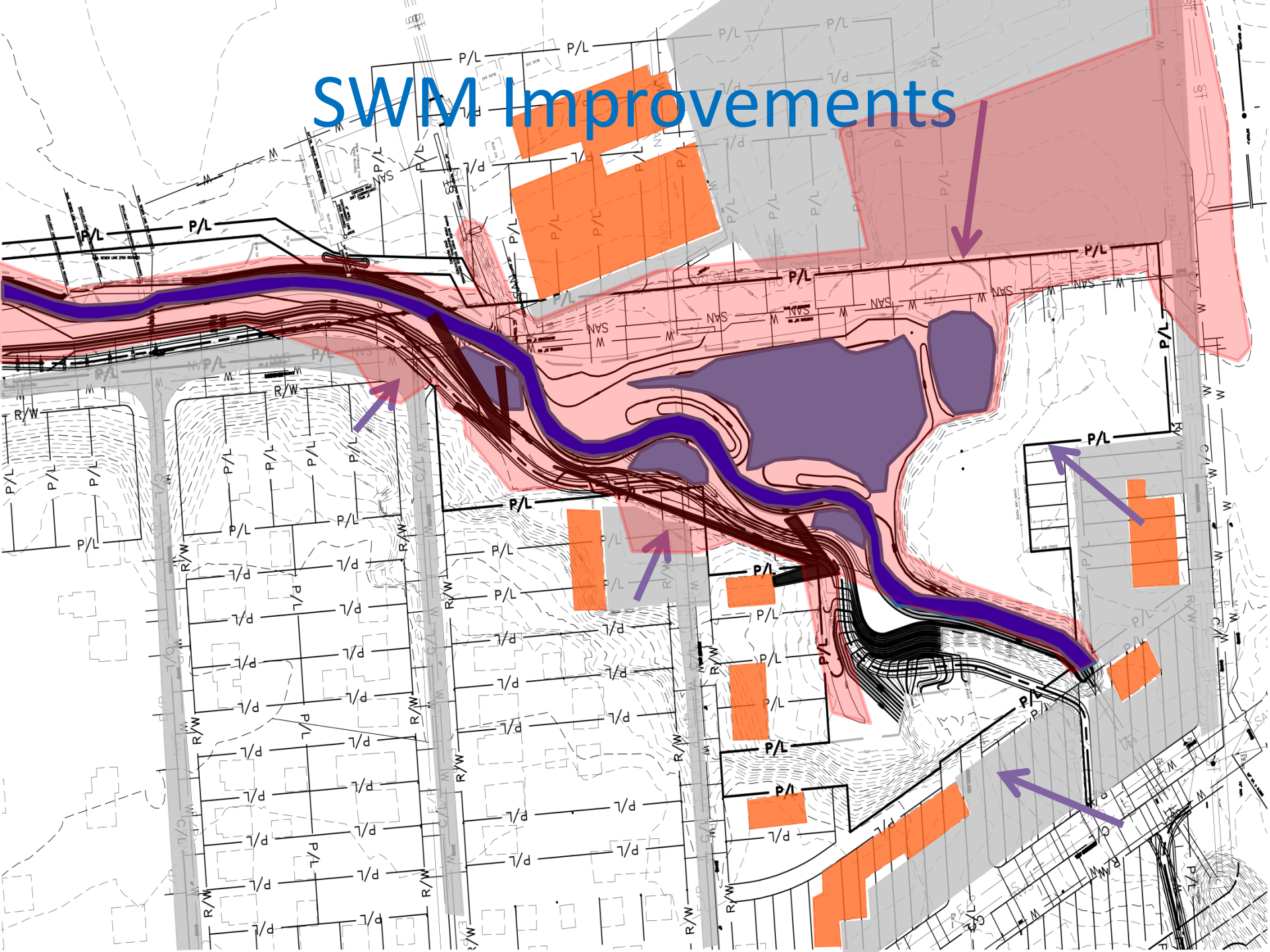
Time to Flood

Restore Land Use



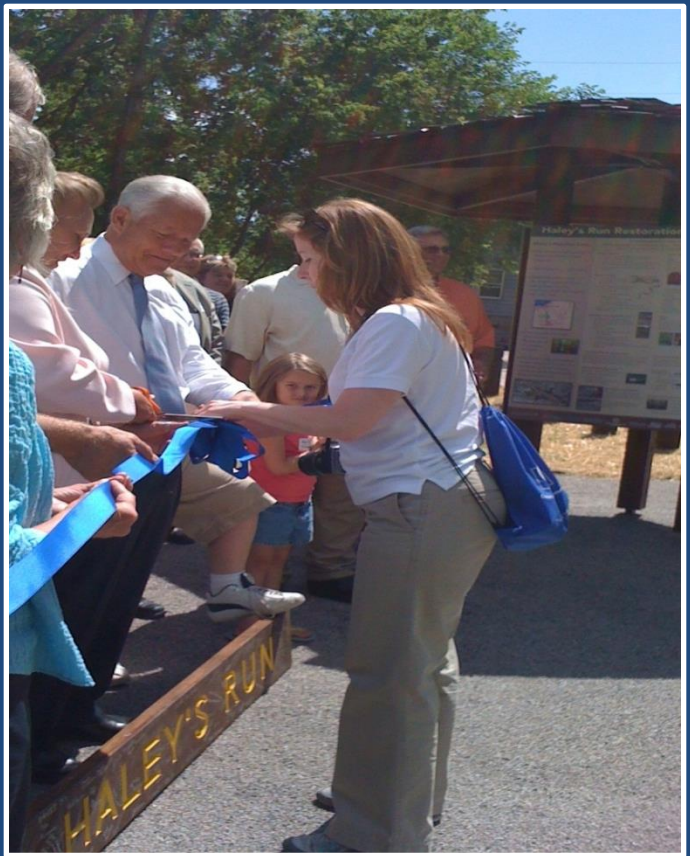
SWM Impairments

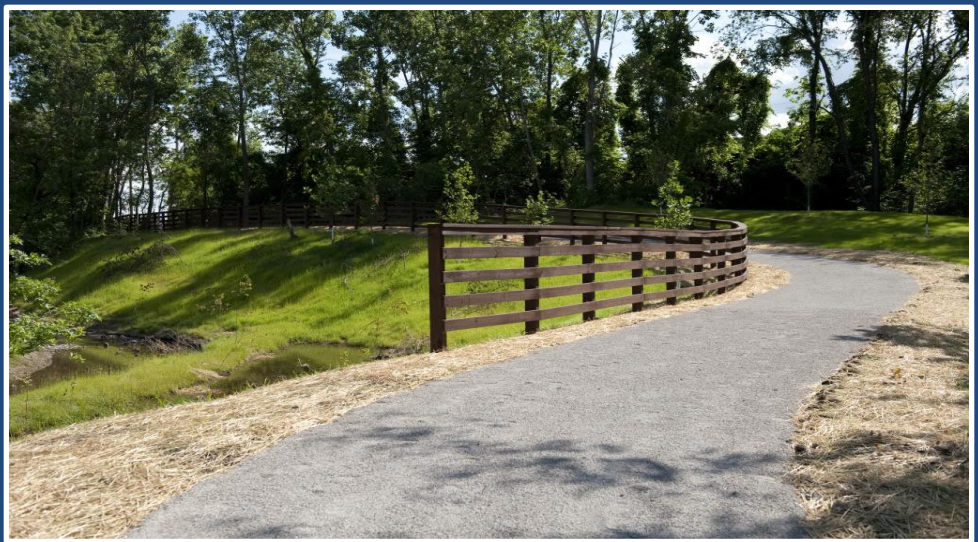
SWM Improvements



Hobart Ave
E Archwood Ave
© 2013 Google
©2010 Google
7.84" N 81°28'18.61" W elev 1028 ft
Eye alt 2100 ft

Greenway Trail





WRLC: Connecting People with Places

Fundraising

Land Protection

Collaboration

Marketing / PR

Western Reserve Land Conservancy

OUR LAND. OUR LEGACY.

GIS/Mapping

Project Management

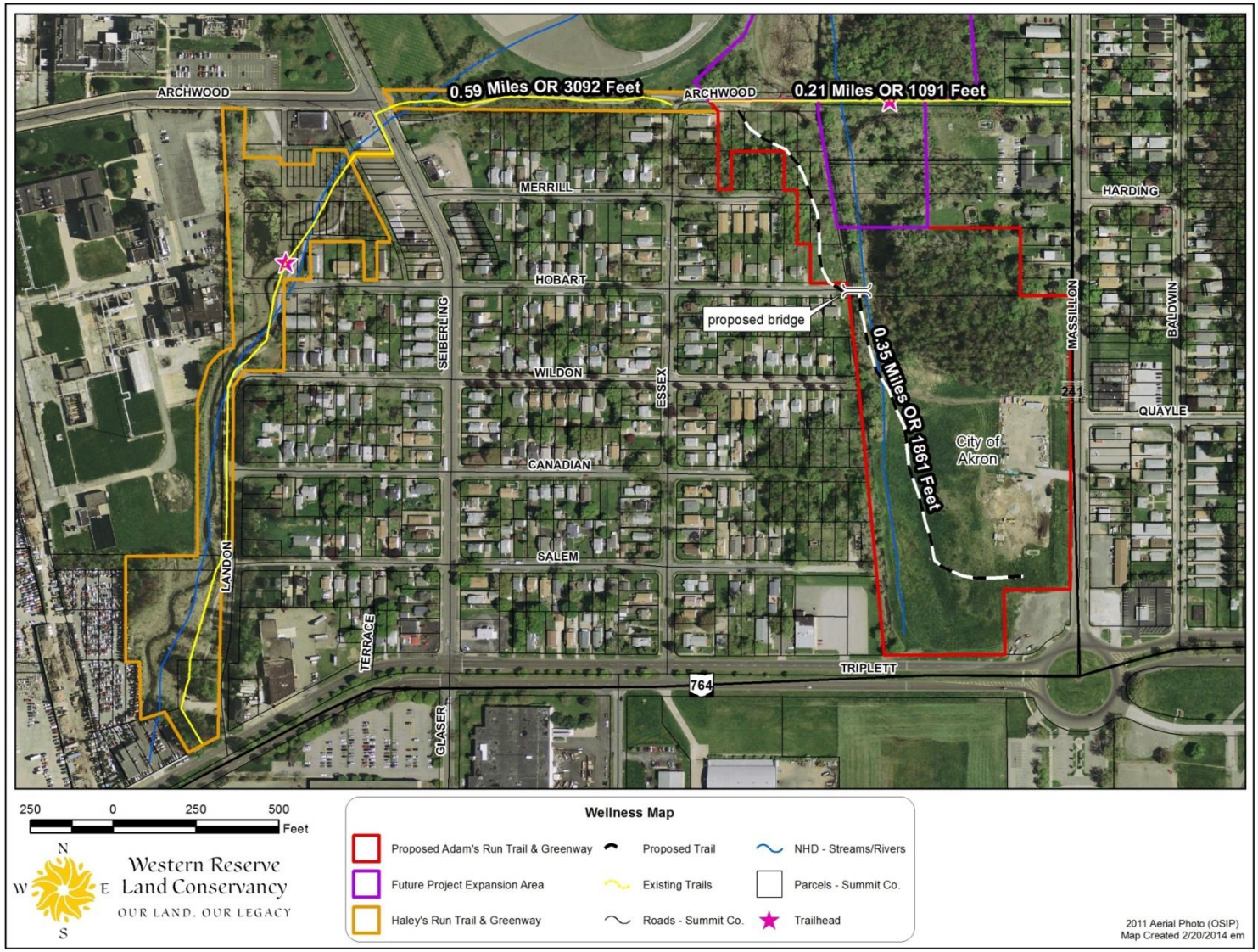
Stewardship

Legal

Grant writing

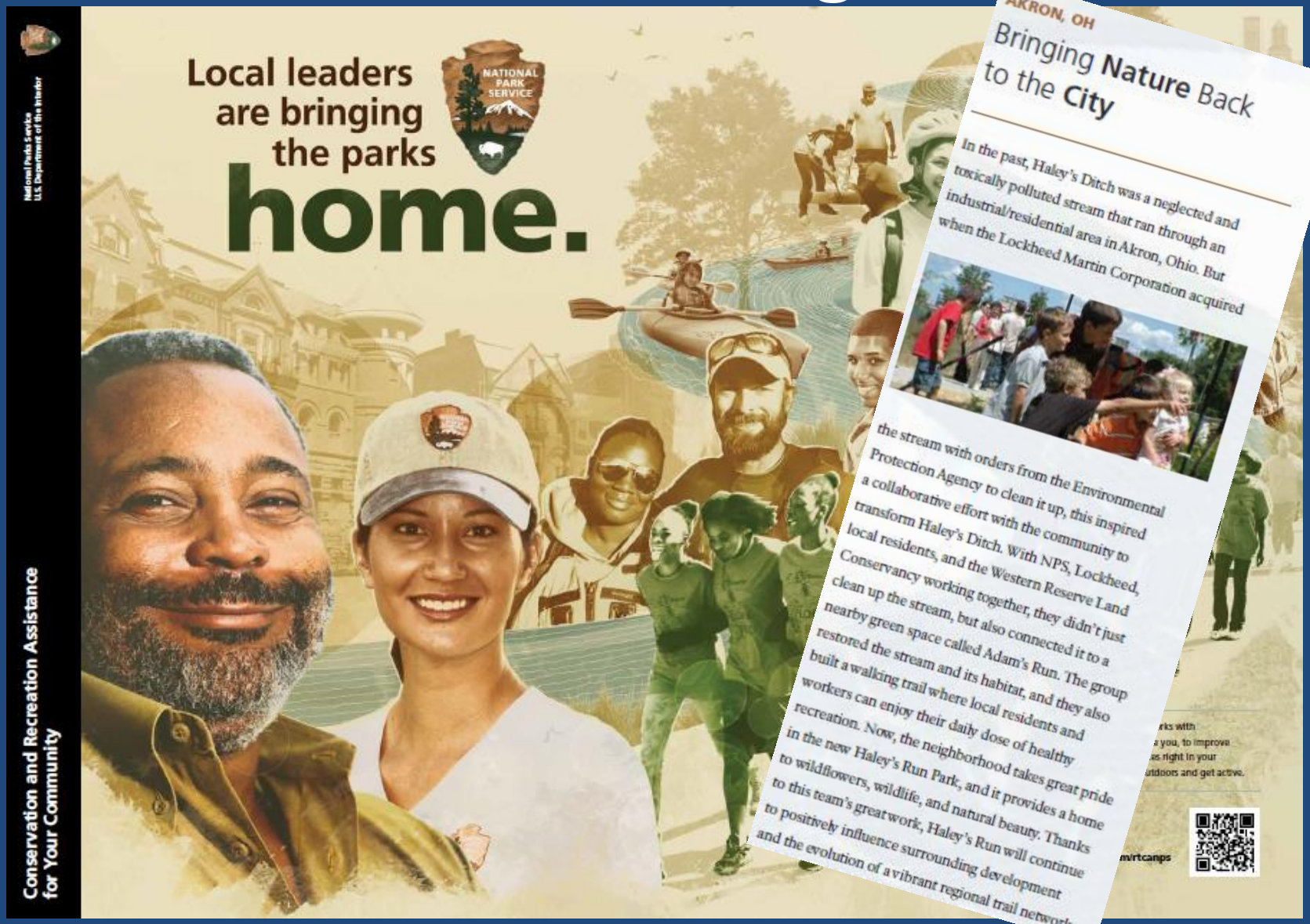
Middlebury Run Park
Little Cuyahoga River Trail
Goodyear World HQ
Planned Road Expansion with Trail
Proposed Trailhead
Elementary School
Proposed Trailhead
Haley's Run Trailhead
Proposed Trailhead
Little Cuyahoga River
City of Akron
W 176 TO MARTHA
MARTHA TO E 176
E 176 TO ENGLEWOOD
GENERAL BRITAIN TO W 176
GENERAL TO W 176
ENGLEWOOD
BRITAIN
SR18 TO W 176
W 176 TO SR18
E 176 TO SR18
CAMBRIDGE
LEAGUE
DETROIT
WIGLEY
MARTHA
SEIBERLING
TWAIN
POE
DARWIN
SPENCER
SHAKESPEARE
RILEY
MASSILLON
FENTON
FERNETTE
SPADE
FULMER
STEPHENS
ESTHER
FREMONT
CRAMER
GUSS
MELLIS CREEK
PENTHLEY
SPRINGFIELD CENTER
DANIELS
BAKER
TECHWAY
ARCHWOOD
MERRILL
HOBART
ESSEX
WILDON
CANADIAN
SALEM
LANDON
TERRACE
TRIPLETT
BALDWIN
GIBBS
HARDING
QUAYLE
THAM
QUEBEC
GLASER

Next Step: Adam's Run



Annual Cleanup

National Recognition



AKRON, OH

Bringing Nature Back to the City

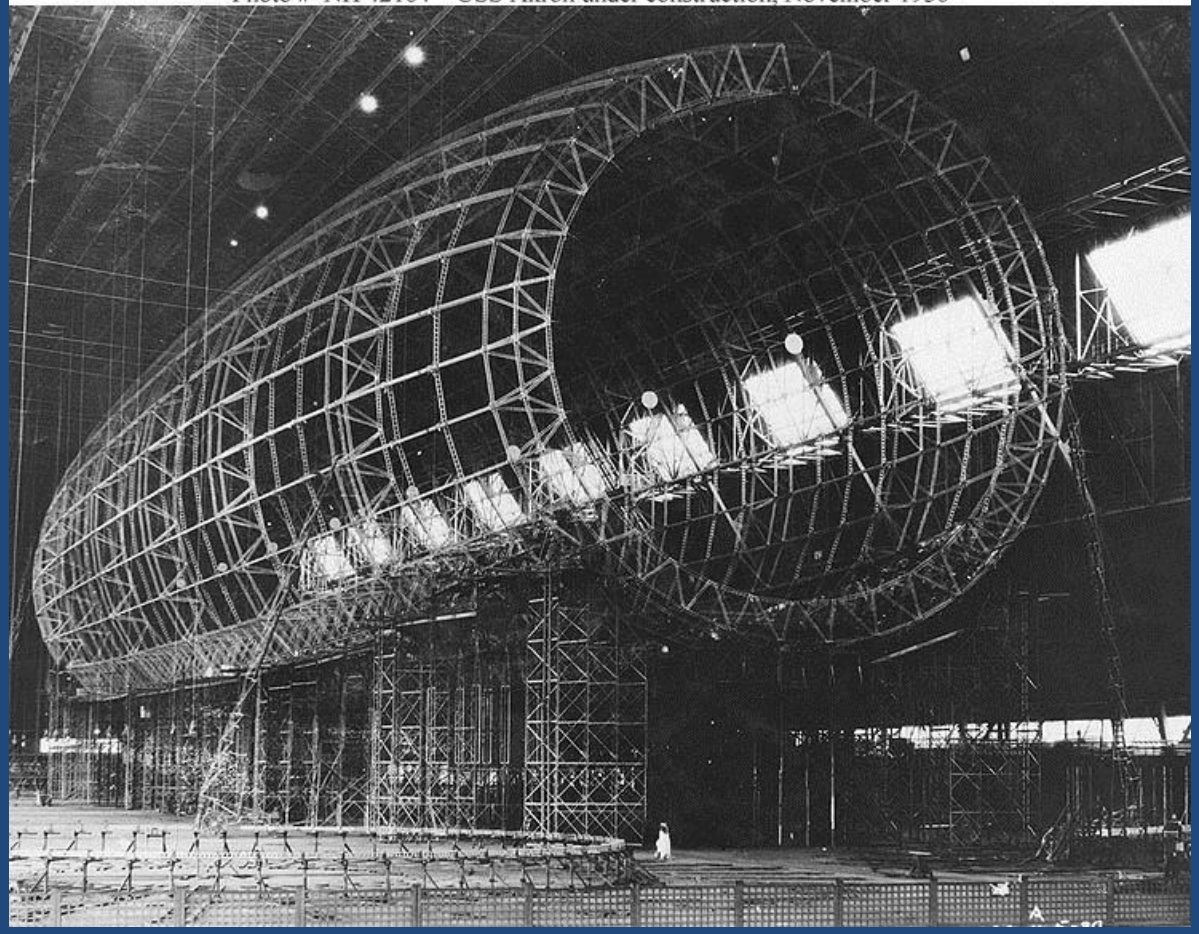
In the past, Haley's Ditch was a neglected and toxically polluted stream that ran through an industrial/residential area in Akron, Ohio. But when the Lockheed Martin Corporation acquired

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.

Current Status of Airdock

- Amendment 3 to CAFO in effect
  - Safety precautions (worker awareness training)
  - Limited occupancy and access
  - Health and safety plans
  - Periodic monitoring and reporting
  - Inspections and maintenance
  - Notifications of repair, remodeling, construction, demolition

Lighter-Than-Air Vehicles - 1930



Lighter-Than-Air Vehicles - 2010

Tethered Aerostats

PTDS “Persistent Threat Detection System” Airships

USS Akron 1931

HALE-D 2011

High Altitude Long Endurance – Demonstrator (HALE-D)

Panel Members

- Jennifer Krueger, URS (jennifer.krueger@urs.com)
- Vanessa Steigerwald Dick, Ohio EPA (vanessa.steigerwald-dick@epa.ohio.gov)
- Joel Bingham, EnviroScience (jbingham@enviroscienceinc.com)
- Matt Lascola, GPD Group (mlascola@gpdgroup.com)
- Sarah Ryzner, Western Reserve Land Conservancy (wrlandconservancy.org)
- Steve Vardavas, Lockheed Martin (steve.vardavas@lmco.com)