Tackling Community Revitalization through Brownfields Redevelopment
Speakers

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TODAY’S AGENDA

- **Brownfields 101 Overview and TAB Services**
  Beth Grigsby, KSU TAB Regional Manager

- **Brightfields 101: How “Brightfields” Can Reuse Brownfields and Reenergize Your Community**
  Matt Popkin, RMI

- **Coal Plant Redevelopment**
  Bill Schleizer, Delta Institute

- **Brownfields Tour Overview**
  Amy Yersavich, KSU TAB POC for Ohio
Brownfields 101, TAB
Services and Regional Approaches
WHAT IS BROWNFIELD?

A brownfield is a property that is difficult to develop because it is contaminated or believed to be contaminated.

A site with low to moderate levels of contamination
Including: hazardous, petroleum, asbestos, lead paint, meth-lab contaminants, and mine-scarred lands.

LEGAL DEFINITION OF A BROWNFIELD “...real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant.”*

*(Public Law 107-118 (H.R. 2869) - “Small Business Liability Relief and Brownfields Revitalization Act”, signed into law January 11, 2002).
Brownfields-Many Property Types

- Churches, Schools
- Gas stations
- Shopping Malls
- Machine shops
- Hospitals, Medical Facilities
- Main Street Buildings
- Apartment Buildings
- Dry cleaners
- Printing shops
- Paint shops
- Auto repair shops
- Shooting ranges

- Marinas
- Agricultural suppliers
- Landfills
- Asphalt plants
- Former coal yards
- Manufactured gas plants
- Scrap yards
- Lumber yards
- Manufacturing facilities
- Tool and die shops
- Oil/fuel terminals
- Mining Operations
- Railyards
BROWNFIELDS: PERCEPTION OF CONTAMINATION CREATES A “STIGMA”

Often it is the PERCEPTION of contamination that keeps properties from being redeveloped, not the actual presence of contamination.

Once the “stigma” is gone, properties can be returned to productive use.
WHY REDEVELOP BROWNFIELDS?

- Preserve community character and history
- Mitigate blight
- Desirable locations that encourage a mix of land uses to provide services that may be lacking
- Increase local tax base and facilitate job growth
- Mitigate public health and safety concerns
- Promote infill and vacant property reclamation
- Reduce the need to develop “greenfields”
CERCLA LIABILITY

BUYER BEWARE!

- Under CERCLA, persons may be held strictly liable for cleaning up hazardous substances at properties that they either currently own or operate, or owned or operated in the past.
- Strict liability under CERCLA means that liability for environmental contamination may be assigned based solely on property ownership.
DEVELOPERS, FUTURE OWNERS: WEIGHING BENEFITS VERSUS RISKS

OPPORTUNITIES

• PRIME LOCATION
• REDUCED PRICE
• EXISTING INFRASTRUCTURE

RISKS

• LIABILITY
• CLEANUP COSTS
• CLEANUP TIME
• FINANCING
• WEAK DEMAND
**BROWNFIELDS LAWS AND INCENTIVES: ADDRESS ENVIRONMENTAL ISSUES FOR PROPERTY TRANSACTIONS AND EXPANSIONS**

*Liability protection*

- For prospective purchaser, contiguous landowners, and others
- Perform due diligence (environmental assessments) *before* purchase and cooperate in addressing environmental issues

*Funding for eligible sites and entities include:*

- Assessment, cleanup
- Redevelopment (primarily non-EPA sources)
THE BROWNFIELDS REDEVELOPMENT PROCESS

Plan
- Identify Brownfields
- Engage the community
- Set Redevelopment Goals

Investigate
- Phase I Environmental Site Assessment
- Phase II Environmental Site Assessment
- Cleanup, if necessary

Re develop
- Stakeholders & Partners
- Financial Resources
WHO IDENTIFIES PROPERTIES AS BROWNFIELDS?

EPA?
The State Brownfields Program?

Brownfields Identification begins in your community!
IDENTIFY YOUR PARTNERS AND TEAM

Local/State leadership – Funds to tap into:
DEED, MPCA, BIL, CDBG, EDA funds, Housing Tax
Credits, Historic Preservation Tax Credits, Tax
Increment Financing

Public Works, Transportation, Public Safety,
Parks, Natural Resources

Private/Local/County Foundations

Regional Planning Commissions

Economic Development interests

Health Department

State and EPA Brownfields Resources
THE BROWNFIELDS REDEVELOPMENT PROCESS

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Redevelop
- Stakeholders & Partners
- Financial Resources
ALL APPROPRIATE INQUIRY: YOUR LIABILITY PROTECTION

EPA Liability protection

• For prospective purchaser, contiguous landowners, and others
• Perform due diligence (environmental assessments) before purchase and cooperate in addressing environmental issues

• AAI is the Process Of Evaluating a Property’s Environmental Conditions and Assessing the Likelihood of any Contamination
PHASE I ENVIRONMENTAL SITE ASSESSMENT

- Review of federal, state, local records
- Visual Inspection of site
- Interviews with current/past owners
- Roadmap for Future Investigations:
  - Identifies Recognized Environmental Conditions
  - Non-Intrusive
  - No sampling or tests
PHASE II ASSESSMENTS

Phase II ESA
• What Are Your Recognized Environmental Conditions (REC)s?
• Presence/Absence
• What ‘s There?
• If It’s There—Where?

Phase II Characterization
• If It’s There-How Much?
• Extent/Delineation/Quantification
• Feasibility Studies
• Cleanup Plan
CONCEPTUAL SITE MODEL
THE BROWNFIELDS REDEVELOPMENT PROCESS

**Plan**
- Identify Brownfields
- Engage the community
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**Investigate**
- Phase I Environmental Site Assessment
- Phase II Environmental Site Assessment
- Cleanup, if necessary

**Redevelop**
- Stakeholders & Partners
- Financial Resources

ksutab.org
Is cleanup required?
• Understanding of contaminant pathways
• What is the future land use?
• Waste in place vs clean closure
  • Continuing obligations necessary
  • Long-term monitoring and management
  • Implement land-use restrictions; institutional/environmental use controls; restrictive covenants or other restrictions as applicable
• Work with cleanup authorities (**typically the State**, not the EPA-except with tribal cleanups)
  • What is required to receive a Cleanup Certificate or No Further Action (NFA)?
KSU Technical Assistance to Brownfields (TAB)

Direct technical assistance on full range of brownfields topics -- community involvement, health impacts, finance, liability, redevelopment, and grant writing.

Assistance includes: workshops and webinars, one-on-one assistance, case studies, web-based tools.

Services provided are FREE and tailored to specific needs.

Kansas State University assists communities in EPA Regions 5, 6, 7 & 8.
KSU TAB Services Supports

- Help identifying, developing inventory and prioritization of brownfields: Develop Story Maps
- Strategic planning and redevelopment visioning: Engaging the Community, Setting Redevelopment Goals, Identification of Resources, Vision Renderings
- Economic feasibility and sustainability analysis: Market studies, Infrastructure evaluation, Economic Impact Analysis, Clean Energy Technical Assistance
- Educational workshops: Retrofitted to your community leaders, residents, stakeholders, developers, real estate interests
- Community outreach and input: Develop approaches towards community involvement, assist with outreach materials, facilitate education methods and approaches, assist with identification of stakeholders/partners/financial resources
KSU TAB Services Supports

• Help identifying funding sources: Resource Roadmaps, EPA Resources, EPA Brownfields Grants, IBP Resources

• Review of grant applications: Assist with grant strategies and grant reviews

• Review of plans and technical reports: Environmental Assessment reports, laboratory data, assistance with RFPQs, EPA Workplans, EPA Procurement Guidelines

• Fact sheets and information: Assist Communities with development of relaying brownfields information to various audiences on various topics

• E-tools: TAB EZ grantwriting tool, PEER: Platform for Exploring Environmental Records, and
KSU TAB and Partners Resources

Brownfield Resource Roundtables
Redevelopment Strategies
Site Design
Clean Energy Strategy
Public/Private Partnerships
Economic Impact Analysis
Market Studies
Real Estate Finance
Tribal Brownfields funding Solid and Hazardous Waste Infrastructure and Transportation

Community Engagement
Area Wide Planning
Public Housing
Historic Preservation
EJ Outreach and Involvement
Indigenous Planning
Sustainability
Resilience
Community Gardens
Healthfields
Database Management
Why Rural and Urban Communities Benefit from Regional Brownfields Programs...

Program Support

• Regional Planning Councils have the ability to grow internal expertise, maintain data, and keep projects on track for communities with little or no capacity

• Rural communities identify their targeted areas and remain engaged with their residents and developers while the planning council ensures funding and technical assistance
How “Brightfields” Can Reuse Brownfields and Reenergize Your Community”

November 2023
Rocky Mountain Institute (RMI) is an independent, non-partisan, nonprofit organization dedicated to accelerating a prosperous, clean energy future for all.

**What We Do:**

- Founded in 1982, RMI combines research, whole-systems thinking, and unconventional partnerships to support strategies that make sense for communities to advance sustainable energy systems.
EPA’s Technical Assistance to Brownfields program can help communities address brownfields challenges

**TAB Guidance & Services:**
- Inclusive community visioning
- Acquiring, assessing, cleaning up and redeveloping brownfield properties;
- Health impacts of brownfield sites
- How to comply with voluntary cleanup requirements
- Funding and financing strategies, including EPA brownfields grant application support
- And more…

Source: US EPA
RMI is partnering with KSU TAB to help communities across America advance transformational brightfield projects.

Our goals are...

- To educate communities and site owners about brownfields reuse options that include clean energy
- To provide pre-development site evaluation and analysis to communities considering “brightfields”
- To provide other technical assistance and tools to help with reuse planning, funding, financing, and clean energy procurement
Today’s Objectives

1. What?
   Establish baseline knowledge about what brightfields are and the potential opportunity that may exist

2. Why?
   Understand the potential opportunity that exists with brightfields

3. How?
   Outline how your community can start to move forward with a project
“Brightfields” repurpose previously disturbed, often-contaminated land with renewables to support a more local and equitable energy transition

**Brownfield:**
- A property where the expansion, redevelopment, or reuse may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant.
- Common brownfields include former industrial sites, inactive landfills/dumps, old factories, abandoned mines, and closed power plants.

**Brightfield:**
- A type of redevelopment where clean energy is built on a former brownfield or Superfund site.
Brightfields offer a large (yet largely untapped) potential market – especially with new federal incentives

190,000+ potential brownfield sites for clean energy deployment on US EPA’s RE-Powering Mapper

4,300+ closed/inactive landfills across America could host up to ~63 GW of solar (RMI)

Only 502 completed brightfields projects totaling ~2.5 GW through October 2022 (US EPA)

Just 1% of potential brightfields sites could support ~6 GW of clean energy and 60,000+ jobs.
Brightfields come in all shapes and sizes
Brightfields are growing across the country, yet 62% of the progress has been in just 5 states.

Source: EPA’s RE-Powering America’s Lands Initiative: Project Tracking Matrix, October 2021

Brightfields are increasingly becoming part of the clean energy economy across America

- **Pittsburgh, PA**
  - 2 MW of solar installed on old steel mill in Hazelwood Green

- **Weirton, WV**
  - 30 MW of solar planned for ~200 acres of Brown’s Island

- **Martin County, KY**
  - 200 MW of solar planned on shuttered Martiki mine land

- **Franklin County, OH**
  - 50 MW of solar planned on closed landfill

- **Houston, TX**
  - 52 MW of solar and community solar planned on 240-acre closed urban landfill
  - Project is spurring federal, local, and private investments in solar and STEM workforce training for 175+ residents
Communities can leverage brightfields to deliver wide ranging local benefits

- Sustainable land reuse
- Using existing infrastructure
- Local jobs & site revitalization
- Environmental justice
- Generate local revenue from innovative reuse
- Hedge against rising utility bill
Closed landfills are particularly promising sites for hosting solar energy

<table>
<thead>
<tr>
<th><strong>Conducive Site Conditions</strong></th>
<th>Landfills typically have good sun exposure and other characteristics that support solar energy installation.</th>
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</thead>
<tbody>
<tr>
<td><strong>Limited Reuse Options</strong></td>
<td>Closed landfills have few, if any, competing redevelopment options, and using landfills avoids land-use conflict with other revitalization priorities.</td>
</tr>
<tr>
<td><strong>Environmental Justice</strong></td>
<td>Landfill solar offers a sustainable, non-hazardous reuse of sites that were often prior areas of environmental injustice.</td>
</tr>
<tr>
<td><strong>Potential for Scale</strong></td>
<td>Landfill solar is highly scalable. There are thousands of active landfills in the US, and many thousands more that are already closed and inactive.</td>
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</tbody>
</table>
Houston’s “flagship” landfill solar project highlights the potential that brightfields have as catalysts for change

Project Impact:

- 52 MW on 240 acre-closed landfill, including 2 MW of community solar
- World’s largest landfill solar farm planned and permitted for low-income and historically marginalized black neighborhood
- Project is spurring federal, local, and private investments in solar and STEM workforce training for 175+ Houston residents
By understanding what is possible, communities and site owners can plan to repurpose their closed landfills and other brownfield sites with clean energy — and how this can be a part of broader community revitalization.
I want to...

- Incorporate clean energy as a reuse into my brownfields assessment grants
- Understand how I can leverage closed landfills or brownfields in my community to generate clean energy locally
- Help my community repurpose aging power plant infrastructure with new, cost-effective clean energy
- Reduce what my local government or residents may have to pay in utility bills
- Find a productive reuse of a brownfield in my community that doesn’t have a near-term option for economic development or conflict with other redevelopment plans
Our technical assistance is designed to support your project from idea to implementation.

- **Identifying Your Most Promising Brightfields Opportunities**
  - Site pre-screening
  - Strategic reuse planning
  - Utility engagement

- **Funding & Financing Guidance**
  - Unpacking brightfields-related incentives and funding strategy
  - Assistance with brownfields grant applications

- **Accelerating Brightfields Procurement**
  - Clean energy procurement support
  - Insights from the brightfields market
Today’s Objectives

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Questions & Feedback?

Matthew Popkin
Brightfields Accelerator
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Coal Plant Redevelopment

Bill Schleizer, Delta Institute-KSU TAB Point of Contact for Illinois and Wisconsin
Coal Plant Redevelopment Roadmap
Tackling Community Revitalization through Brownfield Redevelopment

National Association of Development Organizations
November 7, 2023
MISSION & VISION

Delta Institute collaborates with communities to solve complex environmental challenges throughout the Midwest. We address Midwestern environmental, economic, and climate challenges today, so that our home and region are more resilient, equitable, and innovative tomorrow.
Celebrating our 25th Anniversary!
WHY WE EXIST

Delta Institute exists because environmental, economic, and climate issues hit communities—urban and rural—through disinvestment, systemic inequity, and policy decisions. We collaborate at the community level to solve our home region’s new and legacy issues, by focusing on the self-defined goals and needs of our partners.

Our work takes us to population centers like Chicago, St. Louis, and Detroit; to mid-sized cities such as Gary and South Bend, Indiana; to Great Lakes coastal towns like Michigan City, Indiana and Muskegon, Michigan; and to rural communities and watersheds with tens of thousands of acres of farmland and waterways across our region. It’s quite likely that you—or someone you know—lives, works, or passes through a community that Delta Institute has helped since our founding in 1998. Delta Institute is proud to serve as the EPA’s Environmental Finance Center for Water Infrastructure for the next five years, which means that we may be supporting a community near you right now. We are a trusted 501(c)(3) nonprofit organization with a Platinum Seal of Transparency from Candid/GuideStar, a recognition received by fewer than 1% of all 1.5 million registered nonprofits in the United States.

Acting now is not only a pressing climate change issue, but also an issue of equity and environmental justice.
Delta Institute supports 1,000 farmers as they transition to sustainable and regenerative practices, thus improving the environment, mitigating the impacts of climate change, and strengthening a farmer’s bottom line. We forecast that by 2025, one million Midwestern agricultural acres will successfully transition to conservation-focused farming practices, so our region’s primary economic driver can be more environmentally and financially sound.
Delta Institute assists municipalities by integrating natural climate solutions and Green Infrastructure (GI) to reduce climate change impacts by capturing **100 million stormwater gallons** and leveraging **$100 million in municipal GI investment**. We focus on communities that are disproportionately affected by flooding and climate change, to collaboratively improve their environmental indicators, mitigate local impacts of climate change, and strengthen their neighborhoods’ resilience.
Our Sustainability and Support Services are designed to respond to invitations to participate in community-led plans, which include a wide array of sectors in which Delta Institute has sizable experience. We forecast that by 2025, Delta Institute will work with more than 250 partner communities while securing $40 million in external investment and creating 100 practical tools, resources, strategies, and municipal-, county-, and state-level plans.
Through our work, Delta Institute benefits more than five million Midwesterners by transitioning one million acres to conservation-focused practices, and by improving water quality and reducing flooding by capturing 100 million stormwater gallons. By 2025 we will achieve these goals through our agriculture, climate, water, and community development projects.

This is what a more resilient, equitable, and innovative Midwest looks like.
Let’s jump into talking about Coal Plants!

*A coal plant is just a brownfield, with some extra stuff.*
**OUR COAL PLANT WORK HIGHLIGHTS**

- **City of Chicago Coal Plant Redevelopment Agreement**
  - Mediated an agreement for the reuse of two urban coal plant sites in EJ communities between the city, utility, and community groups.

- **Little Village Coal Plant and Brownfield Redevelopment Strategy**
  - inventoried 260+ sites and created redevelopment plans for top 10.

- **Shenango Coal Plan Redevelopment Planning**
  - Facilitated scenario planning for coal plan redevelopment in Pennsylvania.

- **Just Transition Fund Coal Plant Analysis and Roadmap**
  - Consulted with multiple communities
  - Created tools to assist in planning.
City of Chicago Coal Plants
FISK AND CRAWFORD COAL PLANTS

Fisk Coal Plant, Pilsen, 1903
Output = 236 MW (381k households)
26 acres for development
Multiple buildings

Crawford Coal Plant, Little Village, 1925
Output = 542 MW (638k households)
72 acres for development
One building
FISK AND CRAWFORD COAL PLANTS

- Pilsen and Little Village are both Mexican-American communities with high unemployment
- Both plants situated in an industrial corridor in the middle of a dense residential area
- 14 years of community organizing to close plants
- Close proximity to downtown and great bandwidth
- Transportation advantage
- Located on Sanitary and Shipping Canal with barge access
- Ready access to expressways (I 55)
- Rail access on site or adjacent to site
FISK PLANT AREAL VIEW
REDEVELOPMENT GUIDING PRINCIPLES

• The Fisk and Crawford sites provide opportunities as useful community assets that can enhance the ability of local residents and businesses to live, work and play in a healthy environment.

• Broad-based stakeholder input on the redevelopment of the sites should be encouraged, building upon existing forums and agreements, but including new parties as the project evolves. Such collaboration is likely to lead to the best outcome for all involved.

• As sites are redeveloped and used in the future, pollution and waste should be minimized, with an emphasis on sustainability.

• Located in industrial corridors with ongoing operation of grid infrastructure at both locations and a peaking plant at Fisk, the sites are not suitable for residential development.
REDEVELOPMENT GUIDING PRINCIPLES

• Redevelopment provides an opportunity to create quality, living wage jobs for residents of these communities.

• Redevelopment of each site may include parceling the sites for more than one use, owner or occupant.

• Neither site is intended to be used entirely as a park or open space; however, where feasible there should be public access to the river and canal.

• Potential sources of public and private resources for reclamation and redevelopment should be identified early and actively pursued.

• Parties involved in future redevelopment should be aware that the communities prefer clean, advanced light manufacturing, and not large scale retail, for the sites.
WHAT HAPPENED?

• Change in administration
• Property sold to developer who began marketing site for logistics/transportation property
• Limited, traditional community engagement
• Significant community push back and continued advocacy
WHAT HAPPENED?
Little Village Brownfields Redevelopment
LITTLE VILLAGE BROWNFIELDS REDEVELOPMENT

- The coal plant was just one of over 250+ vacant, polluted, and underutilized sites.
- After the guidelines were developed and before the logistics development occurred, Delta partnered with the community to assess other sites around the neighborhood to evaluate brownfield redevelopment opportunities.
- Evaluated all parcels in the neighborhood
- Trained community members to lead the evaluation
- Prioritized sites based on a number of community priorities
- Created 10 lookbooks for top sites with 8 reuse strategies
  - Used by the community to proactively engage developers
**PROJECT PROCESS**

**Delta Role**

1. Identification & Mapping of 62 Brownfield Sites
2. Marketability Scores and site summaries for 62 brownfield sites
3. Community Impact Area, 3 site re-use categories, reduce sites from 62 to 20
4. Refinement of Marketability Scores for 20 properties, reduction of sites to 14
5. 25 stakeholder visits to ID re-use ideas AND local resources, Stakeholder Notes workbook, Funding d-base, site re-use matrix, 7 re-use ideas, Reduction of brownfield sites to 10
6. Roadmaps/Re-use Strategies for 10 Sites (by November 30) – Case Study, Lookbook

**LVEJO Role**

- Twenty local student interns for site vacancy checks
- Twenty local student interns for windshield surveys
- Public outreach, venues, meeting facilitation
- Staff time for windshield surveys
- Relationships with local Little Village stakeholders and local intel
- Reuse strategy goals, private reuse guidelines
WHAT HAPPENED?

• One of the top sites identified was submitted to be redeveloped as entry to the inaugural Chicago Prize.

• Fire Station to serve as a community center, hub for food cart vendors, commercial kitchen, and training space.

• Project was a finalist, but didn’t win the big prize; however, elements of the project have been successfully implemented.
Shenango Coal Plant Redevelopment
• 50 acre site - Neville Island in Neville Township, PA
• Closed in 2017 - Economic and air quality issues
• Large tax reductions especially for School District
• Community concerns - Reuse will reactivate air quality issues, water quality issues, not maximize property tax generation or job
**SHENANGO**

- Worked with community to create an advisory and engagement structure that worked for the various stakeholders
- Created guiding principles
  - Economics & Jobs
  - Collaboration
  - Environmental Impact & Cleanup
  - No Fracking
  - Sustainable/Green
- Developed and prioritized 20 reuse scenarios based on principles and market assessment
- Created visualizations of the future site reuses
<table>
<thead>
<tr>
<th>Light Industrial</th>
<th>Heavy Industrial</th>
<th>Speciality Industrial</th>
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<tbody>
<tr>
<td>Commercial Bakery - <strong>LOW</strong></td>
<td>Plastics - Heat Related Extrusion - <strong>MEDIUM</strong></td>
<td>Additive Product Manufacturing (3-D printing) - <strong>MEDIUM</strong></td>
</tr>
<tr>
<td>Electronics Assembly - <strong>MEDIUM</strong></td>
<td>Plastics Assembly - <strong>LOW</strong></td>
<td>Aquaponics - <strong>LOW</strong></td>
</tr>
<tr>
<td>Equipment Assembly - <strong>MEDIUM</strong></td>
<td>Sheet Metal Fabrication - <strong>MEDIUM</strong></td>
<td>Autonomous Technology - <strong>LOW</strong></td>
</tr>
<tr>
<td>Metal Fabrication - <strong>MEDIUM</strong></td>
<td>Brewery - <strong>LOW</strong></td>
<td>Commercial/Industrial Use Robotics Manufacturing - <strong>LOW</strong></td>
</tr>
<tr>
<td>Recycling (paper, plastics, electronics) - <strong>LOW</strong></td>
<td>Medical Marijuana - <strong>LOW</strong></td>
<td>Medical Technology Manufacturing Assembly - <strong>LOW</strong></td>
</tr>
<tr>
<td>Truck Service - <strong>MEDIUM</strong> unless using a green fleet i.e. electric lifts/cranes/low emission diesel</td>
<td></td>
<td>Pharmaceutical Packaging - <strong>LOW</strong></td>
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<td>Self-driving Vehicles - <strong>MEDIUM</strong></td>
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<td>Specialty Powder Coating Manufacturing - <strong>MEDIUM</strong></td>
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<td>Specialty Metal Products - <strong>MEDIUM</strong></td>
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</tbody>
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*Note: For uses with a **MEDIUM** potential environmental impact, per Guiding Principle #3, only those uses which are low emitting (low air emissions) with minimal water, ground and noise pollution are acceptable to the community.*

Developed by Newmark Knight Frank, DJS Ventures, and the Shenango Reimagined Advisory Council.
SITE CONCEPTS

- Solar Panels installed to provide economic benefits in the form of both energy savings and tax incentives, while helping to minimize carbon footprints.
- Green Roofs help to capture stormwater, purify the air, reduce ambient temperature, and promote biodiversity.
- Permeable or porous paving can reduce the amount of stormwater run-off and aid in infiltration and groundwater recharge.
- Blue roofs detain stormwater onsite and reduce runoff during rainfall. Blue roofs provide temporary storage for and a slow release of the runoff.
- Sods cells can be utilized above the parking areas to reduce the heat island effect and assist in the capture of stormwater.
- Phytoremediation is bioremediation using plants to eliminate soil/groundwater contaminants. Some species, like sunflowers, are ideal for this process.
- Containers are tanks that store rainwater collected from impervious surfaces. The water collected can lower costs by being stormwater re-used.
Coal Plant Redevelopment Roadmap
COAL PLANT REDEVELOPMENT ROADMAP

• From our previous brownfields and coal plant work, we created a guide to help navigate the long process for coal plant redevelopment.

• Available at: https://delta-institute.org/wp-content/uploads/2018/05/Coal-Redevelopment-Roadmap-5-2-18.pdf

• Broken into five modules:
  • Building the team
  • Assessing economic and environmental impacts
  • Determining site challenges and opportunities
  • Planning an engagement strategy
  • Developing reuse ideas from a shared community vision
COAL PLANT REDEVELOPMENT ROADMAP

• Building the team:
  • Skills and Knowledge Areas
  • Identified Potential Internal Resources within a Community
  • Resources that can be leveraged
    • Federal Departments and Programs
    • State
    • Regional and Local
    • Private Sources
    • Nonprofit and Philanthropy
COAL PLANT REDEVELOPMENT ROADMAP

• Assessing Economic and Environmental Impacts
  • Guiding Questions
    • Employment
    • Tax Base
    • Environment and Energy
  • Potential Sources of Information and examples

• Determining Site Challenges and Opportunities
  • Ownership
  • Site History
  • Infrastructure
  • Land Use
  • Financing
  • Site Assessment and Remediation
COAL PLANT REDEVELOPMENT ROADMAP

- Planning an Engagement Strategy
  - Developing Principles for Engagement
  - Stakeholder Lists and their potential transition interests
  - Examples of engagement strategies and guidance
    - Neutral 3rd party, advisory groups, event, information sharing, meetings

- Developing Reuse Ideas From a Shared Community Vision
  - Reviewing Existing Plans
  - Quantifying Incentives
  - Assessing Community Assets
  - Types of Visioning Engagement and sample agendas
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Cleveland Brownfield Bus Tour
NADO 2023 Annual Training Conference

Amy Yersavich, TAB Partner, KSU TAB
The Cleveland Lakefront Nature Preserve

- This area was originally known as Gordon Park. The park opened to the public in 1893 and quickly became a recreational destination for Clevelanders living on the east side.

- A large bathhouse catered to Clevelanders who crowded onto the park’s Lake Erie beach. The city provided facilities for boaters, fishermen, and picnickers at the park.

- After WWII the park went into decline as water pollution affected many of Lake Erie’s beaches. By the 1960s, construction of Interstate 90 made access to Lake Erie, including Gordon Park difficult if not impossible.

- The area became a landfill in the 1960s.
The Cleveland Lakefront Nature Preserve

- After the landfill operations ceased, the area became an 88-acre confined disposal facility or CDF, known as Dike 14, which the Army Core of Engineers constructed to contain sediments dredged from Cleveland Harbor and the Cuyahoga River. Dredging and placement in Dike 14 occurred from 1979 to 1999.

- After sediment disposal ended, the area was fenced off to deter access.

- While fenced off from access, vegetation grew and flourished attracting migratory birds and other wildlife.

- Using a Brownfield Assessment Grant, the Cuyahoga Co. Soil and Water Conservation sampled the site and determined no cleanup was necessary for the majority of the site. A five-acre portion of the site had PAHs, PCBs, Arsenic and Lead levels above standards. Clean sediments from a nearby CDF were used to place a four-foot cover over the 5-acre area.

- The Nature Preserve opened to the public in February 2012.
Cleveland Downtown Drury Inn & Suites (Former Cleveland Board of Education Building)

- The Cleveland Board of Education Building opened in 1931 in downtown Cleveland. The Board of Education operated out of this building until 2013 when the School District moved their offices a couple of blocks away.

- The property has a history that goes back to 1896 when stores, a meat shop, stables, several saloons and Stroh Brewing Company bottling works were present on the northern portion of the site.

- Shortly after the School District vacated the building in 2013, the property was purchased by the St. Louis based Drury chain of hotels. Cleanup activities were conducted by Drury’s consultant TRC, to address soils impacted from the historic machine shop operations.

- Drury renovated the building utilizing federal and state historic tax credits. As a result, many of the historic features such as marble columns, oak bookcases, Depression-era murals and lighting fixtures were retained resulting in a truly unique and beautiful hotel.
The Flats East Bank

- The Cleveland Flats was first developed as an industrial center as a result of the building of the Ohio and Erie Canal in 1832 and then railroads during the Civil War era.

- The Flats allowed companies such as John D. Rockefeller’s Standard Oil Co. and Cyrus Eaton and William G. Mather’s Republic Steel Corp. to thrive.

- These companies’ successes were at the expense of the environment as the river, tinged red in the early 1930s by iron ore dust and covered with oil slicks, commonly caught fire – most famously in 1969, when that particular fire was featured on the cover of Time Magazine.
The Flats East Bank

- As industries along The Flats shuttered in the 1980s, dozens of old warehouses on the west and east banks were turned into bars, night clubs and restaurants that drew thousands of people on weekends.

- Although The Flats started out as a success with a popular music scene, it ultimately failed due largely to the renegade bar owners, whose beer prices and lack of security fueled uncontrollable crowds.

- During the cleanup of The Flats in 2008, 2,500 tons of hazardous waste, 15,000 tons of contaminated solid waste, and 100,000 gallons of contaminated water were removed using a 1.5 M RLF Loan.

- Today, the East Bank of the Cuyahoga River is being transformed from an area blighted with closed bars and warehouses into a green redevelopment with businesses, restaurants, parks and housing.
Thank you for your Time!

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Thank You!

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