

JANUARY 13, 2025, 1:00PM



Redeveloping Brownfields for Energy and Environment Workshop







Carrie Martin, AICP
Environmental Sustainability Planner



Kiersten M. O'Leary
Brownfield Program Coordinator



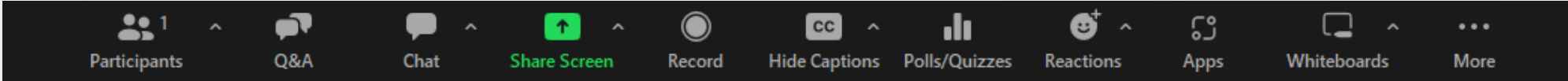
WELCOME!

For More Information Contact TAB Via /    

<https://njit.edu/tab/news-events>

Made possible with funding by US EPA

Need some assistance?



Ask questions here!

Need captions?
Captions can be live translated as well! Just select your preferred language.

Share your thoughts here!

The image shows a Zoom meeting toolbar with the following items from left to right: Participants (1), Q&A, Chat, Share Screen (highlighted in green), Record, Hide Captions (CC icon), Polls/Quizzes, Reactions, Apps, Whiteboards, and More. Three callout lines point from text boxes to the Q&A, Share Screen, and Hide Captions icons.



NJIT TAB EPA REGION 4

NJIT has served as an EPA designated technical assistance provider since 2008

NJIT TAB serves as an independent resources to state, territory, regional, county, tribal, and local government entities, and nonprofits attempting to learn about, identify, assess, cleanup and redevelop brownfields.

Assistance is *free!*

The NJIT TAB Team

We are planners, engineers,
environmental scientists, hydrogeologists, geologists, and social scientists
who have engaged with thousands of communities
throughout the country

We provide assistance through our:

- ▶ Brownfields Academy
- ▶ Brownfield Community Engagement and Educational Forums
- ▶ One-on-one Technical Assistance



NJIT TAB Brownfield Community Engagement and Educational Forums

- **Brownfield Basics Workshops:** brownfield redevelopment process.
- **Grant Writing Workshops:** getting started on your MAC grant applications; tips and tricks for preparing an EPA brownfields grant application.
- **Community Workshops:** on brownfield-specific topics.
- **Webinars:** on brownfield-specific topics.
- **Breaking Brownfields:** an event where a government entity or nonprofit presents their specific brownfields redevelopment challenge to an audience of private sector representatives and obtains feedback on how to overcome those challenges.
- **IAWG:** an event where a government entity or nonprofit presents their specific brownfields redevelopment challenge to an audience of state and federal government representatives and obtains feedback on how to overcome those challenges.
- **Brownfield Summits:** Full day event that may include an IAWG segment, peer-to-peer sessions, success stories, and sessions on brownfield-related topics relevant to the specific locations, their needs, and their challenges.
- **Conferences:** pre-conference workshops, learning labs, panel sessions, office hours

NJIT TAB One-on-One Technical Assistance

*Examples of one-on-one Technical Assistance
tailored to fit specific community's needs*

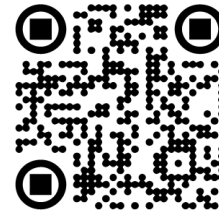
- Answer your brownfield questions
- Develop redevelopment strategy
- Review draft EPA grant applications
- Explain the regulatory programs
- Develop your redevelopment roadmap
- Identify funding sources
- Explain clean-up technologies
- Guidance on developing brownfield inventories
- Create site prioritization processes
- Develop strategies on marketing brownfield sites
- Develop Assets and Needs Studies
- Design and conduct community redevelopment vision workshops

And Much More!

NJIT TAB Brownfields Academy

www.njit.edu/tab

- How-To Videos
- Infographics
- Success Stories
- News and Upcoming Events
- Federal and State Funding Sources
- EPA And State Contacts
- Previously Recorded Webinars
- Downloads of Workshop and Seminar Presentations
- Successful Grant Applications



**Scan the QR Code to
access our website**



tab@njit.edu



(973) 642-4165



@NjitTab



[company/njit-tab](https://www.linkedin.com/company/njit-tab)



bit.ly/zoom-njit-tab

What is 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.”

-US EPA



NJIT

TAB TECHNICAL
ASSISTANCE TO
BROWNFIELD
COMMUNITIES

Negative impacts of brownfield sites



Potential harm to human health & the environment



*Lowers surrounding property value
Reduces local work opportunities
Lost/reduced tax revenue
Limits economic growth*



Can attract unwanted & illegal activity

Extreme Events: Impacts on Brownfields



Underground Storage Tank



Hurricane Harvey in Houston, TX

Unaddressed brownfield sites are susceptible to increased and repeated damage from extreme events that can mobilize contaminants and compromise structures on brownfield sites.

Resilience

“A capability to anticipate, prepare for, respond to, and recover from significant multi-hazard threats with minimum damage to social well-being, the economy, and the environment” – EPA



NJIT Structures damaged by flooding

Elevated structure

Building Resilience Through Brownfield Redevelopment

Positive Environmental Impacts

- Removes contaminants & pollutants
- Improved air & water quality, natural habitats
- Build resilience to natural disasters



NJIT

Building Resilience Through Brownfield Redevelopment

Positive Economic Impacts

- Spurs economic development
- Creates jobs
- Increases tax revenues
- Provides a diverse economic base



NJIT

Distributed Energy & Microgrids

- **Distributed energy** – technologies that generate electricity at or near where it will be used. It can power just one property or be part of a microgrid
- **Microgrid** – an interconnected system of energy consumers (like homes and businesses) and distributed energy technologies that can operate in connection with or autonomously of the utility grid within a specific boundary.



Because microgrids can be connected to the utility grid but also operate alone in the event of power outage, this can make your power grid more resilient and help you recover quicker from disaster.

Distributed Renewables on Brownfields

- In addition to emergency backup generators, distributed energy can include:
 - Natural-gas-fired fuel cells
 - Combined heat and power systems
 - Solar panels
- Consider using renewable energy for a microgrid on your brownfield site. Benefits may include:
 - Energy generation on contaminated lands rather than open space
 - Advantageous location and potential existing infrastructure
 - Economic activity on properties that lack other reuse options

Benefits of Renewable Energy on Brownfield Sites

Job Creation

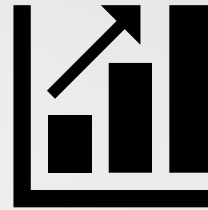


68 Projects Report Job Creation

“The project, over its 20-year life span, is expected to generate approximately 1,300 full time equivalent employee years...”

Regulus Solar Power Plant, Bakersfield, CA
[EPA Benefits Matrix Site List](#)

Revenue Generation



130 Projects Report Revenue Generation

“This solar array... generates revenue for the city from PILOT and lease payments, as well as energy credits, which is expected to total nearly \$4 million over the next 20 years.”

Titcomb Solar Array, Amesbury, MA
[EPA Benefits Matrix Site List](#)

Energy Cost Savings



221 Projects Report Energy Costs Savings

“The system reduces the \$250,000 annual electric bill for cleanup by 90%.”

Clean Harbors, Bridgeport, NJ
[EPA Benefits Matrix Site List](#)

Federal Resources for Distributed Energy

Green Bank for Rural America



ABOUT ▾ HOW WE WORK AWARDS FOR COMMUNITY LEADERS RESOURCE HUB CONTACT US

The Green Bank will provide a list of Qualified TA Providers with expertise and experience in projects. The TA Hub will also provide a growing collection of tools, information, and expert guidance to support the implementation of projects funded through the Green Bank, including:



Project Examples

Review examples of projects that would meet Green Bank criteria if implemented in eligible communities.



Templates & Toolkits

Access ready-made templates and tools to guide your work.



Frequently Asked Questions (FAQs)

Find answers to common questions and concerns.



Webinars, White Papers and Training

Participate in training and educational resources.



Best Practices & Case Studies

Learn from successful projects and see how others have implemented successful projects that meet Green Bank criteria.

RE-Powering America's Land

Brownfields Renewable Energy Siting Checklist

Process Checklist

Brownfields Renewable Energy Siting

The following checklist provides a flexible guide for integrating renewable energy activities into the brownfields assessment, cleanup, and reuse process. Site-specific conditions may lead to implementing some key considerations during steps that differ from those specified below.

1. Site Conditions
2. Integrate Design
3. Implement Cleanup
4. Operate & Maintain

Step 1: Screen Site and Environmental Conditions

Is my site large enough for renewable energy?

The [RE-Powering Mapper](#) is a useful resource to identify favorable site-specific conditions for renewable development. Several brownfield sites are smaller than two acres, below the typical size threshold of five acres for utility-scale renewable energy development. However, other options for small brownfield sites include small community-scale projects that serve nearby development or disadvantaged neighborhoods, or renewable energy that provides just for on-site electricity needs. The [RE-Powering Tracking Matrix](#) has examples of Brownfields sites used for small-scale projects, where less than 300 kilowatts of solar were developed and projects typically required less than two acres.

Are the local solar or other energy resources sufficient to support renewable energy development?

The brownfield site should be screened for basic renewable energy resource potential before it can be considered for renewable development. Some sites or renewable uses, such as biomass or geothermal energy projects, may require more in-depth analysis for renewable energy potential. The National Renewable Energy Laboratory (NREL) maintains useful energy resource maps with national-scale data to evaluate [solar](#) and [wind](#) resources.

Is cleanup needed on the site? Who is the lead cleanup agency?

Some potentially contaminated or underused properties will require little or no cleanup after undergoing an environmental assessment. Others will require minimal to more substantial cleanup before the sites can be returned to productive reuse.

With brownfields, the state agency or Tribal entity is typically the lead cleanup regulatory entity and sites are addressed [under state or Tribal-led Response Programs](#). EPA partners with states and Tribes to provide resources and funding opportunities to brownfield properties. Coordinate with property managers at the state and Tribal level to keep up to date with current site conditions and environmental assessment process. The RE-Powering Mapper contains point-of-information contacts for each site in the Mapper.

TCGM Region 4

TCGM Region 4 TCGM National-Central



Home Eligibility About Contact Us Apply

About TCGM Region 4

TCGM Region 4 is a cooperative agreement between EPA's Office of Environmental Justice and External Civil Rights (OEJECR) and RTI International.

We make awards to community-based organizations and other eligible organizations to support the planning, assessment, and development of community-based projects.

If you are located in EPA Region 5, 6, or 7, visit the [TCGM Region 5](#), [Region 6](#), or [Region 7](#) websites to learn more about their program. If you are an organization represented across EPA Regions 4-7, visit the [TCGM National-Central website](#) to learn more.



Students find evidence of past fire in Pine Rocklands, Everglades National Park

Photo: National Park Service

HOW CAN BROWNFIELD REDEVELOPMENT PLANNING ADD TO CLIMATE SAFETY? FLOODING PROBLEM



1

Potentially contaminated brownfield site

2

Paved, impervious site and road areas

3

Poor drainage for stormwater management

HOW CAN BROWNFIELD REDEVELOPMENT PLANNING ADD TO CLIMATE SAFETY? FLOODING SOLUTION



1

Remove and reduce
contaminants to clean the site

2

Add safe, pervious surfaces
for walking or biking

3

Improve drainage
and stormwater
management

Flooding Solutions: Permeable Surfaces & Stormwater Management

- **Permeable pavement** has openings in it to allow water to soak into the soil
- **Bioswales** are channels that are either vegetated, mulched, or xeriscaped, and used for stormwater retention and treatment.
- Combine for green streets & parking lots



Green Street (Image Credit: Abby Hall, US EPA)

Green Parking Lots (Image Credit : Naturally Resilient Communities)

Brownfield Assessment Grants

- Funding for brownfields inventories, planning, environmental assessments, and community outreach.

Community-wide
Funding: up to \$500,000
Performance Period: 4 years

Coalition
Funding: up to \$1.2 mil
Performance Period: 4 years

States & Tribes
Funding: up to \$2 mil
Performance Period: 5 years

Brownfield Revolving Loan Fund (RLF) Grants

- Funding to capitalize loans that are used to cleanup brownfields.

Funding: up to \$1 mil
Performance Period: 5 years


Brownfield Cleanup Grants

- Funding to carry out cleanup activities at brownfield sites by the applicant.

Funding: up to \$4 mil
Performance Period: 4 years

Federal Resources for Workforce Development

Green Bank for Rural America



GREEN BANK FOR RURAL AMERICA
A subsidiary of Appalachian Community Capital

ABOUT | HOW WE WORK | AWARDS FOR COMMUNITY LEADERS | RESOURCE HUB | CONTACT US

Community Engagement | Workforce Development | Project Examples | News and Events | Join Our Team

Workforce Development Technical Assistance Hub

The Workforce Development Technical Assistance (WFDTA) Hub offers specialized strategies and support to ensure Green Bank funding supports the creation of good jobs offering fair wages as well as career development opportunities for residents living in our priority rural communities.

WFDTA Hub service recipients include community leaders funded through the Green Bank, and projects and businesses receiving financing from community lenders that are funded by the Green Bank. The Green Bank for Rural America prioritizes investments in Appalachia, energy communities, and rural communities of color and Native communities. Financing and technical assistance will be available in all eligible rural areas nationwide.

The WFDTA Hub is led by Coalfield Development Corporation, a nationally-recognized leader in rural workforce development practices, in partnership with the Green Bank for Rural America.

WFDTA Hub services will launch soon. Please sign up for our mailing list and check "Workforce Development Technical Assistance (WFDTA) Hub" for updates.

[Sign Up for Updates](#)

EPA Brownfields Job Training Grants



An official website of the United States government [Here's how you know](#)

EPA United States Environmental Protection Agency

Search EPA.gov

Environmental Topics | Laws & Regulations | Report a Violation | About EPA

Home / Brownfields

Brownfields Job Training Grants

EPA recently announced the selection of 16 applicants to receive FY 2025 Brownfields Job Training Grants – view information on the [Recipients Selected in FY 2025](#).

On this page:

- [About the Brownfields Job Training Program](#)
- [Eligible Types of Training](#)
- [Getting Started for Applicants](#)
- [Resources for Brownfields Job Training Grant Recipients](#)
- [Other Job Training Resources to Explore](#)

Need Help?
Use the [inquiry form](#) to submit a question or technical assistance request.

[Contact Us about Brownfields](#)



EPA Brownfields Program and Pathstone Video v14 11 2024

MILEIDY SOTO TORRES
Director of Training and Employment
PathStone Corporation

Watch on YouTube

About the Brownfields Job Training Program

EPA's Brownfields Job Training Program provides technical assistance to help nonprofits, local governments, and other eligible organizations build local workforces to perform assessment, cleanup, or preparation of contaminated sites (including brownfields) for reuse. Training programs funded by Brownfields Job Training Grants enable program graduates to obtain skills to secure full-time, sustainable employment in various aspects of hazardous substances, pollutants, contaminants, and petroleum products within the larger environmental field, including sustainable cleanup and reuse, and chemical safety. Training programs prioritize unemployed and under-employed residents of communities impacted by a variety of waste facilities, blighted properties, and contaminated sites.



EPA Brownfields Job Training Grants: Interested in Applying for Funding?

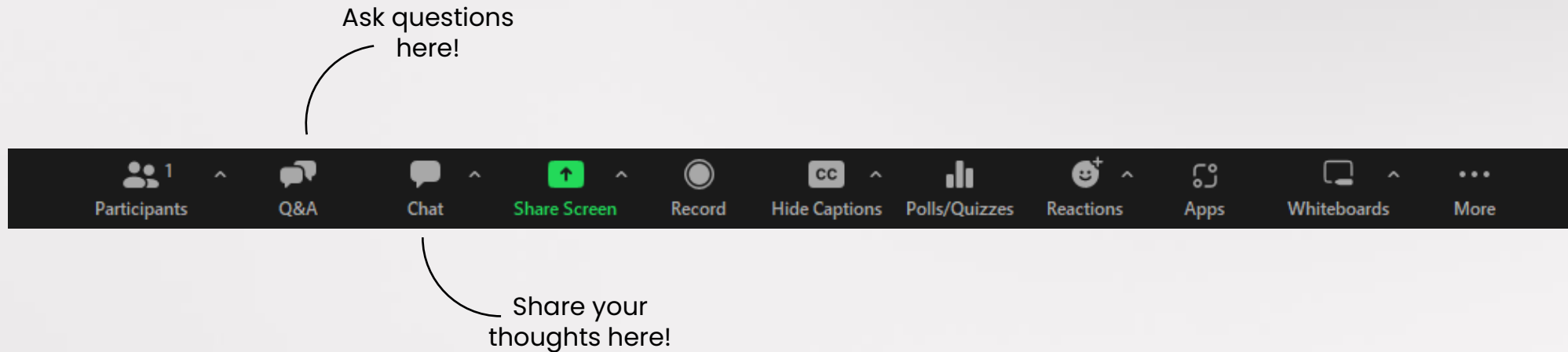
Job Training Grant Factsheet (pdf)
(426.55 KB)

Considerations for Brownfields

- Is your brownfield community seeing increasing storm events? Consider identifying and prioritizing your brownfield sites for redevelopment.
 - When prioritizing brownfield sites, your sites' vulnerability to natural hazards (i.e., flooding).
- Collaborate with the Kentucky Energy and Environment Cabinet to determine what solutions would be appropriate for your sites.

Thank you for attending today's webinar!

Questions and Comments?



Upcoming Events 2025



TAB On Tour

JANUARY 14, 2025, 11:00AM
Out With The Old, In With Renew
Utilizing Brownfields for Renewable Energy

WITH SPEAKER
Elise Molleur
Brownfield Redevelopment Specialist

NJIT TAB TECHNICAL ASSISTANCE TO BROWNFIELD COMMUNITIES

SIGN UP NOW:
 **Register via Zoom:**
[HTTPS://BIT.LY/NEWYEAR-NEWUSE](https://bit.ly/newyear-newuse)

For More Information Contact TAB Via [in](#) [f](#) [X](#) [v](#) <https://njit.edu/tab/news-events>
Made possible with funding by US EPA

January 14, 2025

**TAB Talks:
Out With the Old, In With Renew**

Virtual

JANUARY 31, 2025, 10:00AM
**Brownfield Workshop:
Blight to Bright**

IN PARTNERSHIP WITH:
 **TBRPC**
TAMPA BAY REGIONAL PLANNING COUNCIL

WITH PRESENTER
Elise Molleur
Brownfields Redevelopment Specialist

NJIT TAB TECHNICAL ASSISTANCE TO BROWNFIELD COMMUNITIES

SIGN UP NOW:
 **HTTPS://BIT.LY/TBRPCBROWNFIELDS**

For More Information Contact TAB Via [in](#) [f](#) [X](#) [v](#) **Webinar**
Made possible with funding by US EPA

January 31, 2025

**Brownfield Workshop:
Blight to Bright**

Virtual

TAB On Tour

If you'd like NJIT TAB to visit your area, feel free to contact us!

In Case You Missed It

NJIT
TAB TECHNICAL ASSISTANCE TO BROWNFIELD COMMUNITIES
presents
Carrie Martin, AICP
Environmental Sustainability Planner, Center for Community Systems

Climate Change and Brownfields 101

Thursday, March 7, 2024
12:00pm - 1:00pm EST

Made possible with funding from the US EPA.

Climate Change and Brownfields 101

NJIT
TAB TECHNICAL ASSISTANCE TO BROWNFIELD COMMUNITIES
presents
Elise Molleur
Brownfield Redevelopment Specialist

Brownfields: A Story to Tell

Thursday, March 21, 2024
1:00pm - 2:00pm EST

Made possible with funding from the US EPA.

Brownfields: A Story to Tell

NJIT | **TAB** TECHNICAL ASSISTANCE TO BROWNFIELD COMMUNITIES
presents
Joseph M. Reiner
Brownfield Redevelopment Specialist

Brownfield Contaminants and Human Health

Thursday, February 29, 2024
1:00pm - 2:00pm EST

Made possible with funding from the US EPA.

Brownfield Contaminants and Human Health

Both these webinars with associated presentations and resource links can be found on our website!

www.njit.edu/tab/webinars



NJIT provides free technical assistance to state, regional, county, tribal, and local government entities and nonprofit organizations interested in learning about, identifying, assessing, cleaning up, and redeveloping brownfield sites in EPA Regions 2 & 4.

Thank you for attending today's webinar!



tab@njit.edu

Q&A Session



(973) 642-4165

Have any more questions after today?

Contact Us



www.njit.edu/tab



<https://www.linkedin.com/company/njit-tab/>



<https://bit.ly/zoom-njit-tab>