

Office of Sustainable Communities

Overview of Local Assistance Programs

Supporting locally-led, community-driven solutions that protect human health and the environment, strengthen local economies, and improve people's everyday lives

EPA Office of Sustainable Communities



Our Approach

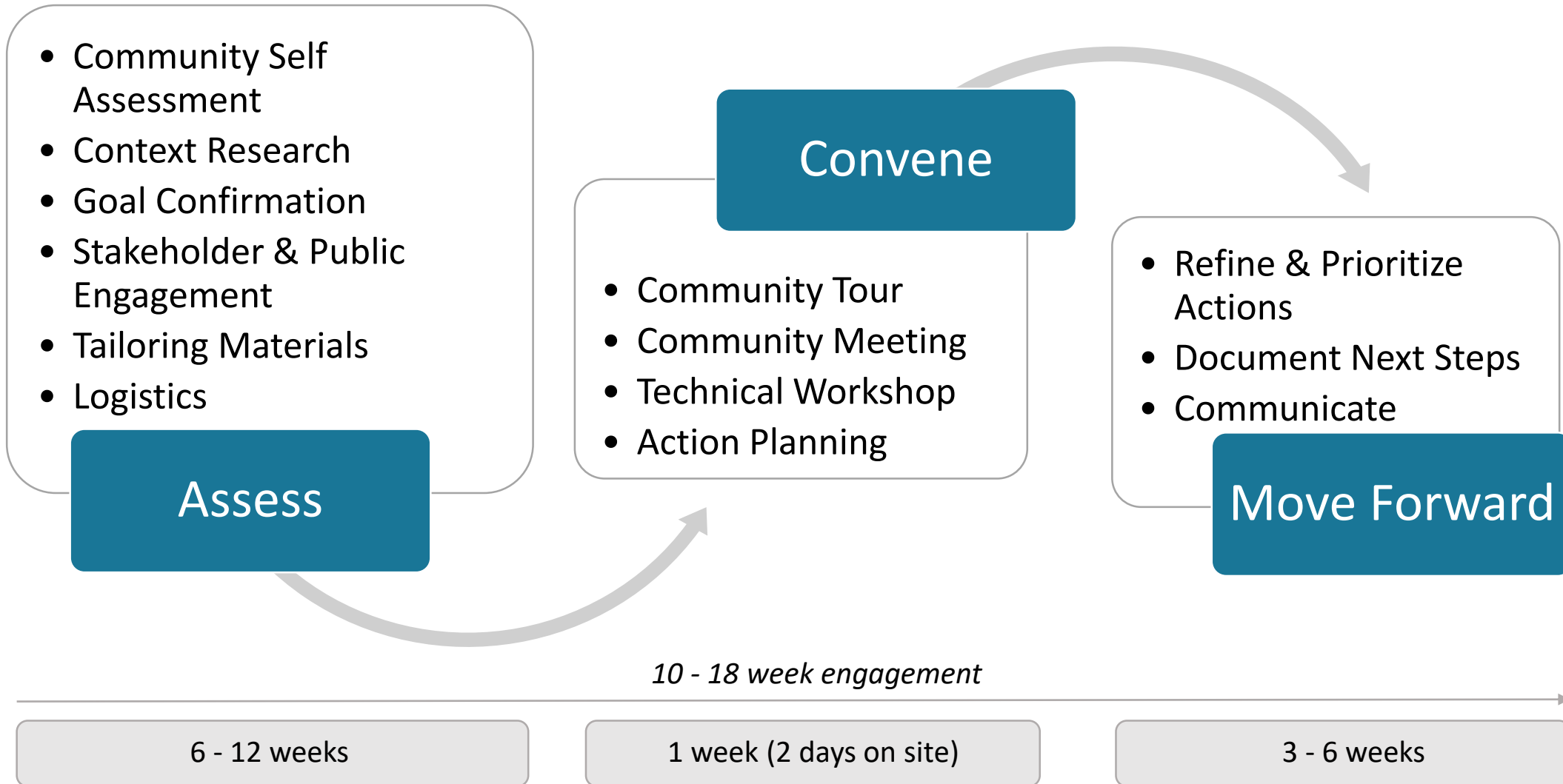
- **Assistance provided at community's request**
 - Solutions are locally-led and supported by EPA expertise
- **Focus is on improving environment, health while revitalizing local economy**
 - Promotes investment in existing neighborhoods,
 - Encourages cleanup and reuse of contaminated property,
 - Protects rivers and streams through stormwater management, and
 - Improves air quality by increasing transportation choices.
- **Example programs include**
 - Building Blocks for Sustainable Communities
 - Local Foods, Local Places
 - Cool & Connected
 - Healthy People for Healthy Places

Building Blocks for Sustainable Communities

- ✓ Quick hit in nature
- ✓ Facilitation and engagement of the public and stakeholders
- ✓ Aimed at empowering communities and building local capacity
- ✓ Education in topical areas with local context
- ✓ Identify solutions that protect environment and support economic growth



Technical Assistance Process



Building Blocks Topic Areas

Bikeshare Planning	Smart Growth Guidelines for Sustainable Design and Development	Green and Complete Streets	Flood Resilience for Riverine and Coastal Communities
Green Building Toolkit	Planning for Infill Development	Linking Land Use and Water Quality	Neighborhood Planning for Healthy Aging
Parking Audit	Preferred Growth Areas		Creating Equitable Development
Sustainable Strategies for Small Cities and Rural Areas	Sustainable Land Use Code Audit	Using Smart Growth to Produce Fiscal and Economic Health	Walking Audit

Workshop Activities

- Presentations with facilitated dialogue
- Interactive activities
 - Promote shared knowledge exchange and problem solving
 - Capture individualized ideas and group priorities
- Action planning
 - Identify and prioritize next steps



Questa, NM

Community issues:

- Former mining town transitioning to be an outdoor recreation destination, with fishing, hunting, and a recently-designated National Monument nearby
- Mine and surrounding area is now a Superfund site with cleanup underway
- Workshop was centered around their economic development plan and how to get that off the ground
- Recently awarded a grant to complete a CEDS
- Primary goals: Diversity workforce training and skills, Convert Questa into a premier outdoor recreation destination, Develop short-term rental options (including use of vacant homes)



Randolph, NE

Community issues

- Most of town declared part of a flood plain by FEMA in 1977 and has largely been in a standstill since then due to real and perceived restrictions on building and renovation
- Randolph is now working with the Army Corps of Engineers to remediate the problem areas, address flood plain designation, and allow for new growth
- Applied for the program as an opportunity to envision what the town could be in the future, but still in beginning stages of a vision
- Meeting was attended by EDD staff, as well as USDA-RD, USACE, FEMA, HUD, and other state orgs
- Primary Goals: Launch and foster a downtown business association, Increase housing supply and choices, Attract and retain young families

2014

Northeast Nebraska
COMPREHENSIVE ECONOMIC
DEVELOPMENT STRATEGY

N

Antelope
Boone Burt
Cedar Colfax

Commonly Identified Next Steps

- Planning, Zoning, etc.
- Downtown Revitalization
 - Renovation of vacant and dilapidated buildings
 - Signage/Beautification
 - Walkability, bikability, transit
- Infrastructure
 - Stormwater management
 - Street improvements and traffic calming
 - Parks
 - Housing (affordability, placement, variety)
- Communication and Marketing
 - Outreach to residents
 - Tourism marketing
 - Event communication
- Economic development
 - Attracting employers, encouraging entrepreneurialism
 - Workforce development
 - Attracting and retaining young families
 - Assessments, analyses

Resource Need Alignment

EDA Funding Program	Sample Building Blocks Next Step
Public Works Program	Use streetscape projects that are underway to try out green and complete streets concepts – Hartford, CT
Economic Adjustment	Workforce assessment, training, and placement – Questa, NM
Planning	Refine the economic development plan and strategies – Apache Junction, AZ
Local Technical Assistance	Conduct a market assessment to identify potential downtown businesses, including proposed industrial park – Randolph, NE
Green Growth	Consolidate some parking in a structure with solar, opening space downtown for new development – Winona, MN

Local Foods, Local Places

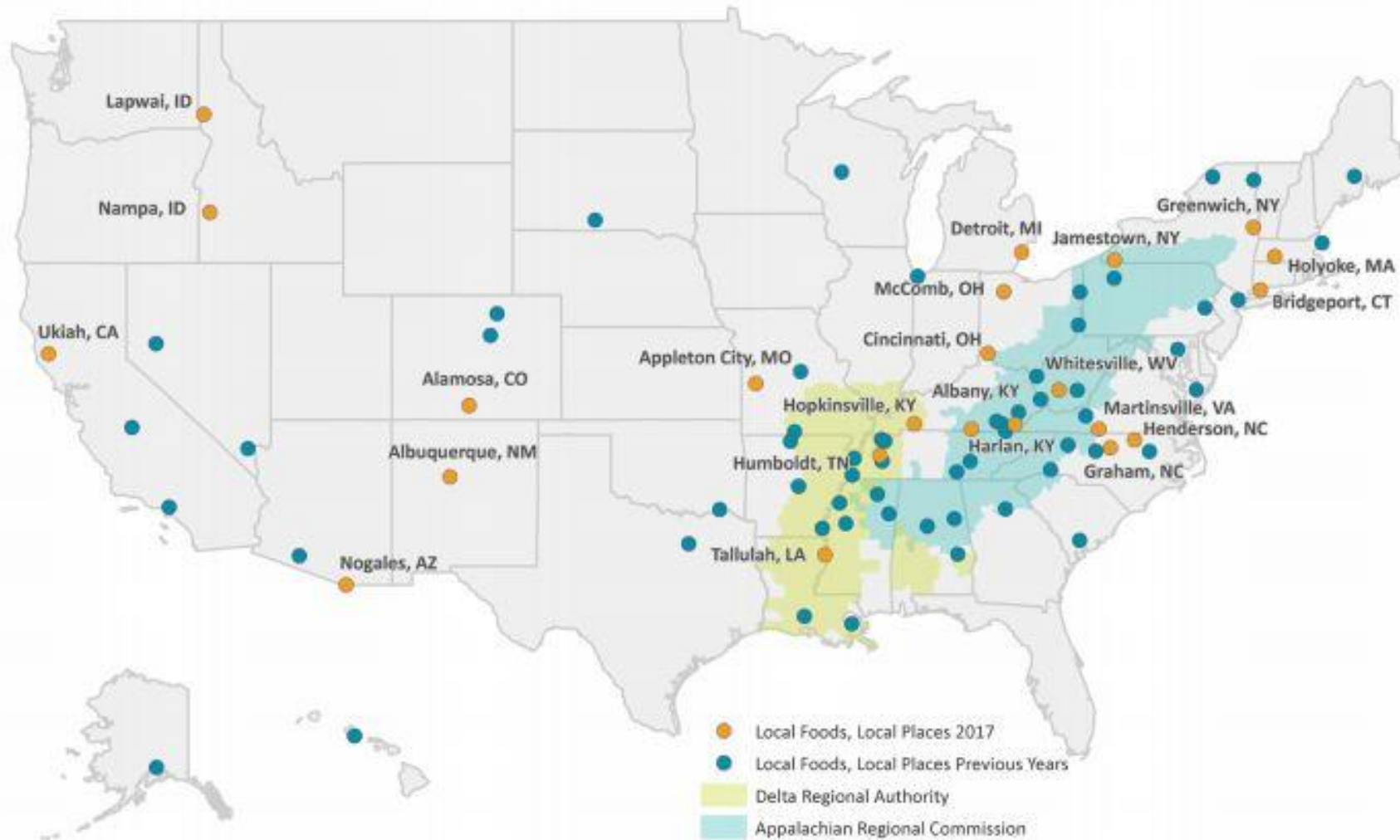
- Placemaking and reinvestment to improve environmental quality.
- More economic opportunities for local farmers and businesses.
- Greater access to healthy local food, especially among disadvantaged groups.
- Revitalized downtowns, Main Streets, and existing neighborhoods.





Local Foods, Local Places

2017



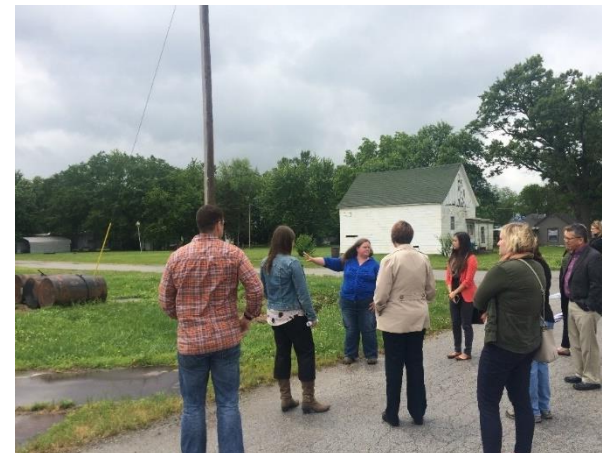
Local Foods, Local Places helps communities create walkable, healthy, economically vibrant neighborhoods through the development of local food systems.

Sources: Local Foods, Local Places
U.S. Census Bureau

Appleton City, MO

Community Goals

- GOAL 1: Community Participation – Increase community engagement in local foods and opportunities
- GOAL 2: Food System Assessment – Assess the local food system for Appleton City and surrounding areas, engaging new partners
- GOAL 3: Market Outlets – Identify and build new markets for local farmers including value-added agricultural opportunities
- GOAL 4: FARE Center – Build support and define the purpose of the Food and Agriculture Regional Enterprise (FARE) Center
- GOAL 5: Youth Involvement – Create opportunities for youth to learn and participate in the local food system – healthy lifestyles, career exploration, civic engagement.



Appleton City, MO

Action 4.3: Complete the design and identify and obtain funds to complete the construction and programming of the FARE Center.

What this is and why it is important

The WCCAA has completed a business plan and initial cost estimate for the FARE Center, and now needs to raise the funds through grants, loans, and partnerships to build the facility. Additionally, while a general design for the FARE Center has been created, detailed construction drawings are needed to refine the cost estimate and obtain funding.

Measures of success

Architectural designs are completed and funding to cover all costs of the FARE Center is obtained.

Timeframe

Begin now, identify and obtain funding commitments by the end of 2017.

Lead(s)

West Central Missouri Community Action Agency; Kaysinger Basin Regional Planning Commission.

Supporting cast

Costs and/or resources needed

Staff time to apply for grants and loans, and to build relationships with local and regional funding partners.

Possible funding sources

USDA Rural Development Community Facilities Program, Strategic Economic and Community Development (SECD) Program, USDA Architect/Missouri State Architect for conceptual design of the facility, USDA Rural Development Community Facility Technical Assistance and Training (TAT) Grant.

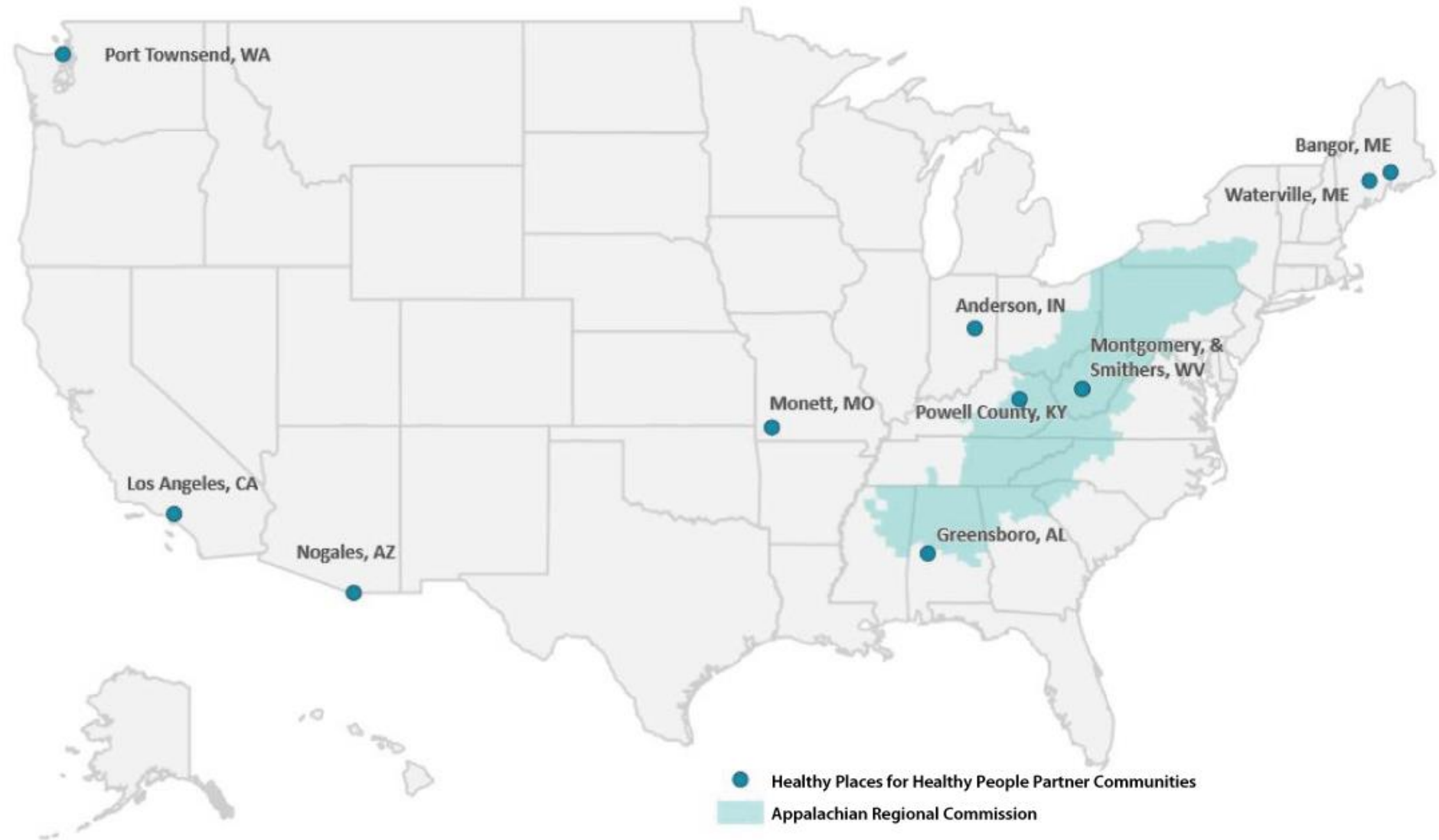


- Health care facilities as centers of community.
- Expand access to health and community services & anchor economic development and downtown revitalization efforts.
- Vibrant economy, and improved environment and health outcomes.
- Community/facility partnerships to create healthy, walkable, vibrant neighborhoods and downtowns.



Healthy Places for Healthy People

2017 Partner Communities



Sources: *Healthy Places for Healthy People*
U.S. Census Bureau

Williamson, WV

- Coal-reliant community in transition
- Health challenges: obesity, diabetes
- Their approach = creating a culture of health
- Workshops in 2012, 2015, and 2017 (Livable Communities in Appalachia; Local Foods, Local Places; Cool & Connected)



Williamson Health & Wellness Ctr.

- Federally Qualified Health Center
- Located in a formerly vacant building on main street
- Organizes activities around health, wellness, local food
- Is an anchor for economic development



Creating a Culture of Health in Williamson, WV



Federally Qualified Health Center, LEED certified, located in formerly vacant building on main street



Diabetes Coalition, adjacent to WHWC, organizes walking programs and fitness classes, provides nutrition education, and coordinates prescription veggies program



Farmers Market located downtown & new Mobile Market in place



Ramella Park Community Garden adjacent to low-income housing facility

Creating a Culture of Health in Williamson, WV



Growing Warriors program gives veterans the tools to become farmers



Local restaurants serving local food downtown



Health Innovation HUB

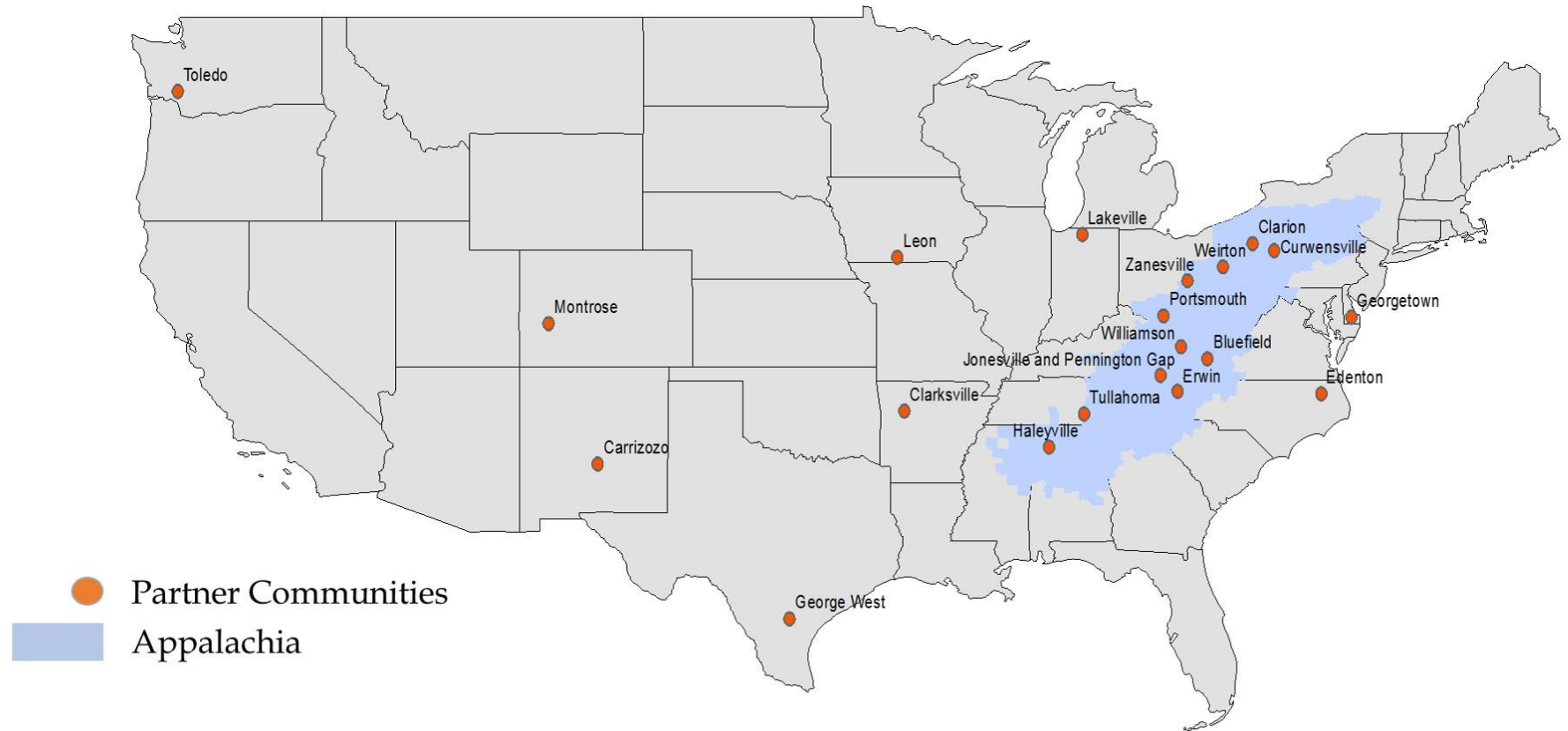


Federal Roundtable to discuss economic diversification in Williamson and Central Appalachia

Cool & Connected



- Leverage broadband to revitalize downtowns & neighborhoods.
- Fosters community development – especially in small towns and rural communities.
- Encourage development in existing neighborhoods, and on traditional main streets.
- Protect environment and support walkable, connected and economically vibrant places.



Sources: Cool & Connected, U.S. Census Bureau

Broadband can contribute to downtown & neighborhood revitalization



- Assets and amenities matter.
- Local foods & breweries, music & arts, trails & recreational opportunities can make a difference in where people choose to live and invest.
- Broadband is both infrastructure and amenity.

Cool & Connected



Broadband can contribute to downtown & neighborhood revitalization

- Developing or marketing downtown Wifi zones.
- Extending broadband service beyond anchor institutions in ways that promote main street development.
- Selecting centrally located anchor institutions or community facilities that will receive broadband service.



Cool & Connected

Federal Partners

- U.S. Environmental Protection Agency (EPA)
- U.S. Department of Agriculture (USDA)
- Centers for Disease Control and Prevention (CDC)
- U.S. Department of Transportation (DOT)
- U.S. Department of Housing and Urban Development (HUD)
- Appalachian Regional Commission (ARC)
- Delta Regional Authority (DRA)

Videos



<https://www.epa.gov/smartgrowth/local-foods-local-places>

- Corbin, KY : <https://youtu.be/ji1v9UPDK-o>
- Williamson, WV : <https://youtu.be/4rCR5FyvtC4>

Background Information on Brownfields Grants and Technical Assistance

July 2017



Ann Carroll
Office of Brownfields & Land Revitalization (OBLR)
Office of Land and Emergency Management (OLEM)

Today's Brownfield 101 Talk :

- Brownfield Introduction
- Brownfield Grants and Technical assistance
 - Grant Type, Eligibility and Funding
 - Technical Assistance
 - Brownfield 'process'
- RE-Powering America's Land and Renewable Energy Examples
- Q's & A's



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.”

The Small Business Liability Relief and Brownfields Revitalization Act, signed January 11, 2002.

[Small Business Liability Relief and Brownfields Revitalization Act, https://www.gpo.gov/fdsys/pkg/PLAW-107publ118/html/PLAW-107publ118.htm](https://www.gpo.gov/fdsys/pkg/PLAW-107publ118/html/PLAW-107publ118.htm)

Brownfields Definition

- A brownfield is – ‘real property, is either contaminated, or is perceived to be contaminated



- A brownfield property is not a:
 - CERCLA National Priorities List (NPL) site (Superfund site)
 - Federal Facility owned or controlled by the U.S. government
 - Active enforcement site

Brownfield Definition

- Brownfields can be:
 - Former industrial, commercial or vacant sites
 - Dry cleaners
 - ‘Meth Drug lab’ sites with “controlled substances”
 - Low risk sites contaminated by petroleum products, if other conditions met
 - Mine-scarred lands



A Comparison of Superfund and Brownfields

Superfund Sites

- **Sites are the worst known uncontrolled, abandoned hazardous waste sites that pose health risks**
- **US EPA has over 1,729 final and deleted sites that pose significant risks to human health and safety at Dec 2016**
- **Demand substantial resources to restore and manage**
- **EPA may lead or delegate authority for site cleanup**

Brownfield Sites

- **Characterized by low to medium levels of environmental contamination**
- **Estimates roughly 450,000 brownfields sites in the U.S. As of May 1, 2017; 26,722 assessed, 67,419 acres ready for reuse**
- **Easier to cleanup and redevelop**
- **EPA grants let Tribe, State or local government lead**

EDA and EPA (1995 – now)

Long term Brownfield Program Partners

- Partner in early brownfield ‘pilot’ projects – 1993 – 2002
- Participate in Showcase Pilots – Federal employee housed with municipality for up to 2 years to assist with brownfields
- Provide technical assistance and critical funding for planning, market analysis, redevelopment and revitalization support not eligible for EPA funding. (HUD CDBG, USDA RD, DOT, SBA, NPS, New Market Tax Credits and HHS \$ too)



The Brownfield Program: Types of Grants

- Environmental Workforce Development Job Training (EWDJT)
- Area-Wide Planning (AWP)
- Assessment Grants
- Revolving Loan Fund (RLF)
- Cleanup Grants
- Research, training and technical assistance

And Q & A Eligible
grants, recipients and \$



The Brownfield Program:

Environmental Workforce Development and Job Training (EWDJT) Grants

- Provide funding to recruit, train, and place unemployed and under-employed residents of communities affected by solid and hazardous waste.
- Support training in various environmental programs across EPA (such as solid waste, Superfund, brownfields, emergency response, waste and stormwater, chemical safety, etc...).
- Who is eligible?
 - States, counties, municipalities, tribes, and U.S. territories
 - Colleges and universities
 - Community job training organizations
 - Non-profit training centers and Workforce Investment Boards
- Funding:
 - Up to \$200,000 each
 - Award ~16 grants annually

Next Solicitation:
Fall/Winter 2017

The Brownfield Program:

Area-Wide Planning (AWP) Grants

- Provide assistance for community involvement and reuse planning.
 - Applicants select a focus area that is affected by Brownfields (e.g., a neighborhood, district, city block, corridor, etc.).
 - Applicants must identify at least one catalyst, high priority site and any other brownfield sites in the focus area.
 - Grant funds used to research existing conditions and involve the community in activities that will lead to development or an area-wide plan, including implementation strategies.
- Who is eligible?
 - State, local, and tribal governments
 - General purpose units of local governments
 - Regional councils or redevelopment agencies
 - Non-profit organizations
- Funding:
 - Up to \$200,000
 - Award ~20 grants every other year

The Brownfield Program: Assessment Grants

- Provide funding to plan, inventory and assess brownfields contaminated with hazardous substances, pollutants, contaminants and petroleum products, conduct community involvement, and cleanup/redevelopment planning.
- Who is eligible?
 - State, local, and tribal governments
 - General purpose units of local governments
 - Regional councils or redevelopment agencies

Next Solicitation:
Summer/Fall 2017

The Brownfield Program: Assessment Grants (Cont.)

- Community-Wide Proposals:
 - Up to \$200,000 for hazardous substances, or
 - Up to \$200,000 for petroleum product, or
 - Up to \$300,000 for hazardous substances AND petroleum in the same competition cycle (not to exceed \$200,000 for either type)
- Site-Specific Proposals:
 - Up to \$200,000
 - May seek waiver and request up to \$350,000
- Assessment Coalition Proposals:
 - Up to \$600,000
- Award ~150 grants annually

The Brownfield Program:

Revolving Loan Fund (RLF) Grants

- Provide funding to capitalize a revolving loan fund that provides loans and subgrants to carry out cleanup of brownfield sites contaminated with hazardous substances, pollutants, contaminants and petroleum products.
- Who is eligible?
 - State, local, and tribal governments
 - General purpose units of local governments
 - Regional councils or redevelopment agencies
- Funding:
 - Up to \$1,000,000 (typically around \$800,000 in past years)
 - Requires a 20% cost share
 - Award ~12 RLFs every other year
 - Provide supplemental funding annually to 11-30 existing high performing RLFs

Next Solicitation:

- Supplemental RLF: February 2018
- RLF: Summer/Fall 2017

The Brownfield Program: Cleanup Grants

- Provide funding for remediation of brownfields contaminated with hazardous substances, pollutants, contaminants and petroleum products.
- Who is eligible?
Applicants must own the property at time of proposal submission
 - State, local, and tribal governments
 - General purpose units of local governments
 - Regional councils or redevelopment agencies
 - Non-profit organizations
- Funding:
 - Up to \$200,000 per site (total of 3 sites)
 - Requires a 20% cost share
 - Award ~60 grants annually

Next Solicitation:
Summer/Fall 2017

The Brownfield Program:

Types of Technical Assistance

- Targeted Brownfield Assessments (TBA)
- Technical Assistance for Brownfields Communities (TAB)
- Tribal Technical Assistance Grant
- Other Research, Training and Technical Assistance Grantees

The Brownfield Program: Targeted Brownfield Assessment

- EPA performs environmental assessments for a community using a contractor.
- Especially useful for small and rural communities as well as environmental justice communities.
- Requests are accepted by regional EPA offices on a rolling basis – requests forms on their website.

<https://www.epa.gov/brownfields/targeted-brownfields-assessments-tba>

- Non-competitive (i.e., not a national competition)

The Brownfield Program:

Technical Assistance to Brownfield Communities (TAB) Grants

- Provide geographically-based technical assistance to communities on brownfield issues through 2021.
- Help communities build brownfield programs and guide them in assessment, cleanup and redevelopment process.
- TAB grantees can offer a wide range of assistance with:
 - developing a brownfield program,
 - establishing site inventories and reviewing historical site information,
 - designing an investigation or sampling analysis plan,
 - planning for cleanup and redevelopment and community engagement,
 - convening workshops, webinars and meetings such as meet the funders, and
 - preparing grant proposals.
- TAB Providers:
 - New Jersey Institute of Technology (NJIT) — EPA Regions 1, 3, and 4
<https://www.epa.gov/brownfields/technical-assistance-brownfields-tab-communities-new-jersey-institute-technology-grantee>
 - Kansas State University (KSU) — EPA Regions 5, 6, 7, 8, and the national grant
<https://www.epa.gov/brownfields/technical-assistance-brownfields-tab-communities-kansas-state-university-grantee-fact>
 - Center for Creative Land Recycling (CCLR) — EPA Regions 2, 9, and 10
<https://www.epa.gov/brownfields/technical-assistance-brownfields-tab-communities-center-creative-land-recycling-grantee>

The Brownfield Program: Tribal Technical Assistance Grants

- Provides technical assistance to tribal communities addressing brownfields issues through 2022.
- Tribal technical assistance includes:
 - understanding and building a Tribal Response Program,
 - finding funding resources for cleanup and reuse,
 - reviewing historical information,
 - designing an investigation or sampling and analysis, and
 - cleanup and redevelopment planning.
- Tribal Technical Assistance provider:
 - Kansas State University

The Brownfield Program:

Other Research, Training and Technical Assistance Grants (to Sept 2019)

■ Hazardous Materials Training and Research Institute (HMTRI)

- Offers and promotes educational opportunities, partnerships, and training programs related to Brownfields cleanup and redevelopment. Great resource for potential and existing Environmental Workforce Development and Job Training grantees.



■ Council of Development Finance Agencies (CDFA)

- Offers free technical assistance to community interested in how to finance economic development on brownfields.
- Resources include: financing toolkit, webinars (with archives of past sessions available), and direct TA opportunities that connect brownfields project and finance experts through project marketplaces and project response teams.

The Brownfield Program:

Other Research, Training and Technical Assistance Grants (to Sept 2019)

■ **Groundwork USA**

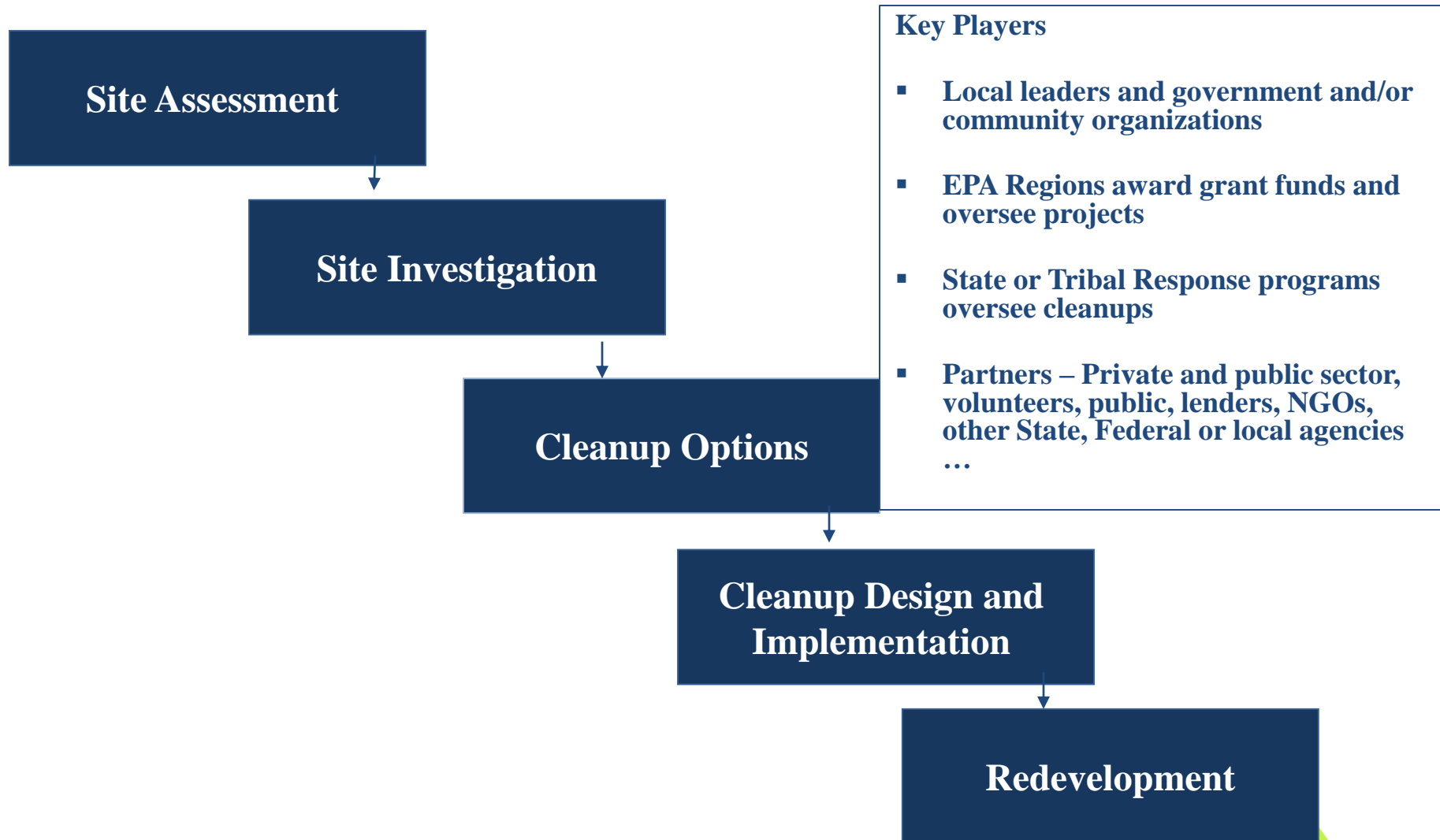
- Provides free technical assistance to communities trying to incorporate equitable development and environmental justice into their brownfields projects.
- Supports feasibility assessments of projects and community planning efforts,
- Designs and sequencing of near and long-term place-based strategies, and
- Aids development of tactical, locally based work groups and partnerships that jointly lead brownfield redevelopment responsive to community needs.

Assistance includes: One-on-one, direct technical assistance opportunities (communities request assistance via form on GW USA website), quarterly webinar series and conference workshops.

■ **University of Louisville**

- The research is to develop a Brownfields Communities Benefits Assessment Toolkit that communities can use to see where it makes the most economic and environmental sense to invest their brownfield resources.

Overview of Brownfield Process



The Brownfields Process: Site Assessment/ Investigation

Environmental Audits/Site Assessments

- All Appropriate Inquiry (AAI or Due Diligence):
site assessment
 - Phase I Environmental Site Assessment Process
 - Must review site history and property records prior to purchase or acquisition for CERCLA liability defense.
 - Must be conducted by:
 - Professional Engineer
 - Professional Geologist
 - Other education/experience combinations
 - Phase II Environmental Site Assessment Process
 - Sampling
 - Soil borings
 - Clean-up recommendation

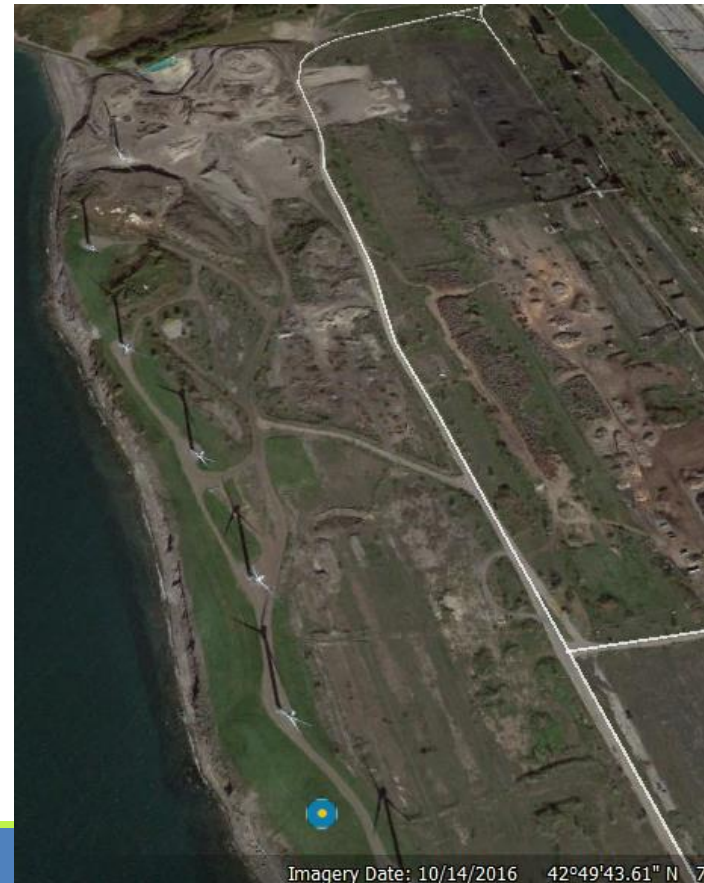
Cleanup Depends on Reuse

- Cleanup standards set by the States/Tribes (soil, GW)
- Cleanup based on reuse and exposure risk
- Unrestricted reuse / Residential > Commercial > Industrial – stringency of cleanup – with property land use restrictions noted on the property deed and regulatory tracking systems
- A good developer adheres to risk-based goals
- Compliance required for liability release
- States overseeing cleanup will provide a “No Further Action” letter to developer and lenders
- USEPA Emergency Response and Federal government can still go in and clean site or States can request help

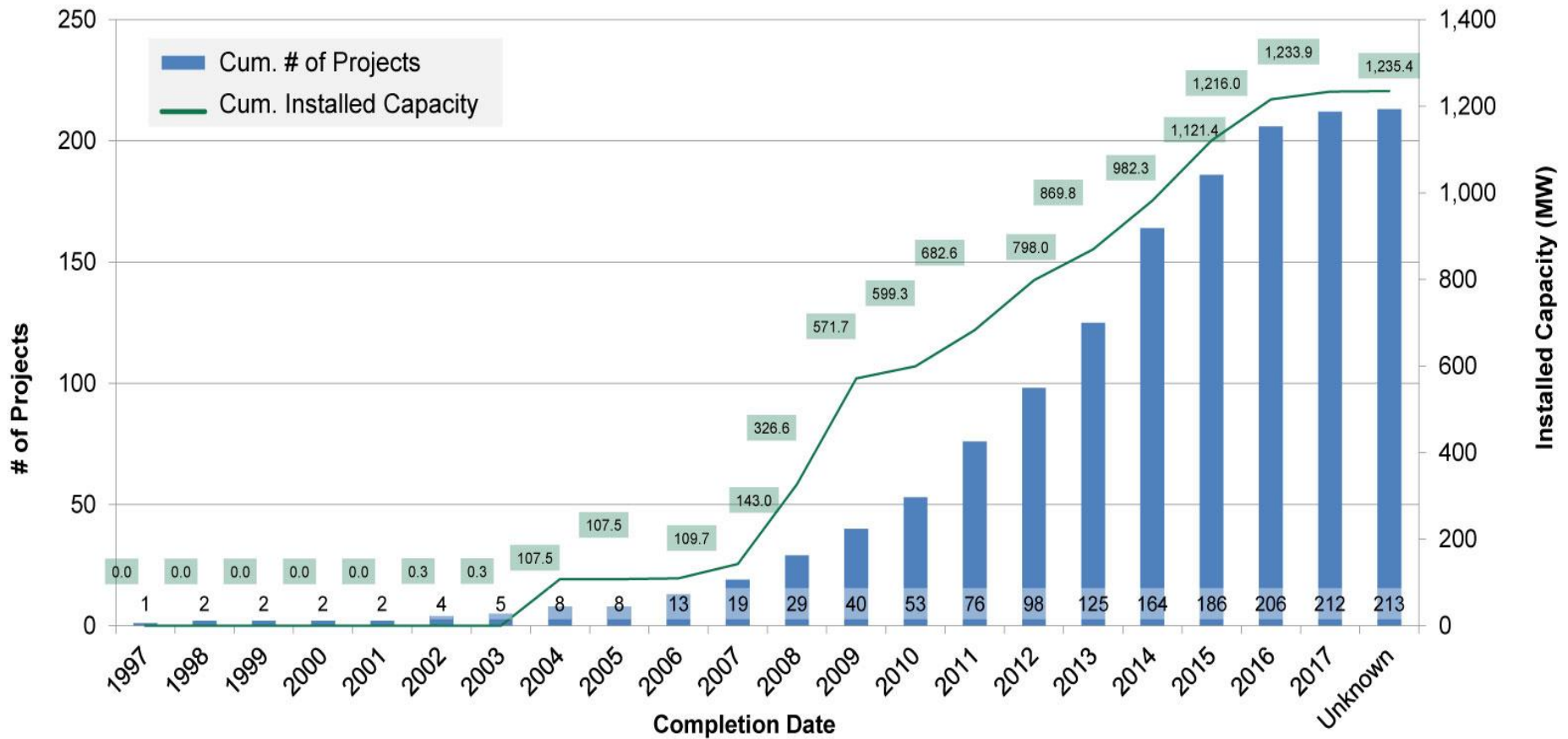
RE-Powering America's Land

Encourages the reuse of formerly contaminated lands, landfills and mine sites for renewable energy development, when such development is aligned with the community's vision for the site.

<https://www.epa.gov/re-powering>

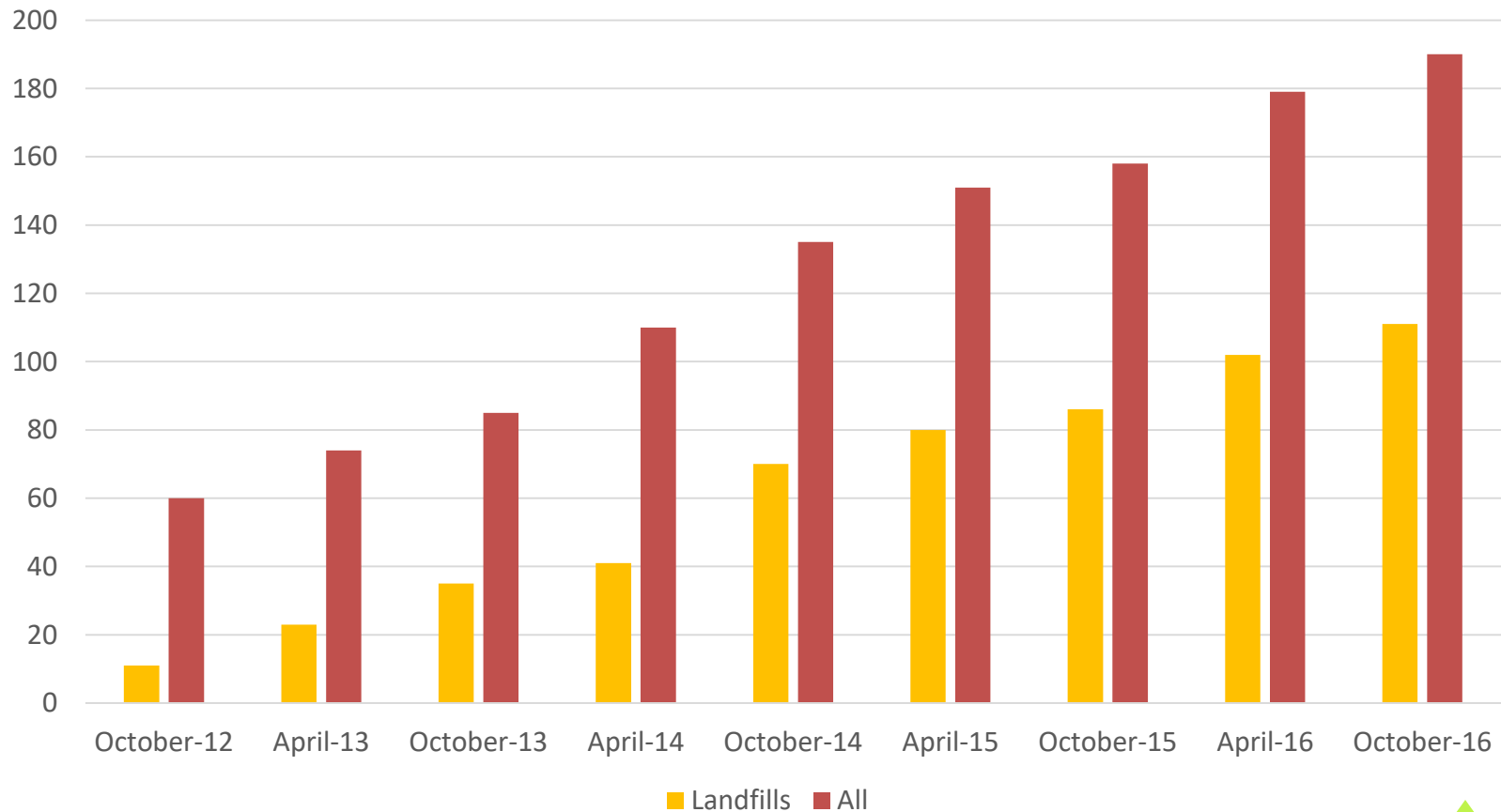


RE-Powering Type Installations Over Time



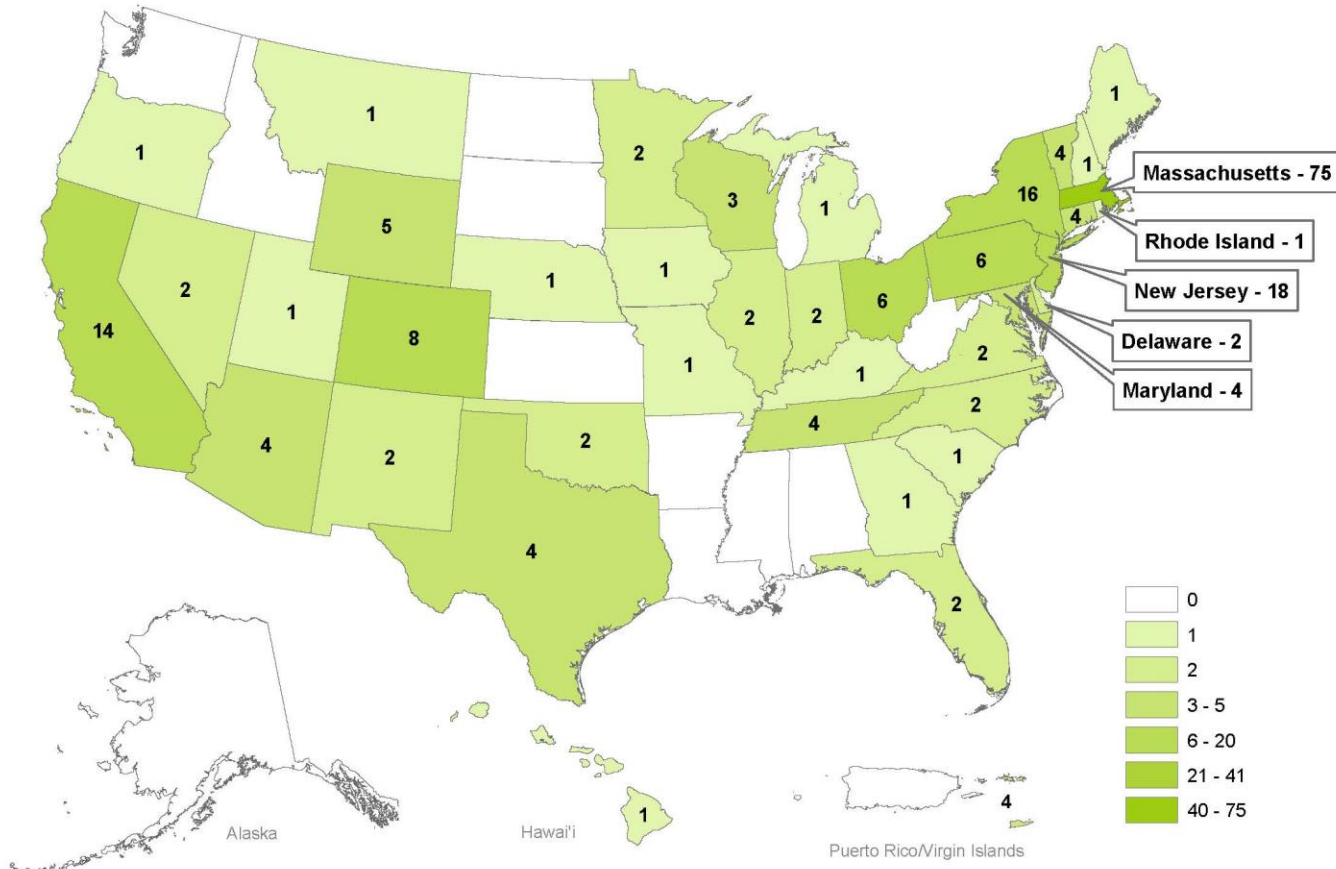
Tracking Matrix -- Landfills Project Trends

RE-Powering Installations



40 States and Territories to Date

40 States and Territories have Renewable Energy Projects on Contaminated Lands



This map is for informational purposes only. The information was gathered from public announcements of renewable energy projects in the form of company press releases, news releases, and, in some cases, conversations with the parties involved. This map may not be a comprehensive representation of all completed renewable energy projects on contaminated lands. To provide information on additional projects, please email cleanenergy@epa.gov.

April 2017

Renewable Energy Example

Palmer, MA Brownfield

- 6 MW
- Palmer, MA
- Commercial Operation as of December 2015
- Former municipal airport from 1930 - 2004
- In 1999, found petroleum hydrocarbons (VPH) in soil and groundwater.
- Permitting – No specific environmental permitting required
- Power sold to several nearby towns
- First Brownfield Project qualified under the MA SREC-2 project
- 2016 “Photovoltaic Project of Distinction” award winner from the Solar Energy Industries Association and the Solar Electric Power Association.



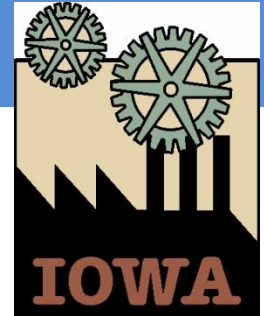
Dubuque, Iowa - Renewable Energy Renews a Contaminated Site and a Community



- **A.Y. McDonald had a 6-acre Foundry Waste Landfill Downtown**
- **Closed under a Superfund Consent Order in 1986**
- **30-Year Post Closure Monitoring to be Completed in 2018**
- **Site still under Perpetual Covenant to keep cap and “waste in place”**
- **A.Y. McDonald Retains Ownership and Site Responsibility, along with IDOT for small portion of ROW**
- **Site has been unused for 30 years, located near downtown, greenbelt parkway, and redeveloping neighborhoods**



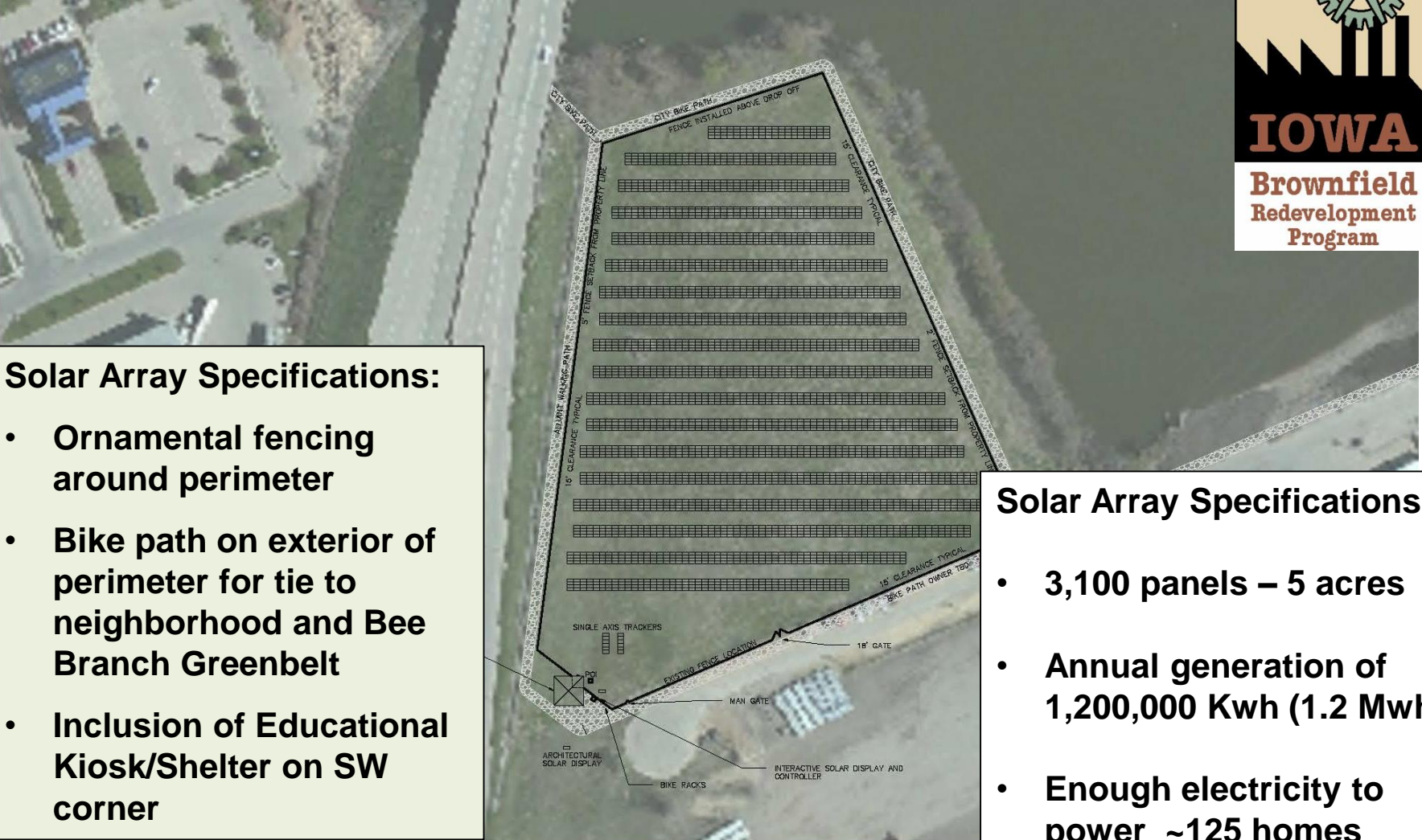
Dubuque, Iowa - Renewable Energy Renews a Contaminated Site and a Community



**Brownfield
Redevelopment
Program**

- **Key provisions of Agreement for Site Reuse as Solar Array:**
 - **Cap integrity will continue to be maintained under A.Y. McDonald Responsibility (sublease of site to Alliant Energy)**
 - **Installation of Solar Array will only require minor 'leveling' of each panel frame, so no intrusion to cap**
 - **Minor trenching will be allowed for collected cable 'runs' to be buried, but will remain in upper cap**
 - **Site will remain fenced for site and solar array security**
 - **Work to install array to begin in Feb 2017**

Dubuque, Iowa - Renewable Energy Renews a Contaminated Site and a Community



Solar Array Specifications:

- Ornamental fencing around perimeter
- Bike path on exterior of perimeter for tie to neighborhood and Bee Branch Greenbelt
- Inclusion of Educational Kiosk/Shelter on SW corner

Solar Array Specifications:

- 3,100 panels – 5 acres
- Annual generation of 1,200,000 Kwh (1.2 Mwh)
- Enough electricity to power ~125 homes
- First of its kind in Iowa

Dubuque, Iowa - Renewable Energy Renews a Contaminated Site and a Community

Educational Amenities:

- Kiosk for recreational way-stop and presentations
- Interactive Solar Exhibit
- Charging Station for EVs



RE-Powering Success Stories / Best Practices

<https://www.epa.gov/re-powering>

Success Stories

RE-Powering America's Land:
Siting Renewable Energy on Potentially Contaminated Land and Mine Sites
An Old New England Town Lights the Way with Solar



The U.S. Environmental Protection Agency (EPA) recognizes the overall benefit of siting renewable energy projects on contaminated properties. Through the RE-Powering America's Land Initiative, EPA is encouraging renewable energy development on current and formerly contaminated lands, landfills, and mine sites. This case study highlights a successful siting of solar panels on a closed landfill, including information that was addressed.



Finding Treasure in a Tr:
In 2010, representatives in the town of Truro, MA, decided to consider recreational uses for a brownfield site. After issuing a request for proposals, the town selected the most viable and cost-effective solar project to develop. After interviewing with several potential developers, the town selected the most viable and cost-effective solar project to develop. After interviewing with several potential developers, the town selected the most viable and cost-effective solar project to develop.

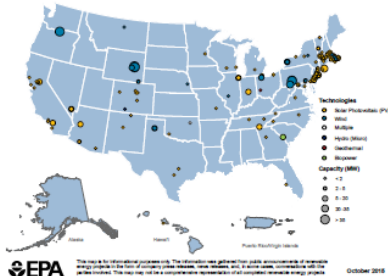
RE-Powering America's Land Initiative: Project Tracking Matrix

October 2015

The U.S. Environmental Protection Agency (EPA) recognizes the overall environmental benefit of siting renewable energy projects on contaminated properties. Through the RE-Powering America's Land Initiative, EPA is encouraging renewable energy development on current and formerly contaminated lands, landfills, and mine sites when such development is aligned with the community's vision for the site. Using publicly available information, RE-Powering maintains a list of completed renewable energy installations on contaminated sites and landfills. To date, the RE-Powering Initiative has identified 138 renewable energy installations on 150 contaminated lands, landfills, and mine sites, with a cumulative installed capacity of almost 1,070 megawatts (MW) and consistent growth in total installations since the inception of the RE-Powering Initiative. Approximately 65% of these installations are large-scale systems with a project capacity of 1 MW or more, either exporting energy onto the utility grid or offsetting onsite energy demands. This document provides summary statistics of known installations and discusses emerging trends.

In addition to the completed sites listed here, EPA is tracking more than 40 renewable energy projects on contaminated or disturbed properties in various stages of planning, approval, or construction. These include a 13-MW solar on landfill project under construction in Moore County, NC; a nearly 1-MW community solar garden on a landfill underway in Milton, NH; and a 7.75-MW solar installation beginning construction on a state brownfield in Olean, NY. In addition, more than 15 other communities have promoted renewable energy projects on contaminated sites, primarily landfills, at town council or public meetings.

158 Renewable Energy Projects, Over 1 Gigawatt Installed Capacity



EPA United States Environmental Protection Agency
Office of Communications, Partnerships, and Analysis
Office of Solid Waste and Emergency Response

Best Practices

Best Practices for Siting Solar Photovoltaics on Municipal Solid Waste Landfills

Handbook



Handbook on Siting Renewable Energy Projects While Addressing Environmental Issues



U.S. Environmental Protection Agency Office of Solid Waste and Emergency Response's Center for Program Analysis

Tracking Matrix

Questions?

Ann Carroll
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Join Us and Learn more

 **Brownfields 2017**
SUSTAINABLE COMMUNITIES START HERE



ICMA
Leaders at the Core of Better Communities

Join us in Pittsburgh • December 5-7, 2017

SAVE THE DATE!



Photos courtesy of EPA

2017 NATIONAL BROWNFIELDS TRAINING CONFERENCE

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