Land Revitalization Success Stories 2014

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Cover Photos (top to bottom): *Houses along California Street, St. Louis, Missouri; Conceptual design for the Roxana South Shore Station area in East Chicago; Dry Gulch Stream, Lakewood, Colorado; Former auto repair facility in St. Louis, Missouri; and Construction underway in Detroit, Michigan*

Contents

Land Revitalization Success Stories: An Overview of Recent and Ongoing Regional Land Revitalization Projects

The U.S. Environmental Protection Agency's (EPA's) Office of Solid Waste and Emergency Response's (OSWER) Land Revitalization Program strives to restore land and other natural resources into sustainable community assets that maximize beneficial economic, ecological and social uses, and ensure protection of human health and the environment.

The EPA Land Revitalization Team's (the Team's) mission contributes significantly to EPA's strategic planning goals by placing protective, sustainable and energy-efficient solutions at the forefront when considering solutions for restoring contaminated properties to useful life.

OUR GOAL

Our goal is to create a new norm. The EPA Land Revitalization Team strives for sustainable approaches to remediation and revitalization to become the standard throughout EPA's cleanup programs. We encourage government officials and stakeholders to incorporate sustainable cleanup and development techniques into standard practices, guidance, codes, ordinances and laws to ensure mainstream adaptation and long-term benefits. We help communities that have difficulty securing funding from public and private sources to achieve their revitalization vision as well as those that have superb revitalization strategies that just need a little expert advice to keep going. We provide technical assistance to these communities as discrete projects or small projects that feed into larger, longer-term revitalization projects. The success stories that follow demonstrate the Team's assistance to land revitalization projects across the country in support of this goal.

OUR APPROACH

- **Engage with communities**: Environmental decisions improve when communities are actively engaged in the process. The EPA Land Revitalization Team fosters stronger partnerships with stakeholders to promote their meaningful involvement and maximize the efficiency of site cleanup efforts.
- **Bridge the gap**: Targeted technical assistance and funding often can significantly impact a project by providing access to experts to launch a project, overcome a hurdle or identify a path forward. Most of the projects the EPA Land Revitalization Team supports are part of a larger local effort that will require additional time and money to complete. However, EPA's support helps move the project forward, make connections with partners and identify additional resources to leverage.
- **Expand the conversation on environmentalism and work for environmental justice**: Communities impacted by EPA's decisions must have a role in the processes that affect the cleanup and revitalization of contaminated lands.
- **Promote and manage community-based projects**: Demonstration projects offer opportunities to test new ideas and ways to make development sustainable; pilot projects provide opportunities to identify successful approaches and share lessons learned. Together, these projects help keep the Team fully informed on the best available sustainability technologies and practices.
- **Share success stories and lessons learned**: Knowledge of sustainable land revitalization approaches encourages the implementation of EPA's Land Revitalization Program and projects. The Team addresses this need by sharing success stories and lessons learned through targeted outreach and educational efforts.
- **Promote partnerships**: The Team works with communities, state partners and federal partners to develop effective working relationships and promote redevelopment practices, including urban agriculture, mixed-use and transit-oriented development, renewable energy development and other options that protect human health and the environment. Technical assistance projects encourage collaboration among partners pursuing revitalization, community and economic development and sustainability, as well as encourage leveraging resources.

2014 LAND REVITALIZATION PROJECTS

EPA Region 1 Using the PREPARED Workbook in Connecticut, State of Connecticut

EPA Region 3 Economic Development and Climate Adaptation Planning, Chester, Pennsylvania

Litter Control Brochure, Berkeley County, West Virginia

EPA Region 5 Northside Redevelopment Project, Gary, Indiana

South Side/Roxana Neighborhood Transit Oriented Development, East Chicago, Indiana

Green Demolition Practices, Detroit, Michigan

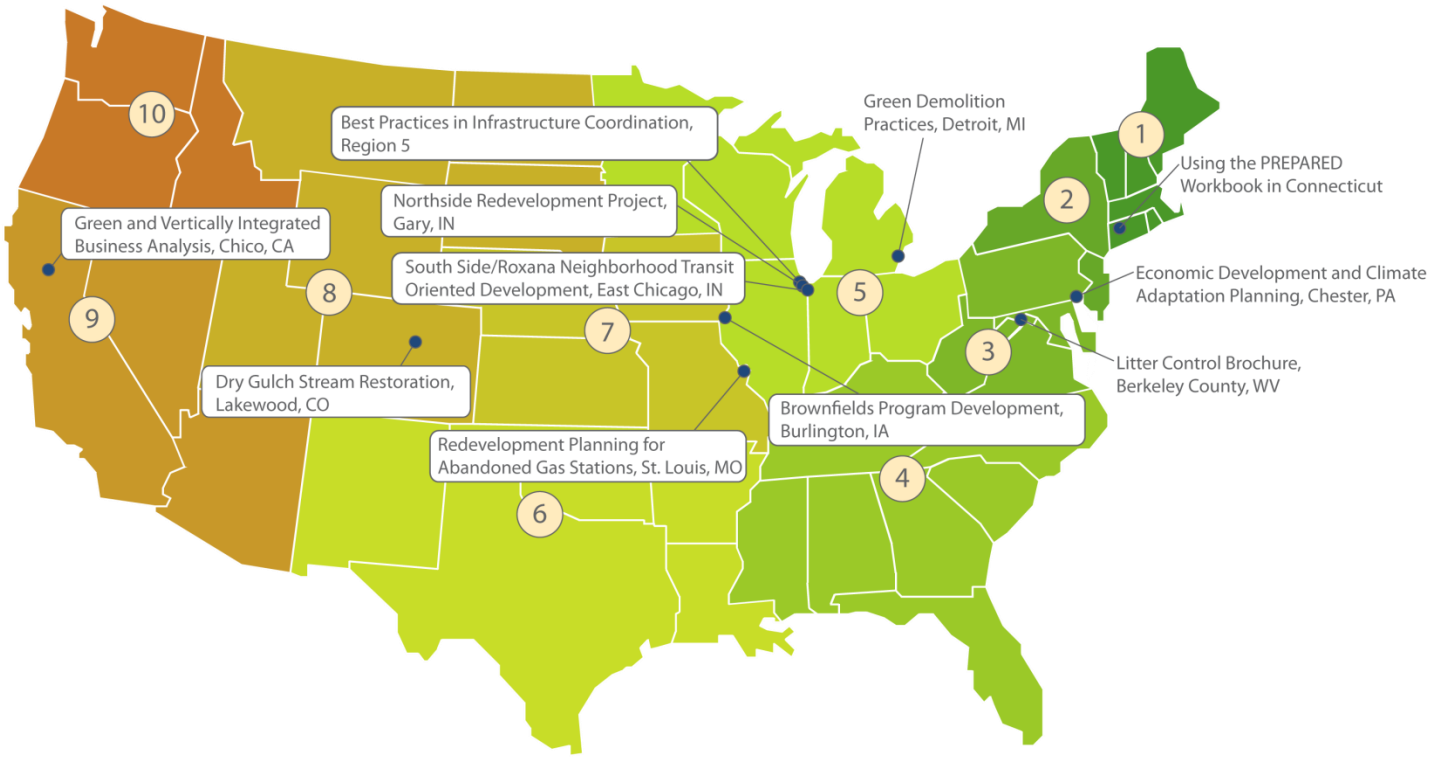
Best Practices in Infrastructure Coordination, Region 5

EPA Region 7 Brownfields Program Development, Burlington, Iowa

Redevelopment Planning for Abandoned Gas Stations, St. Louis, Missouri

EPA Region 8 Dry Gulch Stream Restoration, Lakewood, Colorado

EPA Region 9 Green and Vertically Integrated Business Analysis, Chico, California



This Land Revitalization Success Stories Report

This report illustrates the EPA Land Revitalization Program's approach to restoring land and other natural resources into sustainable community assets. It highlights recently completed and ongoing land revitalization technical assistance projects in EPA's regions. This report does not provide a comprehensive summary of EPA's land revitalization activities, but rather offers snapshots of select projects to highlight successful approaches and lessons learned.

The Team issued a call to the EPA regions for land revitalization technical assistance projects and selected the following projects for technical assistance after EPA regional staff nominated them. Although there were no restrictions placed on the type of projects that could be nominated, the projects can generally be grouped into five categories as listed below.

PLANNING FOR SUSTAINABLE BROWNFIELD REDEVELOPMENT

- Northside Redevelopment Project, Gary, Indiana, EPA Region 5
- Redevelopment Planning for Abandoned Gas Stations, St. Louis, Missouri, EPA Region 7
- Green and Vertically Integrated Business Analysis, Chico, California, EPA Region 9
- South Side/Roxana Neighborhood Transit Oriented Development, East Chicago, Indiana, EPA Region 5
- Brownfields Program Development, Burlington, Iowa, EPA Region 7

ADAPTING TO CLIMATE CHANGE

- Economic Development and Climate Adaptation Planning, Chester, Pennsylvania, EPA Region 3

DEVELOPING PRACTICAL LAND REVITALIZATION TOOLS FOR COMMUNITIES

- Using the PREPARED Workbook in Connecticut, State of Connecticut, EPA Region 1
- Green Demolition Practices, Detroit, Michigan, EPA Region 5
- Best Practices in Infrastructure Coordination, EPA Region 5

PREVENTING ILLEGAL DUMPING

- Litter Control Brochure, Berkeley County, West Virginia, EPA Region 3

IMPROVING STORMWATER MANAGEMENT

- Dry Gulch Stream Restoration, Lakewood, Colorado, EPA Region 8

These projects demonstrate the variety of communities seeking assistance and the many niche areas of subject matter expertise that are needed to support a revitalization effort. These projects also exemplify the catalyzing impact that a small investment can have.

EPA's Land Revitalization Program continues to work with our federal, state and local partners and with the private sector to test new approaches for improved environmental protection and sustainable development. By supporting, promoting and communicating the results of our land revitalization technical assistance projects, we are challenging our partners, stakeholders and ourselves to make sustainable development the norm.

Planning for Sustainable Brownfield Redevelopment

NORTHSIDE REDEVELOPMENT PROJECT

GARY, INDIANA, EPA REGION 5

Gary was created to be a steel town, with a large portion of its lakefront land occupied by the United States Steel Corporation. Decline in the steel industry led to over 55% population loss from the city's peak population in the 1960s; more than 20 percent of its population decline occurring between 2000 and 2010 from 102,746 residents to 80,294 residents. The city's rapid loss of jobs and population has led to a large amount of blight and abandonment in large swaths of the city. As the city's population dwindled, so did the budget and capacity of local government, leading to a rise in crime and a sense of disinvestment and disenchantment in the government's ability to rebuild.

In 2012, as part of the U.S. Department of Housing and Urban Development (HUD), U.S. Department of Transportation (DOT) and EPA Partnership for Sustainable for Communities, EPA Region 5's Land Revitalization Team began working with Mayor Karen Freeman-Wilson and her new administration to establish priorities for brownfields redevelopment and sustainability.

Figure 1: The Northside Redevelopment area includes four neighborhoods with potential for redevelopment. A coordinated effort will help prioritize redevelopment plans and resources.

The EPA Land Revitalization Team identified a need to establish a process for prioritizing sites and redevelopment projects into which technical resources and funding could be targeted. During the first half of 2013, EPA assisted Gary officials in identifying focus areas for redevelopment.

As a result of this planning effort, the "Gary Northside Redevelopment" area was identified as a priority, with particular focus on four key areas: Horace Mann neighborhood surrounding Methodist Hospital, the Emerson/Downtown district, Aetna/Glen Ryan and Miller neighborhoods. These areas were selected by the city and key stakeholders for the potential to build upon redevelopment opportunities. For each area, technical assistance helped establish a team of city, regional and federal leaders to focus efforts on the four areas.

This technical assistance helped catalyze a coordinated and focused redevelopment effort, into which the city could direct regional, state and federal resources and establish priorities for redevelopment. The teams provided the city with key objectives that were approved by the mayor and, as of summer 2014, the city has targeted funding to the four neighborhoods, including:

- $1.8 million has been assembled from EPA, HUD, the Northwest Indiana Redevelopment Agency and the city for the demolition of the long-abandoned Sheraton hotel.
- $155,000 in HUD Community Development Block Grant funds for targeted demolition of homes.
- $1.5 million for the rehabilitation of the Hudson-Campbell fitness center.
- A $150,000 transportation oriented development planning grant from the Northwest Indiana Regional Planning Commission for the Emerson/Downtown district.

The momentum created by this project was a key contributing factor for the city's designation as a Strong Cities, Strong Communities Initiative participant in 2014.

For more information, please contact Stephanie Cwik, EPA Region 5, cwik.stephanie@epa.gov.

LESSONS LEARNED

- In depopulated areas, it helps to prioritize key sites or other catalyst redevelopment opportunities.
- Sometimes establishing capacity and rebuilding local systems is necessary to move projects forward.
- Planning for sustainable brownfield redevelopment is a long-term process that can be enhanced at key times with targeted technical assistance.

PLANNED POST-TECHNICAL ASSISTANCE ACTIVITIES

- Establish priorities for redevelopment within the four targeted areas.
- Target city investments to four targeted areas.
- Complete a site inventory and identify investment opportunities.
- Make connections to regional area, including East Chicago, IN and Chicago, IL.

Planning for Sustainable Brownfield Redevelopment

REDEVELOPMENT PLANNING FOR ABANDONED GAS STATIONS

ST. LOUIS, MISSOURI, EPA REGION 7

St. Louis, Missouri, is plagued with abandoned property throughout the city. Like many cities across the country, St. Louis has dozens of abandoned gas stations across its neighborhoods. These sites often are vandalized, have illegal dumping and loitering, and are not maintained to protect human health and the environment. Abandoned gas stations can be unattractive to developers or future site owners because of the unknown contamination and smaller return on investment. Additionally, gas stations tucked into neighborhoods can be hard to find, market and reuse. Addressing these sites helps preserve the integrity of older neighborhoods and can be a model repeated at thousands of sites across the country.

From February – December 2013, EPA's Office of Brownfields and Land Revitalization and Office of Underground Storage Tanks, in partnership with EPA Region 7, provided technical assistance to the St. Louis Development Corporation (SLDC) to support redevelopment planning for three abandoned gas stations located in the same general geographic location—south and southwest of downtown St. Louis.

The EPA technical assistance team analyzed the former gas station sites, located in Fox Park, Tower Grove South and Benton Park neighborhoods. The Land Reutilization Authority (LRA) owns all three sites and, therefore, the SLDC can influence their use. The sites require environmental site assessments (ESAs) and remediation, which will be facilitated by SLDC, Missouri Department of Natural Resources (MDNR) and EPA. Because the sites were located on separate parcels, EPA's technical assistance team developed separate site reports that provided:

- A policy and infrastructure evaluation of the conceptual redevelopment plan to ensure it was consistent with land use and zoning requirements and that infrastructure and utilities were available and capable of supporting redevelopment.
- A market assessment to evaluate the neighborhood's demographics and an assessment of how the data might influence the conceptual redevelopment plan.
- A review of the organizational capacity of SLDC and partners to facilitate interim uses and redevelopment.

In April 2013, EPA Region 7 and the project team met with key stakeholders and property owners to discuss neighborhood needs and opportunities for redevelopment, such as access to small, local retail shops, restaurants or other amenities that would be within walking distance to the community. Based on input from community members, environmental conditions analysis, market data and infrastructure evaluations, the project team developed conceptual site designs for each site to be used as educational and marketing tools to promote site redevelopment.

The existing neighborhoods and uses surrounding each site influenced the orientation and size of the building in the conceptual designs. For the Fox Park site, the conceptual design recommended a mixed use (residential/commercial). The Tower Grove South site conceptual design suggested residential reuse, and provided several design options for a future developer to consider based on site costs and demand. Finally, the Benton Park site was the only site with an existing building that could be reused, but it also had the worst environmental conditions of the three sites. Market data and

Figure 2: Abandoned gas station site and conceptual design for its reuse in the Benton Park neighborhood.

LESSONS LEARNED

- Engaging area residents in discussions early in the redevelopment process helps refine developer requests for proposals (RFPs).
- Data and expert analysis help the local stakeholders understand the site options and opportunities.
- While the three sites share several common elements—former gas stations, small site size, located within mostly residential neighborhoods—the reuse opportunities varies based on site location, site layout, reuse of the current building and community and market inputs.
- SLDC can leverage limited technical assistance for additional project work. SLDC received additional EPA funding to assess the Benton Park site and pull underground storage tanks, making the site more attractive for reuse.

community input led to a recommendation to consider reusing the building for commercial use, but did not limit the opportunity to building a new corner structure that could feature commercial and limited residential spaces.

For more information, please contact David Doyle, EPA Region 7, doyle.david@epa.gov.

PLANNED POST-TECHNICAL ASSISTANCE ACTIVITIES

- In March 2014, EPA supported SLDC in a tank pull at the Benton Park site. EPA removed eight underground storage tanks from the site and helped address environmental concerns.
- "Without EPA's help, I'm certain this site would have been guaranteed to sit inactive for another five years." – SLDC Project Manager
- SLDC continues to promote site redevelopment opportunities for the three sites and pursue economic development.

Planning for Sustainable Brownfield Redevelopment

GREEN AND VERTICALLY INTEGRATED BUSINESS ANALYSIS

CHICO, CALIFORNIA, EPA REGION 9

Chico, a vibrant college town in Northern California with about 86,000 residents, is recognized as a regional center for recreation, education, shopping, employment and health services. Rich in outdoor recreation opportunities and natural resources, the town is also home to several local, entrepruial enterprises. "The Wedge," located in the southeast part of the Southwest Chico Neighborhood Improvement Plan Area, offers up to 40 acres of underutilized industrial land and is considered critical to the revitalization of the area.

EPA provided technical assistance to Chico to increase economic development in the The Wedge by analyzing local, green and vertically-integrated business (VIB) opportunities. VIBs conduct at least two processes that are typically separated—such as manufacturing, distribution or retailing—in a single location. Several VIBs exist in or near The Wedge already.

The technical assistance team met with city staff to understand the community's goals for The Wedge and to attain a better understanding of the characteristics of The Wedge. The team also met with numerous property and business owners, developers and economic development professionals to understand the opportunities and challenges associated with revitalizing the area. EPA funded an analysis of key market indicators and existing institutional infrastructure to assist community officials understand economic drivers in Chico. EPA also identified local entrepreneurial businesses that could be interested in locating to The Wedge as a VIB. The final report presents recommendations and next steps to the city to foster a supportive environment for attracting local, green VIBs to The Wedge. Key recommendations from the project include:

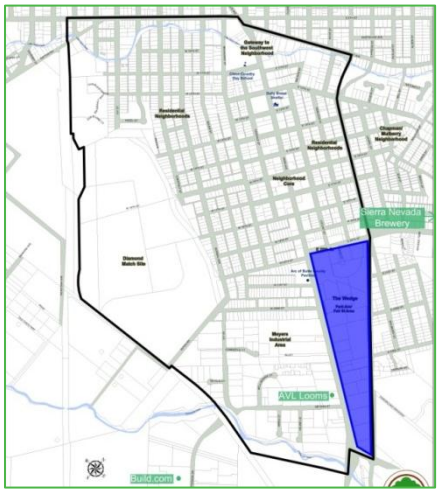


Figure 3: The Southwest Chico Neighborhood Plan Area highlights several VIBs and The Wedge.

- Establish a public/private partnership and assemble properties.
- Update and implement the Southwest Chico Neighborhood Improvement Plan.
- Nurture home grown, green VIBs.
- Leverage additional public and private investment opportunities.

On April 8, 2014, EPA met with more than 25 stakeholders, including business owners from The Wedge, neighbors, realtors, economic development professionals and city staff, to present the technical assistance findings and discuss opportunities for revitalizing The Wedge as part of the Brownfields Community Wide Assessment grant awarded to the city in 2012. As a result of the EPA-funded VIB analysis and EPA Brownfields grant activities, momentum is building towards redeveloping The Wedge. A developer is coordinating with the city to meet with the California Department of Toxic Substances Control to discuss a strategy for moving forward on a key property within The Wedge, and the city is prioritizing sites for environmental assessment.

For more information, please contact Nova Blazej, EPA Region 9, blazej.nova@epa.gov.

LESSONS LEARNED

- Communities may be more successful by assessing opportunities to foster existing businesses as a strategy for job creation and growth rather than focusing on attracting a business from another community.
- A culture of sustainability is important for green VIBs because it provides a basis for cross collaboration and encourages innovation and creativity.
- When planning for sustainable brownfield redevelopment in communities with city budget constraints, a public /private partnership can allow the city to guide the process while sharing redevelopment responsibilities and costs.

PLANNED POST-TECHNICAL ASSISTANCE ACTIVITIES

- Continue to focus on redevelopment of the catalyst property at the "top" of The Wedge.
- Continue site prioritization for environmental assessments for other Wedge properties.
- Pursue developer interests and respond to inquiries.
- Continue to provide information on site opportunities.

Planning for Sustainable Brownfield Redevelopment

SOUTH SIDE/ROXANA NEIGHBORHOOD TRANSIT ORIENTED DEVELOPMENT

EAST CHICAGO, INDIANA, EPA REGION 5

The Vital East Chicago Project in the city of East Chicago is a HUD-DOT-EPA Partnership for Sustainable Communities initiative to plan and execute sustainable development projects that will facilitate community revitalization. A team of key city leaders has been assembled (Vital East Chicago Team) and is responsible for developing a vision for the two pilot projects. The project represents the mayor's vision for redevelopment in East Chicago, and is informed by local, regional, state and federal stakeholder engagement. The project objectives are to improve quality of life and public health for residents by:

- Leveraging existing investment in East Chicago to support redevelopment efforts that yield environmental, economic and social benefits to the community.
- Identifying and securing funding for these projects through public, non-profit and private sources.
- Providing the structure for pilot projects that can be replicated throughout the city.
- Facilitating partnerships that will carry forward this work.

Figure 4: Conceptual design for the Roxana South Shore Station area in East Chicago.

EPA provided technical assistance to support planning for the South Side/ Roxana Neighborhood Transit Oriented Development (TOD) Project (one of the Vital East Chicago pilots). These resources helped the Vital East Chicago Team gather resources, understand opportunities and constraints, then design and conduct a transit-oriented development charrette around the East Chicago commuter rail station, which is the busiest stop on the Northern Indiana Commuter Transportation District South Shore line. TOD planning experts reviewed materials associated with trail development, stream cleanup and revitalization, infrastructure improvements and master planning efforts in the area. The initial conceptual design options helped key stakeholders consider what TOD might include at the East Chicago South Shore station.

On May 8, 2014, more than 30 stakeholders convened in East Chicago to learn about TOD, review conceptual designs and begin identifying steps to take toward achieving a TOD district. Participants were asked to take part in map-based exercises to identify anchors for economic development and job creation; consider complete green street strategies to beautify the station area and improve storm water management; improve signage, connectivity and access to the station and the marsh; consider tools such as design guidelines that will help to create a "sense of place" in the South Side/ Roxana neighborhoods; and consider opportunities to construct a portion of a regional trail network to support community building and healthy and active lifestyles.

EPA is leveraging over $150 million in existing and proposed investment in East Chicago (EPA Programs, including Superfund, Resource Conservation Recovery Act (RCRA) and the Great Lakes National Program Office, as well as the City and other partner funds) to improve the quality of life for residents. The effort will result in economic, environmental and social benefits for residents, demonstrating the Agency's commitment to sustainability. This plan will help provide expanded housing and mobility choices, reduce transportation costs, improve public safety, support economic development and promote connectivity to other areas of the city for residents, visitors and tourists. It will also contribute to environmental benefits such as a reduction in greenhouse gas emissions and vehicle miles traveled.

LESSONS LEARNED

- Bringing key leaders to the table early in the planning process helps to create joint strategies and implement solutions to resolve environmental challenges.
- Conceptual planning helps stakeholders leverage additional ideas and see the possibilities for sustainable brownfield redevelopment.

PLANNED POST-TECHNICAL ASSISTANCE ACTIVITIES

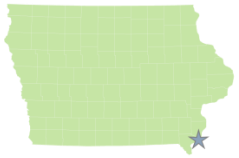
- Meet regularly to engage key stakeholders, formalize a community engagement plan and engage in longer-term strategic planning and implementation.
- Work to identify near-term activities and how to implement recommendations from the report immediately in the project area.
- Work to incorporate these sustainable development plans into their comprehensive plan to guide the implementation process and position the city to be competitive for future grant funding.

For more information, please contact Danielle Potts, EPA Region 5, potts.danielle@epa.gov.

Planning for Sustainable Brownfield Redevelopment

BROWNFIELDS PROGRAM DEVELOPMENT

BURLINGTON, IOWA, EPA REGION 7



Burlington, Iowa, is like many towns across America: it has a historic downtown in need of investment and revitalization to restore economic development and community services to the broader city. While several organizations are working to improve development opportunities in Burlington, the disconnected approach was leading to duplicative efforts. However, by working together to build a Brownfields Program, these organizations can achieve a revitalized vision for downtown Burlington and further their own goals for the region.

From January to June 2014, EPA provided technical assistance to build a cohesive Burlington Brownfields Program. The Burlington Brownfields Program instituted a Sponsor Group to lead future brownfield and development efforts. Sponsor Group members included the City of Burlington, the South East Iowa Regional Planning Commission and Downtown Partners, Inc. The Sponsor Group set goals for the program, including a focus on redeveloping property downtown.

EPA technical assistance supported a webinar series to help build local capacity and support the formation of the Burlington Brownfields Program. The first webinar focused on helping the community organize its brownfield program goals and objectives, as well as identify individual brownfields projects throughout Burlington. A second webinar focused on site prioritization and identifying the key opportunities, challenges and connections to available properties and interested development projects.

Figure 5: The Burlington Brownfields Program will focus on sustainable redevelopment at brownfields downtown.

In May 2014, EPA Region 7, Iowa Department of Natural Resources and the project team met with key stakeholders and property owners to identify redevelopment opportunities. The project team developed a site prioritization tool to help the Sponsor Group understand assets and challenges associated with each site. The project team also developed a program report that outlined the goals of the Burlington Brownfields Program, available tools and resources, and next steps to continue to build toward a sustainable vision for downtown Burlington and surrounding neighborhoods.

For more information, please contact Whitney Rawls, EPA Region 7, rawls.whitney@epa.gov.

LESSONS LEARNED

- A defined group of leaders helps consolidate limited resources and presents a stronger story to attract economic development.
- Site prioritization helps communities with limited resources identify immediate opportunities while still cataloguing all potential resources.
- Successful planning for sustainable brownfield redevelopment relies on communication between all entities supporting development, economic revitalization and infrastructure improvements.

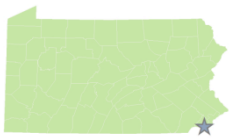
PLANNED POST-TECHNICAL ASSISTANCE ACTIVITIES

- The Sponsor Group will accept the Brownfields Program and identify a redevelopment vision.
- The Sponsor Group will conduct broader community outreach to educate stakeholders about the Brownfields Program and seek input.
- The Sponsor Group will develop a downtown redevelopment vision and strategy that will direct future growth to the city's downtown (reusing existing structures/ infrastructure, creating a more compact development pattern and enhancing downtown vibrancy.

Adapting to Climate Change

ECONOMIC DEVELOPMENT AND CLIMATE ADAPTATION PLANNING

CHESTER, PENNSYLVANIA, EPA REGION 3



Chester, Pennsylvania, is no stranger to damage caused by inadequate protection from coastal hazards. On September 5, 1971, more than 11 inches of rain fell on Montgomery and Delaware counties, leading to at least 12 deaths. In Chester, flooding swept across Eyre Park destroying nearly a hundred homes and forcing 300 residents to relocate at an estimated cost of $17.6 million (1978 dollars). Eventually, the city built a levee to protect parts of the city, but in 1999, flooding from Hurricane Floyd breached the levee causing over $1 million of damage to the nearby school.

Figure 6: Homes located in Chester, Pennsylvania.

Numerous vacant, abandoned and/or contaminated properties along the Delaware River remain vulnerable to flooding, especially as climate change presents new threats. The Chester waterfront area presents an opportunity to explore options other than traditional industrial or commercial development. Opportunities could include redevelopment or non-development that may increase the city's resiliency to sea-level rise and increased precipitation events.

EPA's Land Revitalization Team is providing technical assistance to Chester to evaluate real estate market conditions and collect examples of land use strategies that can promote economic development, increase green infrastructure and reduce vulnerability to climate change. The project was initiated in December 2013 and was completed in September 2014.

In May 2014, EPA conducted a site visit to meet with local stakeholders and planning staff and to tour the areas that may be vulnerable to climate change and where redevelopment could improve climate resilience. EPA's technical assistance team has developed a report that provides national examples of (a) relevant regulatory standards, incentives and guidelines that Chester may consider as it updates its zoning and subdivision regulations, and (b) national examples of non-regulatory projects, programs and approaches that may be helpful to the city.

The report focuses on examples drawn from areas outside the Pennsylvania, New Jersey and Delaware region, as the approaches used here are already familiar to local stakeholders. However, it also includes some very recent examples from the New York region based on intensive research on improving climate resilience following Super Storm Sandy. The report includes examples: from distressed cities with significant inventories of public lands; that are relevant to the types of redevelopment opportunities available in Chester; of different levels of flood risk mitigation required by new construction; that allow for a climate sensitive use of the lower floors of buildings on vulnerable lands (e.g., parking); that are related to repurposing land for flood absorption; and that can be graphically illustrated to improve public understanding.

For more information, please contact Dave Campbell, EPA Region 3, campbell.dave@epa.gov.

LESSONS LEARNED

- Regulatory approaches to improve resilience to increased creek and coastal flooding often involve tax rebates, storm water fee reductions or grant funding to offset added development costs related to installation of site or building-based resiliency features, including porous pavers and asphalt, bioretention and vegetated swales.
- Significant opportunities may exist to reduce stream flooding risk through redesign of upstream parks, similar to projects implemented in Fargo, Tulsa, New York, and New Orleans.

PLANNED POST-TECHNICAL ASSISTANCE ACTIVITIES

- Revision of flood plain regulations to better align with the Federal Emergency Management Agency (FEMA) Community Rating System (CRS) criteria.
- Evaluation of best practices in home and land swaps to remove population from flood risk areas.

Developing Practical Land Revitalization Tools for Communities

USING THE PREPARED WORKBOOK IN CONNECTICUT

STATE OF CONNECTICUT, EPA REGION 1

Like other states, municipalities in Connecticut are faced with the challenge of productively and sustainably reusing brownfields properties. Connecticut has an extensive brownfield program that is administered through the Connecticut Department of Energy and Environmental Protection (CTDEEP), Connecticut Department of Economic and Community Development (CTDECD) and other state agencies. Accessing information and resources involves multiple websites, which is made more difficult if the user does not have a good familiarity with the various state and federal programs relevant to their brownfields sites.

EPA is working with CTDEEP to create a Web-based tool to help Connecticut's municipalities navigate the redevelopment process and access applicable state and EPA information. This tool is based on the PREPARED Workbook, published by EPA in 2011, which outlines a risk management framework to help municipalities evaluate actions to bring about the reuse of brownfield properties.

The project will provide a user-friendly interface for municipalities to engage the Connecticut Brownfields program and address specific issues related to their brownfield sites. The Web-based tool will walk a municipality through the steps outlined in the PREPARED Workbook. Each step in this process will be briefly described and linked to the appropriate sections of the PREPARED Workbook where more detailed discussion is available, as well as to relevant Connecticut information, guidance and resources. The process will include worksheets in an electronic format and instructions for their use.

In addition, EPA is providing technical assistance to update the original PREPARED Workbook worksheets to reflect state-specific and more up-to-date information. By using this tool, municipal project managers will gather information from a broad team of professionals and be better equipped to make decisions about their level of involvement in individual brownfields sites from a risk management perspective. Connecticut initiated the project in March 2014 and expects to complete it by December 2014.

Figure 7: Stakeholder engagement is central to the PREPARED Workbook process for brownfields redevelopment.

NEXT STEPS

- Meet with Connecticut information technology staff to finalize Web map.
- Develop final draft of Web page content.
- Test final draft of Web page content and Web format with key Connecticut municipalities.
- Provide final Web page content for publication on Connecticut website.

For more information, please contact Kathy Castagna, EPA Region 1, castagna.kathleen@epa.gov.

Developing Practical Land Revitalization Tools for Communities

GREEN DEMOLITION PRACTICES

DETROIT, MICHIGAN, EPA REGION 5

Detroit has almost 80,000 blighted structures and vacant residential lots, according to a report by the Detroit Blight Removal Task Force, representing almost a third of Detroit's housing stock. This scale of blighted buildings has significant environmental, social and economic impacts. EPA is working with partners to find ways to align federal resources to support the city's environmental and economic revitalization.

EPA Region 5 is assisting Detroit in updating its residential demolition bid specifications as the city ramps up its blight removal efforts. As a result of EPA's efforts, future residential building demolitions will better address backfill contamination, stormwater infiltration, asbestos, fugitive dust, materials recycling and deconstruction. This assistance is augmenting the federal response to the Detroit bankruptcy, including assistance from the U.S. Department of Treasury's Hardest Hit Fund. This work builds upon EPA Region 5's On the Road to Reuse: Residential demolition bid specification development tool, which the Region created for use by cities, counties or land banks undertaking residential demolitions.

EPA Region 5 and the Detroit Land Bank are leading the effort to safely remove blight from the city's many residential properties with the goals of:

- Minimizing adverse environmental and health impacts.
- Promoting reuse of salvaged materials and the safe disposal of hazardous materials.
- Supporting compliance with asbestos regulations.
- Leaving sites in a condition suitable for redevelopment, including reuse for green infrastructure and urban agriculture.

Figure 8: Vacant and blighted homes in Detroit, Michigan.

The project team coordinated the March 4, 2014, *Demolition Best Practices Workshop.* At the Workshop, 80 residential demolition stakeholders focused discussions on ways to reasonably incorporate materials management, health and workforce development strategies in planned residential demolitions. The project team developed the Workshop Outcomes Report to inform demolition practices related to health and environmental impacts in advance of the $52 million Hardest Hit Fund residential demolition program.

NEXT STEPS

- Finalize Demolition Specification Review Tool.
- Finalize Rapid Building Assessment Tool.

The Land Revitalization Team is also developing two tools—the Specification Assessment Review Tool and the Rapid Building Assessment Tool. The Specification Assessment Review Tool facilitates a self-assessment of demolition specifications developed by municipalities, land banks and other public landowners tasked with implementing residential demolition programs. The Rapid Building Assessment Tool allows property assessors to assess and inventory a building to determine the recommended course of action (e.g., rehabilitation candidate, extent of deconstruction, recycling opportunities or hazardous/unsafe (demolition only)). The Land Revitalization Team will incorporate these tools into the EPA Region 5 Residential Demolition Bid Specification Development Tool as a resource for other cities, municipalities and land banks.

For more information, please contact Jon Grosshans, EPA Region 5, grosshans.jon@epa.gov.

Developing Practical Land Revitalization Tools for Communities

BEST PRACTICES IN INFRASTRUCTURE COORDINATION

EPA REGION 5

Cities throughout the Midwest continue to experience economic and demographic shifts that result in an imbalance between the infrastructure that exists and the infrastructure that is needed. In many cities, past development patterns have resulted in more infrastructure than is currently needed, given depopulation and an emphasis on more compact development patterns. These cities are also facing the economic constraints of a shrinking revenue base, while at the same time facing decreases in funding from state and federal revenue sources. Creative approaches in infrastructure management is more important than ever in these and other cities that are seeking to provide more resilient and efficient results.

Figure 9: Infrastructure repair in Detroit, Michigan.

EPA's Land Revitalization Team is developing a tool that will help cities identify best practices to more effectively coordinate public infrastructure maintenance, repair and development. The tool also will assist cities in estimating the cost savings that they can realize by implementing more efficient infrastructure planning practices.

The project team met with public officials in the cities of Saginaw and Detroit, Michigan, and Vaparaiso, Indiana, to learn how city officials approach infrastructure maintenance, repair and development. The meetings provided information about existing organizational arrangements that facilitate progress or create barriers to more effective coordination; factors that drive infrastructure priorities (e.g., economic development, availability of grant funds) and their implications for coordination; and potential benefits of improved coordination, including cost savings and improvements in quality and continuity of public services.

NEXT STEPS

- Develop draft Community Public Infrastructure Asset Management Tool, to include a Checklist and Action Plan, and Invest-to-Save Analysis Tool.
- Conduct webinar with participating cities and request feedback on draft tool.
- Refine and finalize the tool and develop user guide.

Information from these meetings and additional research will be the basis for developing a Community Public Infrastructure Asset Management Tool. The tool will help local infrastructure managers, city planners and other local officials assess their current state of coordination, identify practical ideas for change and estimate the cost savings and other benefits that could be realized through enhanced coordination.

The tool will have two parts. The Checklist and Action Plan will be a question-based checklist to help communities assess their status with regard to completing an asset inventory, organizational practices that encourage coordination, community collaboration and financial collaboration. It will summarize local priorities and areas for improvement in an action plan. The second part of the tool will allow municipalities to complete an Invest-to-Save analysis. This will:

- Help municipalities organize information about public infrastructure to support a high-level strategic invest-to-save analysis.
- Serve as an analytical tool to assess long-term savings from near-term public infrastructure investments and the incremental benefits of coordinated planning and investments.
- Provide high-level cost-benefit information to help managers and public officials explain sensible, cost-effective infrastructure investments.

We expect the tool to make clear that better coordination could not only help cities stretch their dollars further and improve service reliability, but could also attract investment to help communities achieve revitalization objectives. Coordination can help ensure that projects have broad local support, demonstrate a comprehensive planning approach and articulate multiple benefits that could be leveraged through public funding. A history and reputation for cooperation and coordination also communicates to potential investors that the city is committed to timely and predictable review processes in support of investments in community revitalization.

For more information, please contact Chris Choi, EPA Region 5, choi.christopher@epa.gov.

Preventing Illegal Dumping

LITTER CONTROL BROCHURE

BERKELEY COUNTY, WEST VIRGINIA, EPA REGION 3

Berkeley County is the second most populated county in West Virginia. Since 2000, the county saw unprecedented population growth and an increase in open dumping and roadside littering. A lack of public awareness of the county's solid waste programs among the influx of residents most likely contributed to the increase in litter and open dumping.

EPA's Land Revitalization Team and staff from Region 3 assisted Berkeley County, WV, in developing a brochure to promote public awareness of the county's solid waste programs, litter control and open dumping laws. The pamphlet focuses on increasing public awareness of alternatives to such illegal activities and promotes recycling opportunities in the county. The brochure features eight panels of content about alternatives for the management of waste materials and information on cleanup solutions.

The Berkeley County Litter Control Program is using the brochure to promote public education. The Program distributes a limited number of printed copies of the brochure at special events, Earth Day events and other similar functions to promote recycling of waste materials and educate the public on the costs and risks associated with littering and open dumping. The Berkeley County Solid Waste Agency applied for two state grants, requesting funds to print up to 30,000 pamphlets of the newly designed brochure for broader distribution to area schools. In addition, the county distributed an electronic copy to residents through a listserv e-mail and posted on Facebook.

For more information, please contact Christopher Thomas, EPA Region 3, thomas.christopher@epa.gov.

Figure 10: The litter control brochure provides information on how to safely dispose of waste in the county and the benefits of safe waste disposal.

LESSONS LEARNED

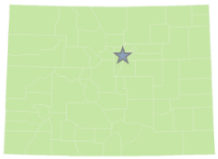
- Small technical support projects can make a large impact to small communities, offering resources that often are provided by volunteers or not found within the community.
- Traditional educational materials come to life in social media settings and improve the reach to citizens.
- Preventing illegal dumping requires repeated, ongoing and engaging outreach.

PLANNED POST-TECHNICAL ASSISTANCE ACTIVITIES

- Continued education of residents about alternative disposal methods for the county.
- Broader distribution of the brochure through mailings and online resources.

Improving Stormwater Management

DRY GULCH STREAM RESTORATION



LAKEWOOD, COLORADO, EPA REGION 8

The Lamar Station Crossing redevelopment project in Lakewood, Colorado, used funding from an EPA Brownfields Assessment grant and a Brownfields Cleanup grant to conduct planning activities and remediate 4,200 cubic yards of contaminated soils in 2012. The Lamar Station Crossing redevelopment project includes property owned by the Metro West Housing Solutions (Metro West) and a portion of the Dry Gulch Stream.

Figure 11: Removal of in-channel debris, reducing erosion potential, flattening channel bank slopes and vegetation maintenance are key project elements in the Dry Gulch channel restoration design.

The Dry Gulch channel has steep drop offs at the top of the channel bank and erosion issues. The Gulch also is considered a safety hazard by Metro West. There is debris, low value vegetation and rubbish within the creek, which is aesthetically unattractive and creates potential hazards for flood debris and associated conveyance reduction issues.

EPA's Land Revitalization Team, Metro West Housing Solutions and the Urban Drainage and Flood Control District are working together to address water quality, safety and erosion control concerns associated with the Gulch by designing an approach for stream restoration. Additional project goals are to make the Gulch more ecologically sustainable, connect with a future greenway and to use Dry Gulch as an educational and recreational asset for neighborhood residents and community partners. The project is also part of the South Platte Urban Waters Partnership.

NEXT STEPS

- Develop construction drawings, prepare a no-rise floodplain certification and conduct final coordination with stakeholders.

The project team conducted a site visit on March 5, 2014, with the purpose of reviewing existing site channel conditions, identifying areas of channel improvement and establishing restoration concepts. The site visit observations and discussions of site constraints and opportunities identified problem areas along the channel to be addressed through restoration concepts. During the site visit, the project team presented three restoration concepts that ranged from: 1) Channel and Vegetation Maintenance, 2) Partial Channel Stabilization and Vegetation Maintenance and 3) Full Channel Stabilization and Restoration.

The stream restoration design project includes development of restoration concept drawings, initial assessment of channel hydraulics, the recommended plan's concept overview drawing and preparation of a Restoration Concepts and Recommended Plan summary memorandum. The project team and stakeholders selected the Partial Channel Stabilization and Vegetation Maintenance plan approach as the best value in terms of addressing the key project goals while minimizing cost and reducing impacts to healthy sections of the existing stream corridor.

The final deliverable for the stream restoration project includes a package of construction drawings that can be used by Metro West to obtain construction bids to implement the recommended improvements. Prior to developing the construction drawings, Metro West will use the recommended plan concept drawings and details to obtain an initial estimate of construction costs in an effort to reassess the available budget.

For more information, please contact Stacey Eriksen, EPA Region 8, eriksen.stacey@epa.gov.