Environmental Justice (EJ)
Workgroup

EPA Local Government Advisory Committee's *EJ Best Practices for Local Government*

Message from the LGAC Chair:

EPA's Local Government Advisory Committee is chartered for 30 local elected and appointed officials across the nation, representing the perspectives of large, small and diverse communities. We bring the perspectives of our communities to EPA through our collective and collaborative work. Environmental justice is an issue we care deeply about and it is reflected in all of our recommendations to the EPA.

I want to thank the work of the LGAC Environmental Justice Workgroup, especially Mayor Lisa Wong, Chairwoman and Dr. Hector Gonzalez, Vice-chair, for their work in spear-heading this report. This report contains many examples of the successful work in our communities in order to further sustainability and resiliency. It also illustrates the creative solutions we find in local government to address environmental challenges. We hope that by sharing this information it will be helpful to other communities as they work to solve their own environmental justice challenges. We firmly believe that by working together we will achieve sustainability so that all can share in our common wealth.

- ***Mayor Robert Dixson, Chair of LGAC***

Message from the Workgroup Chairwoman:

Environmental justice is a major issue that is often overlooked. The unfortunate reality is that many local cities and towns across America have low-income and minority communities that are especially vulnerable to public health disparities, environmental damage, and other related problems. LGAC members have noticed this disparity, and have worked within our own communities to develop plans to revitalize vulnerable communities and encourage economic growth in these areas using innovative strategies and to also share these successes with the EPA. ***–Mayor Lisa Wong, Chairwoman of LGAC Environmental Justice Workgroup***

Photo sources for cover (clockwise): City of Laredo Dept. of Public Health Website; Mayor Johnny Dupree; Michael Wenstrom, EPA Region 8; EPA, City of Greensburg website

Executive Summary

A clean and safe environment is essential for communities to thrive and prosper. In local governments we share a vision that environmental protection and health are integrated and can be a reality for all of our citizens. When gaps arise, we take deliberate actions to reduce health disparities and safeguard our environment, especially for those most vulnerable to adverse environmental conditions. For low-income, minority, and rural residents however, there remains the risk of exposure to pollution, hazardous run-off and lack of resources for clean air and water. These residents only make up a small subset of America's total population, but they have had to pay the greatest price in terms of health risks and environmental damage because their communities are involuntarily located near pollution sources and hazardous emissions.

Photo Source: EPA Website

In this Report, we have outlined some of these present challenges; we have also put forward case studies of innovative problem solving strategies in our LGAC Members' communities where we have documented positive environmental and public health outcomes. In our advisory role to the EPA, we put forward recommendations coming from our unique perspectives in order to strengthen our partnership for positive environmental outcomes. We hope that by sharing our story, it will inspire others to overcome environmental justice challenges to promote environmental and economic vitality for *all* our nation's communities.

Contents

Photo: City of Fitchburg, Massachusetts Source: City of Fitchburg Website

What is Environmental Justice?

Environmental Justice is the fair treatment and meaningful involvement of all people, regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.[1] Environmental quality affects people in all communities, regardless of income level, race, identity, religion, or any other social or demographic factor.

Unfortunately, the benefits of a clean environment are not always equally shared. Many communities across the nation that are predominately made up of racial minorities and low-income families still face environmental challenges. These factors greatly affect their quality of health and well-being.

Environmental Justice Matters to Local Governments

Environmental justice concerns exist all over the country, from urban areas to isolated rural towns. Sometimes, state or federal initiatives are too broad in scope to adequately address the specific problems that plague individual communities. This is where local government action can make a visible difference. Local governments are more familiar with specific needs of their community, and often have a greater knowledge of physical environmental resources that affect them. This enables actions to be tailor-made to address the problem and to adjust changes as necessary. Implementing successful local programs can lead to incorporation of previously isolated communities into the larger social network, which enables greater access to resources. This access can help revitalize the communities further and increase the standard of living for residents.

Challenges to Local Communities

Infrastructure

In order to support and sustain prosperous communities, there has to be reliable infrastructure. For many communities, however, the basic provision of clean and safe water infrastructure is often inadequate. And this lack of adequate infrastructure affects communities' ability to attract businesses and achieve economic prosperity.

[1] EPA definition of environmental justice http://www.epa.gov/environmentaljustice/resources/policy/plan-ej-2014/plan-ej-2011-09.pdf

Photo source: Commissioner Robert Cope

The cost to replace and upgrade aging water systems can easily be millions of dollars. Large cities and metropolitan areas can leverage state grant or loan funds, making it easier to fund large-scale projects. Local cost share portions required for grants are often available for larger populations as well. However, for small communities (populations fewer than 10,000 people), as well as low-income and minority communities, the cost per capita bears an even larger burden on residents, which can impact cost share options. Therefore, the cost of replacing water infrastructure takes up a significant portion of a community's budget. A prime example of this can be found in Salmon, Idaho, where the cost to upgrade the drinking water system to meet drinking water standard costs approximately $6 million. Among a small population of 3,000, with 19 percent under the poverty level, a water bill that constitutes 5 percent of their income is significant.

Drinking Water

Clean and safe drinking water is essential for all people. However, disparities exist in the quality of drinking water systems. For example, some communities along the U.S.-Mexico Border, Alaskan Native Villages and other rural, small communities often have poor drinking water quality, as well as inadequate drinking water infrastructure. Issues that affect drinking water quality include source water quality, transmission, storage, maintenance, monitoring, and access to technical and financial resources. It is difficult to identify and assess how to better address system quality issues because there is a lack of available data on drinking water systems. There are also documented instances where lead is leached from service lines, particularly in older neighborhoods and in disproportionately low-income and minority communities.

In general, affordability is a significant issue for disadvantaged, low-income and rural communities desiring to improve their drinking water infrastructure. Many small, low-income communities simply cannot afford the cost required to replace or upgrade drinking water infrastructure. Regulatory compliance may also create additional burdens on a community struggling to provide safe, quality drinking water when there are no funds allocated or available for improvement projects.

Air Emissions

Emissions of harmful and sometimes toxic air pollutants can be found across many industrial sectors. Power plants and petroleum factories are common emissions sources, but these are not by any means the only air pollutant sources. The table below lists some other sources of air pollutants.

General Source	Specific examples
Agricultural Activities	Agricultural field burning, fertilizer application
Shipping	Emissions from diesel-fueled vessels and trucks
Dust	Roads (paved and unpaved), construction
Fire	Wildfires and prescribed burning
Indoor Sources	Cleaning products, building materials

Source: EPA Office of Air and Radiation

Low-income, minority, and rural communities are especially susceptible to adverse air effects because many facilities that emit air pollutants are sited within or near these communities. A study conducted by the Government Accountability Office in 1983 confirmed that the populations of the communities in 3 out of 4 landfill siting locations were predominately African-American residents. In addition, at least 26 percent of the residents in communities near siting areas had incomes that were below the poverty level. Having landfills and other hazardous sites in close proximity to communities often exacerbates exposure to toxic air pollutants that can severely impact public health. [2]

Sustainability

Green Infrastructure

From big cities to small towns, stormwater runoff can be a major problem. Excessive, uncontrolled stormwater runoff can result in extreme flooding that causes contamination and pollution. Urban areas are especially at risk for this type of pollution. Regardless of the location, uncontrolled stormwater runoff raises concerns of public health and safety for all members of the affected community. Green infrastructure can help to mitigate the adverse effects of stormwater runoff by absorbing and filtering water to reduce pollution. Utilizing vegetation, soils, and other natural elements, green infrastructure helps urban areas create healthier, more manageable environments. It can also protect against floods, pollution, and water contamination. Green infrastructure methods can be applied to buildings, cities, wetlands, or coastlines. These practices include planting trees, adding vegetation, preserving wetlands, and monitoring watersheds. By incorporating technology and engineered systems into water management methodologies, green infrastructure encourages areas of high development to maintain a natural water cycle. This approach also gives cities and communities opportunities to create green spaces and parks as multi-use areas.

---

[2] Government Accountability Office: *Natural resources and environment: siting of hazardous waste landfills and their correlation with racial and economic status of surrounding communities* (1983)

Brownfields

In communities throughout America, a legacy of industrial development has left behind abandoned industrial buildings and abandoned pollution problems. In some cases, this pollution has left blighted and abandoned waterfronts. For example, communities in the Northeast have housed paper and plastic mills, while Gulf Coast communities have more recently become oil refinery hubs. Many of these industries typically require intensive resources and produce large quantities of byproducts and in some cases toxic wastes. When an industry closes or moves elsewhere, the land that previously held factories is abandoned, leaving contaminated lands that bring down community property values and expose community members to harmful pollutants. These areas most often have communities directly in the pathway of exposure to potentially harmful emissions.

While they appear to be obstacles upon first glance, these brownfields can offer a great opportunity to revitalize the land. Cleaning up previously contaminated lands can remove pollution sources, which can result in cleaner communities. It also opens up economic opportunities by creating space for commercial redevelopment. For example, these areas can be converted to public parks, residential neighborhoods, or new businesses.

Access to Resources

Low-income and minority communities often lack access to valuable resources. Such resources include health care facilities, public utilities, and even grocery stores. These resources are taken for granted by most communities in America, but they are a luxury for vulnerable communities. These communities often lack information to avoid the impacts of climate change and/or exposure to environmental hazards. Such resources could help them avoid harmful impacts to diminish harm.

Public Health

Public health and well-being is an issue that is of the utmost concern to most citizens. Environmental justice strives to provide equal access to adequate health services and healthy environments for *all* citizens. Numerous studies have shown a relationship between minority populations, income levels, and overall quality of health. In almost all cases, low-income, minority populations have reported a greater amount of health issues than higher-income, predominantly white populations. Common health concerns include:

- Increased risk of heart disease
- Higher obesity rates
- Respiratory problems
- Greater occurrence of Type II diabetes

A study by Taylor et al. examines park and recreation infrastructure, and the effect that it has on communities. [3] This study concluded that low-income communities generally do not have as much access to community parks and public pools as higher-income communities. Not only does this lack of recreational resources reduce a sense of community pride, but it also decreases the amount of time spent outside, and consequently, the average amount of outdoor physical activity per individual. This effectively puts community members at a higher risk of developing heart disease, obesity, or diabetes. Low-income, minority community members who do not have access to parks experience lower levels of physical activity than more affluent community members.

In addition to the increased vulnerability to dangerous diseases, there is the lack of available and affordable resources to treat important health issues in low-income, minority, and rural communities. Citizens in these vulnerable communities have a decreased quality of life due to increased risks of health hazards and higher susceptibility to diseases. The environmental justice movement aims to address these disproportionate health concerns and promote greater access to helpful resources.

Climate Change/Adaptation

Climate change effects are a pressing matter for all of our nation's communities. However, minority, low-income, and rural communities are particularly vulnerable to the consequences of climate change. Furthermore, low-income and minority populations often lack funds for climate adaption measures, such as flood-proofing homes or other flood control options to address adverse climatic events or sea level rise. Mitigation measures are not always effective for vulnerable communities. Many individuals have to use the "last resort" course of action of retreating and moving elsewhere. However, many low-income residents lack the financial capital to find a new place elsewhere. And some are not willing to sacrifice their personal and cultural identity that is associated with the land on which they currently reside. This means that community leaders are often facing an uphill battle to make their communities' voices heard and secure protection from the economic and environmental harm resulting from climate change.

City of Bridgeport, CT Photo Source: City of Bridgeport

One of the major obstacles preventing low-income and minority communities from properly addressing climate change is the lack of opportunity for public engagement. In many cities and towns across the country, underserved communities are often underrepresented in public decisions, if they are even included at all. It is up to local governments to not only engage

[3] Taylor, W; Floyd, M; Whitt-Glover, M; Brooks, J. Environmental justice: *A framework for collaboration between the public health and parks and recreation fields to study disparities in physical activity* (2007)

vulnerable communities, but also to empower their citizens to use the public dialogue as a way to spur change in their communities.

EPA Office of Environmental Justice (OEJ)

The EPA created the Office of Environmental Justice (OEJ) in 1992 to further examine issues pertaining to environmental justice. This office provides many resources to increase public awareness of environmentally vulnerable communities, such as published reports, fact sheets, and web tools that identify communities particularly at risk for environmental justice issues.

Over the past few decades, special consideration has been given to the importance of environmental justice. One landmark moment for the movement occurred in 1994, when President Clinton signed Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*. The Order requires all Federal agencies to consider the environmental impacts of any program, policy, or action on minority and low-income populations in the United States and all associated territories and possessions.

E.O. 12898 also effectively created the Interagency Working Group on Environmental Justice to be convened by the EPA Administrator and comprised of the heads of several major federal agencies. This workgroup is charged with the following tasks:[4]

1. Provide criteria to identify disproportionately adverse health or environmental effects on minority and low-income populations
2. Coordinate with each Federal agency to develop an environmental justice strategy
3. Conduct research in cooperation with the Environmental Protection Agency, the Department of Health and Human Services, the Department of Housing and Urban Development, and other participating agencies
4. Coordinate data collection; examine data and studies on environmental justice
5. Hold public meetings
6. Develop interagency environmental justice projects

EPA's Plan EJ 2014

Plan EJ 2014 is a roadmap that helped EPA to integrate environmental justice into the Agency's programs, policies, and activities. Plan EJ 2014 is named in recognition of the 20th anniversary of President Clinton's issuance of Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*. In implementing the Plan, EPA sought meaningful engagement with communities and stakeholders. The goals of the plan are to:

- Protect health in communities over-burdened by pollution

[4] *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations;* Federal Register, Vol. 59, No. 32. [http://www.archives.gov/federal-register/executive-orders/pdf/12898.pdf]

- Empower communities to take action to improve their health and environment
- Establish partnerships with local, state, tribal and federal organizations to achieve healthy and sustainable communities.

Plan EJ 2014 *is not a rule or regulation*. It is a *strategy* to help integrate environmental justice into EPA's day-to-day activities.[5] Plan EJ 2014 provided the agency with a blueprint of EPA's top EJ priorities and a plan of action to focus assistance on addressing EJ challenges. Plan EJ 2014 actions are tracked within EPA's Strategic Plan.

Environmental Justice- *Plan Forward*

EPA made great strides in gaining environmental equity by setting forth a course of action to address EJ challenges through Plan EJ 2014. Local governments benefited immensely by having access to this clear strategy that aimed at improving the environmental and public health of our nation's communities. Local governments valued this type of transparency and strategic direction to assist in planning at the local level. The LGAC looks forward to the next iteration of EPA's Plan EJ 2014 so that we can continue to progress and advance our local goals for areas that still struggle with EJ issues.

Challenges of Rural Communities

Salmon, Idaho

The town of Salmon is a small rural community that lies near the north-central border of Idaho. The Salmon River runs straight through the area, which is rich with history of the Lemhi Shoshone culture and is also home to Sacajawea. The city has seen a decline in the mining and timber industries, both instrumental to Salmon's economy, which have left many in the community under-employed and scrambling to make ends meet. Approximately 19 percent of Salmon residents live below the poverty line, a considerable number considering the fact that the town only has about 3,000 residents. Many residents tend to work two or three jobs, mainly in the retail or service sector, to make ends meet. In most cases, these jobs still are not enough to keep families afloat. Additionally, a large percentage of their monthly income (up to one-fourth) must be spent just to have basic access to clean, safe drinking water and proper wastewater management systems.

Photo source: City of Salmon Webpage

Local organizations, along with regional state agencies, have stepped in to help Salmon and other similar towns by setting up food banks. The food banks are open once or twice a week, and provide staple foods for families and individuals in need. The program was initially successful, but as more people flocked to food banks after a series of severe layoffs, the food

[5] Plan EJ 2014- EPA Office of Environmental Justice [http://www.epa.gov/environmentaljustice/plan-ej/index.html]

sent to food banks started to run out faster. The food shipments are shipped from far away, so it has been difficult to keep up with the demand of rural, isolated communities. Many communities face similar struggles to obtain important resources on a regular basis. For environmental justice, it is important to connect vulnerable communities to the resources necessary to promote economic growth and protect community well-being.

Arcadia, Oklahoma

The Town of Arcadia is a rural community of 279 residents located approximately 15 miles north of Oklahoma City. The town was created in 1987 by Executive Order action of the Governor. Arcadia has median income of $26,000 for a family. The Town of Arcadia was seeking to upgrade its infrastructure by providing municipal drinking water system in order to comply with updated drinking water standards, but lagged behind in its ability to achieve state funds to assist with this infrastructure. Historically, there had been an employee of HUD who served as an ombudsman to assist small communities in obtaining grant resources. That position was cut, and towns in Oklahoma like Arcadia lost this valuable assistance. Arcadia was faced with a 1.8 million dollar price tag on the new drinking water system that would be shared by the 279 residents, making the infrastructure upgrade goal seem unobtainable. It was not until EPA Region 6 began work with the town of Arcadia, the state, and an adjacent city that assistance came through the State DEQ to provide assistance that enabled the town of Arcadia to buy water wholesale through a long term agreement. It is through focused intergovernmental cooperation that Town of Arcadia was able to secure clean and safe drinking water service to the community. The Town of Arcadia will soon begin construction on the municipal water system for the residents of Arcadia.

Arcadia Historic Barn, Photo Source: City of Arcadia webpage

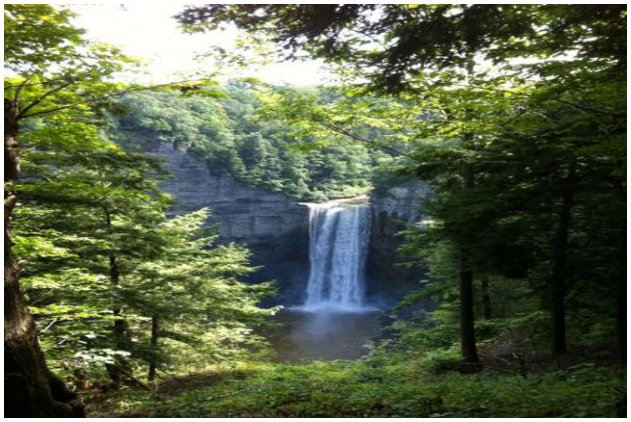


Photo Source: Elizabeth Thomas

Ulysses, New York

The Town of Ulysses is a rural agricultural village located in the Finger Lakes region of New York State, near Cornell University and Ithaca College. The Town of Ulysses' water district 3 was built in response to a leaking gas station tank that contaminated drinking water wells in the hamlet of Jacksonville. Unfortunately, this small system (387 users) consistently exceeds the federal limits for total trichloromethane because it is at the end of the Southern Cayuga Lake Water System in a rural area where the demand

is low, allowing water to stay in the pipes for months. This leads to an accumulation of chlorination by-products. The best solution would be to connect the Jacksonville water district with Trumansburg -- a 1 mile connection compared to the 11 miles the water currently travels. This connection is estimated to cost $1,000,000 to the 387 users in this water district. The area has a low to middle income range, but exceeds the income threshold to qualify for any grants. Each household already pays $562 per household to cover the operation, maintenance and existing loan plus a quarterly usage fee. The costs associated with sewer and water systems is large, which acts as a disincentive to correct problems, resulting in aging systems. And under New York State's tax freeze, municipalities are prevented from being able to address the aging infrastructure problems they know exist.

Local Communities Take Action

Several communities across America have taken steps to overcome the obstacles that pose major threats to the success of minority, low-income, and rural communities. Community leaders have used education, public outreach, planning methods, and collaborative measures to improve their towns and better protect citizens from environmental harm. Many of these approaches to engage EJ-troubled communities have shown investment upfront, but these community leaders have demonstrated that there can be economic benefits for the entire community by addressing EJ concerns.

Connecting Communities and Local Government

Bridging the gap between underrepresented communities and their local government is a vital step to successfully combat environmental justice issues. This process can be quite challenging at times, especially when there are cultural, communication and physical barriers between communities with environmental justice concerns and the larger areas overseen by local governments. Faced with environmental and public health challenges, we offer the following case studies, all of which engaged citizens to solve these environmental challenges.

Kansas City, Missouri

Kansas City is a good example of how steps to improve environmental sustainability can be achieved through community engagement. A court order under a Clean Water settlement required the city to reduce Combined Sewer Overflow (CSO) discharges and stop all sanitary system discharges by 2025. This order was issued in the face of sewer backups and flooding, as well as increased bacteria levels in Kansas City’s water source. Funding for this project was in short supply, so the local government turned to its citizens to engage them in creating innovative solutions. This public engagement sparked an outflow of innovative ideas to reduce stormwater sewage leaks while improving the overall life of the community. After much deliberation and public input, the city officials developed a plan to reduce stormwater runoff in an EJ community aimed at revitalization by setting up green infrastructure projects. Such projects included cultivating rain gardens, installing porous sidewalks and permeable pavers, and creating stream buffers. These projects were supplemented by home repairs throughout

the neighborhood. The result was a vastly enhanced area of town, with increased property values, as well as improved parks and other community spaces. Stormwater runoff was decreased by a value between 36-76%. The importance of local government and citizen collaboration cannot be understated.

Bridgeport, Connecticut

The City of Bridgeport, Connecticut developed a plan to revive areas of its town by expanding its park system. In the eyes of city officials, a more expansive park would help the community in two ways. The new parks would serve as additional green infrastructure for the city, effectively reducing stormwater costs, mitigating air pollution, and thereby increasing the city's overall resiliency to climate change. The project would also increase public accessibility to these common areas and would subsequently increase property values in various neighborhoods. Bridgeport created three new parks, complete with waterfront access, improved bike paths, recreational programming, playgrounds, and sustainable maintenance strategies. The park created a natural filtering on parkland that reduced stormwater by 97,570,000 cubic feet annually, which relates to a savings of $751,289 in stormwater treatment. Bridgeport's tree canopy makes up 27% of the total land, which equates to $860,405 worth of pollutant removal. Studies have shown that properties located within 0.1 mile of a Bridgeport park are valued between 8% and 11% higher than those properties located more than 0.1 miles away from a Bridgeport park. The City of Bridgeport example highlights how public access to parks can improve the environmental health and economic stability of a community. The City's BGreen 2020 Plan also assures sustainability for all for the future.

Salt Lake City, Utah

The West side community of Salt Lake City, Utah is home to a large refugee community representing migrants from over 20 countries, most of whom have left oppressive government regimes and social unrest. A sense of distrust toward government organizations is an issue that further isolates foreign-born residents who live in the West Side community from the rest of Salt Lake City at large, causing problems for both the West Side community and for aid organizations. The West Side community also has significant health disparities in relation to Salt Lake City as a whole. This public health gap is especially apparent among children, who are at an extremely high risk for diseases. Effective outreach has been difficult because of cultural and linguistic barriers. In order to address this issue, EPA Region 8 teamed up with *Communidades Unidas*, a local grassroots organization founded by members of the Latino community in West Side. This partnership delivered a better understanding of community concerns. Programs were then developed to improve engagement with the West End community and enable community members to take a more active role in public affairs. The project successfully trained a group of dedicated individuals who could voice public health and environmental concerns on behalf of their community. This level of public engagement has helped the city to assist the West Side community to build environmental resiliency and spur economic growth.

Fitchburg, Massachusetts

The paper mill industry had historically acted as a major driver of the economy in Fitchburg, Massachusetts. With the closure of the paper mills in the mid-twentieth century, Fitchburg took an economic nose dive. Large job layoffs pushed the unemployment level above the state average. Besides high unemployment came the challenges of contaminated brownfields of the abandoned paper mill properties. Health concerns have also plagued the community. Childhood obesity and post-partum depression have become especially prevalent in the community. This challenge was taken on by Mayor Lisa Wong. Mayor Wong analyzed the trends and put her knowledge as an economist to use by formulating an innovative economic development program. This measurement tool was used to collect information and create an impact report card. The analysis measured the community's overall well-being by looking at both traditional economic factors and aspects that are not measured by the economy, such as the environment, socioeconomics, and public health. This assessment allowed local officials to develop strategic plans that could both spur economic growth and increase social well-being. One plan that was especially successful for economic growth was a project to revitalize the Nashua Riverfront. This project involved the creation of a river access point in an area that was previously blocked off by the paper mills. Having a new access point not only increased revenue through river tourism, but it also created an outdoor community space, which brought people and businesses back to the river. This resource, which was once an eyesore, became the thriving natural resource on which the city flourished. The connection to the river brought people back to nature and provided pathways for people to explore, improving public health and quality of life. The Fitchburg example shows that local leadership focused on improving the viability of vulnerable communities can bring positive outcomes to a community.

Prince George's County

Like many urban and suburban areas, stormwater runoff has become an increasing source of pollution in the Washington, DC metro region resulting in unswimmable and unfishable waterways and continued distress of the Chesapeake Bay. Like other jurisdictions nationwide, the County faced increased regulatory demands to control runoff pollution. To meet these demands in a manner that reduced costs, maximized efficiencies, and create socio-economic benefit for local communities, the Prince George's County Department of the Environment, led by Adam Ortiz and Larry Coffman, turned a regulatory requirement into a thoughtful stimulus program for the local economy. The agency created a Public Private Partnership (P3) approach that leveraged the strengths of the public and private sectors to encourage local business participation in a comprehensive urban stormwater retrofitting program. This innovative model has won the support and engagement of the White House, private industry schools, local entrepreneurs, contractors, faith-based communities, non-profits and the local community college. The partnership has resulted in new management practices that have controlled runoff and flooding, prevented stream erosion, and reduced pollutants in a manner that have helped put raingardens and other stormwater devices into the ground, expands local businesses, creates workforce pipelines.

Mississippi Mayors Encourage Collaborative Problem Solving

Photo source: Mayor Johnny Dupree

Rural communities in Mississippi have turned the old adage of "strength in numbers" into a new solution for overcoming environmental justice obstacles. Towns and cities throughout the state came together in Atlanta, Georgia on February 5, 2015, to meet with EPA Region 4 and other federal agencies and begin to brainstorm regional approaches to solve EJ issues. These issues include high rates of poverty, low median incomes, and aging, inadequate water infrastructure. The Mississippi Conference of Black Mayors has long recognized that there are no quick fixes to these issues, but by providing a forum for communities to come together, they can focus on creating infrastructure, environmental, public health and economic solutions one step at a time. Many of these small communities have trouble getting access to healthcare, water infrastructure, and other resources. Such struggles are compounded by the continuous clean-up efforts still left over from the damage induced by Hurricane Katrina and extreme weather events related to climate change, such as flooding. In rural Mississippi, local leaders have not been defeated, but have instead built coalitions among small towns to encourage innovative partnerships aimed at overcoming these challenges and building sustainable solutions. This network of regional leaders work together to identify and reduce sources of environmental risks across the area. This best practices approach of uniting at a regional level ensures that no community is left behind, regardless of location or demographics.

Laredo, Texas

The city of Laredo, Texas, is the second largest port in the nation and is located on the North bank of the Rio Grande River in South Texas. Laredo's residents have struggled with a longstanding condition of health disparities, which can be attributed to the city's location along the border, limited access to health care services, and medically underserved population. To address the health care issues, Laredo city officials have worked on several programs to protect human health, increase public participation in government, and develop Laredo into a sustainable, thriving community. The Active Living Plan was introduced by city officials as a strategy to encourage healthier lifestyle decisions for all Laredo residents. Features of the program include incorporating exercise into employee work schedules and serving healthier food options at schools for both students and faculty. Active citizen participation in local

government has been supported through the Citizen's Environmental Advisory Committee (CEAC). CEAC is a group of professionals and environmental advocates hailing from a diverse range of backgrounds that weighs in on proposed city plans and ordinances, effectively providing a voice for citizens. All CEAC meetings are publicly announced, and public comment periods are available for issues brought before the committee. When a consensus is reached on an issue, a recommendation letter is drafted and sent to the decision-making body, the city council. Laredo prides itself on committee transparency and active participation among community members. In addition, the Greenspace Ordinance requires that developers leave green space when undertaking a new development project. This provides Laredo citizens with more outdoor community space, which in turn, improves overall health and well-being.

Greensburg, Kansas

Source: City of Greensburg Website

The town of Greensburg, located in the heart of the prairie, is about 60 miles west of Wichita, Kansas. The town was founded in 1886, with a population size of approximately 1,400 people. Agricultural, oil, and gas industries sustain its economy. This idyllic rural prairie town was nearly destroyed when a disastrous F-5 tornado roared through the town in 2007, demolishing approximately 95% of the city. The tornado left in its wake a path of destruction, but the hearty and faithful people of Greensburg pulled together to rebuild almost immediately. Greensburg residents immediately began to create a new vision for their town, showcasing new green building and renewable energy. Eight years after the tornado, Greensburg is the world's leading community in LEED-certified buildings per capita. The town is home to eight LEED-platinum certified buildings, including a new City Hall, a business incubator for public-private partnerships, the new 48,500-square-foot Kiowa County Memorial Hospital, and the Kiowa County School in School District 422. Renewable energy powers the entire community. The streetlights are all LED, and the sustainability efforts provide unique educational opportunities for youth and the community. Rather than moving away, the Greensburg residents turned a disaster into opportunity and succeeded in creating a vision to rebuild a sustainable community. Greensburg's efforts are paying off; with thirteen Greensburg buildings, the town is saving a combined total of $200,000 in energy costs per year by utilizing wind energy. Private enterprises have also embraced the innovative green initiatives.

Santa Barbara, California

Ports are vital hubs of American prosperity through their transport of imports and exports. However, diesel-fueled cargo ships and transport trucks can emit large quantities of nitrogen oxides, particulate matter, sulfur, and other greenhouse gas emissions into the atmosphere and into the channel of the Santa Barbara County coastline. These emissions are known to have disproportionately higher effects on low-income and minority populations who live in surrounding communities, compared to the communities located further away from ports. The

Santa Barbara Air Pollution Control District, NOAA's Channel Islands National Marine Sanctuary, and the Environmental Defense Center addressed this air quality issue by developing the Vessel Speed Reduction Trial Incentive Program to reduce the speed limit of cargo ships as they enter ports. The program was inspired by a study that determined a correlation between vessel speeds and fuel consumption. The study found that reducing ship speeds by any given amount results in a greater than proportional reduction in fuel consumption. COSCO, Hapag-Lloyd, K-Line, Maersk, Matson, Mitsui O.S.K. Lines and United Arab Shipping Company participated in the trial program through voluntary agreements to reduce ship speeds from 14-18 knots to 12 knots for 27 trips through the channel between July and November 2014. Each shipping company incentive payment was $2,500 per trip. This program has resulted in a 16 ton reduction of nitrogen oxide and a 20 metric ton reduction of greenhouse gas emissions, a 50 percent drop from the baseline emissions of each pollutant.[6] This comprehensive partnership between local government, federal government, a non-profit organization, and the shipping industry provided an inexpensive method to substantially cut down on toxic air emissions. It has also paved the way for future air emission reduction programs in the area.

Gary, Indiana

Gary, Indiana, is located on the border of Lake Michigan, about 25 miles southeast of Chicago, Illinois. The city of Gary has its root in the steel industry, which has heavily declined in recent years. The city shares the difficulties of other rust belt cities, such as unemployment, decaying infrastructure and educational attainment gaps. The downturn of the steel industry and declining job opportunities left abandoned industrial sites, bankrupt businesses and vacant residences. These brownfields originated years ago; businesses lacking sufficient cash flow would close, leaving behind vacant structures that sat for decades. Through the leadership of Mayor Karen Freeman-Wilson, the Gary Redevelopment Division took action. To start the citywide makeover, the city partnered with the University of Chicago's Harris School of Public Policy, the Center for Community Progress, and LocalData to launch a comprehensive survey of the city's 50 square miles. This 18-month survey process involved almost 200 volunteers. The project not only fueled community pride and education, but also served as a vital source of data for the planning of future revitalization efforts. The information collected from the survey will be used in decision-making to formulate a master plan the sustainable rebuilding of the great City of Gary.

LGAC Findings and Recommendations

Forum to discuss and collaborate on solutions

[6] Protecting blue whales and blue skies: results from 2014 ship speed reduction trial in Santa Barbara Channel; Santa Barbara County Air Pollution District, Channel Islands National Marine Sanctuary, National Marine Sanctuary, Environmental Defense Fund; Pub. March 3, 2015

Finding: Low-income, minority, and rural communities often lack the resources to collaborate with one another on environmental and public health solutions.

Recommendation: EPA regions should facilitate regional meetings with low-income, minority, and rural communities, bringing together federal and state agencies which may be of assistance to discuss and brainstorm pathways forward.

Lack of basic infrastructure

Recommendation: EPA should continue to work with Integrated Planning, particularly with low-income, minority, and rural communities in order to identify funding sources for water infrastructure and provide low cost options.

Recommendation: EPA should work with USDA to identify strategies for communities to fund infrastructure needs in low-income, minority, and rural communities.

Recommendation: EPA should look for funding opportunities within the Water Infrastructure Finance Innovation Authority (WIFIA) under the WRDA to provide funds for water infrastructure for low-income, minority, and rural communities.

Access to resources to address community problems

Finding: Low-income, minority, and rural communities often lack the capacity to access resources or often lack information on how to access information. Often, this information is written in English and is not available in multi-lingual media.

Finding: Low-income, minority, and rural communities are also on a digital divide and may not have network connections or email accessibility for online trainings or online resources.

Recommendation: EPA should provide online resources and one-to-one training targeted at low-income, minority, and rural communities to address community issues.

Recommendation: EPA should provide resources to foster peer-to-peer learning and sharing opportunities to address community issues and challenges.

Recommendation: EPA should foster opportunities to facilitate other federal and state agencies to come together for the benefit of low-income, minority, and rural communities.

Recommendation: EPA should meet with the low-income, minority, and rural communities to learn from their perspective what their needs and concerns are.

EPA's Plan EJ 2014 as a strategic plan for EJ issues

Finding: EPA's Plan EJ 2014 established a set of strategic goals and a statement of concrete actions the agency will take over a multi-year time to address environmental and public health disparities. Plan EJ 2014 has been implemented and the agency needs to develop a follow up plan of action.

Recommendation: The EPA should consider drafting a comprehensive blueprint for advancing environmental justice, particularly identifying and outlining steps to follow Plan EJ 2014.

Recommendation: The EPA should carefully weigh the impacts of climate change on vulnerable communities, particularly those with EJ concerns, and address these impacts in a strategic plan so that no community is left behind.

Conclusion

Environmental justice is a wide-ranging issue that affects low-income, minority, and small rural communities. Many communities continue to struggle in 2015 without the adequate resources to address major environmental and public health concerns. These challenges include lack of access to resources, contaminated land, inadequate water infrastructure, climate change threats and health disparities. This gap contributes to a divide between "those who have" and "those who have not," which challenges *all* of our communities. Some communities struggle to achieve long-term sustainability, which degrades the overall quality of life for all citizens. Low-income, minority, and rural communities are left without the means by which they can improve their situations. Although federal and state governments have acted to improve EJ and rural issues on a large scale, low-income, minority, and rural communities still have case-specific issues that have yet to be solved.

Such complex, enormous challenges require creative approaches to encourage success in EJ impacted and rural communities. Local governments are on the frontline of these solutions. This report highlights innovative examples where LGAC members have put forth our leadership to address these challenges and to make a visible difference in our communities. These ideas have ranged from the creation of private-public partnerships, to forming local networks, to increasing public health awareness and education. The approaches we have identified in this report can serve as examples for other vulnerable communities faced with similar environmental justice obstacles.

The LGAC appreciates that the EPA has worked hand-in-hand with local governments in a partnership with the states and tribes to address EJ issues. The LGAC recognizes that Plan EJ 2014 was hugely successful in establishing the partnerships at the local level and setting forth a clear direction of transparent goals. We believe that moving forward with this type of plan can

further assist communities with environmental justice concerns, and can also be expanded to address the needs of rural communities.

The LGAC believes that, through the enlightened efforts and vision of local leaders, organizations, and community members, in partnership with the EPA, states, and tribes, we have already begun the journey to achieve the American dream of sustainable and thriving communities for all.

Acknowledgements

The LGAC and the Environmental Justice (EJ) Workgroup thank the EPA and Administrator Gina McCarthy for engaging communities large and small on the many issues affecting local government, such as environmental justice. The Committee also would like to acknowledge Mark Rupp, EPA's Deputy Associate Administrator, Intergovernmental Relations as well as Charles Lee, Deputy Associate Administrator for Environmental Justice in the Office of Enforcement and Compliance Assurance (OECA), for their continued support of and advocacy for local governments and environmental justice. We would also like to thank EPA staff, Victoria Robinson (OEJ), Kevin Olp (OEJ), Carleton Ely (OEJ), Michael Wenstrom (Region 8), and Shea Jones-Johnson (Region 4).

We also express our utmost appreciation for all of the communities we serve and the partners all too numerous to name who have made these projects a success. We also want to thank EPA Interns who have contributed to this Report: Jenna Behrendt, Jincy Varughese, and Jordyn Giannone. We particularly would like to acknowledge and thank Amrita Spencer, OCIR Intern, for hearing our interviews, listening to our stories and taking a creative and lead role in producing this Report. We would also like to acknowledge members of our staff who have assisted: Nate LaRose, staff assistant for Mayor Lisa Wong; Lisa Valencia (Supervisor Carbajal's office); Kathleen Hartfield (Mayor Johnny DuPree); Brad Pearson (Mayor Pro Tem Cindy Circo's office); Chelsea Whittington (Mayor Karen Freeman-Wilson's office); Macheal Brooks (Mayor Elizabeth Kautz); Shirley Posten (Prince George's County-Director Ortiz' office); Shurley Lazarus and Chris Anastasi (Mayor Bill Finch's office).

Finally, we would like to acknowledge the thousands of people who live with or have suffered from the impacts of pollution, or live downwind to toxic chemicals, smokestacks, toxic chemical fires, uncontrolled run-off. The issue of a clean and safe environment may be an issue of life and death for many with debilitating health issues of asthma, emphysema, heart disease and other illnesses. We also dedicate this Report to the many people of the environmental justice community who advocate and work toward a clean environment and public health on a daily basis: *We thank you*.

As local leaders, we are in some way taking the steps necessary to promote equity in public decision-making that will lead to a cleaner and safer environmental where everyone has an opportunity to live and thrive. We are so encouraged by the dedication, innovation and

wisdom of our many local government colleagues and partners who are making a visible difference in communities. *Thank you for doing your part!*

Bibliography

1. Government Accountability Office: *Natural resources and environment: siting of hazardous waste landfills and their correlation with racial and economic status of surrounding communities* (1983)

2. *Federal actions to address environmental justice in minority populations and low-income populations;* Federal Register, Vol. 59, No. 32. [http://www.archives.gov/federal-register/executive-orders/pdf/12898.pdf]

3. Santa Barbara County Air Pollution District, Channel Islands National Marine Sanctuary, National Marine Sanctuary, Environmental Defense Fund; *Protecting blue whales and blue skies: Results from 2014 ship speed reduction trial in Santa Barbara Channel*; Pub. March 3, 2015

4. Taylor, W; Floyd, M; Whitt-Glover, M; Brooks, J. *Environmental Justice*: *a framework for collaboration between the public health and parks and recreation fields to study disparities in physical activity* (2007)

City of Fitchburg, Massachusetts

Source for photos: Santa Barbara County Website, Agricultural Commissioner/ Weights and Measures Department
http://cosb.countyofsb.org/agcomm/

LGAC EJ Case Studies Appendix

Photo Sources: Santa Barbara County website (top); Brian Sorg (bottom-left); City of Kansas City website (bottom-right)

Appendix- EJ Best Practices for Local Government

Tip 1: Use of Green Infrastructure

Addressing Storm Water Challenges Through Community Involvement

Each year, an average of 6.5 billion gallons of untreated effluent are discharged from the sewer systems in Kansas City, entering local creeks, streams and rivers. Sanitary sewer overflows discharge another 100 million gallons annually. Sewer backup and flood events increase in likelihood if there is excess water after storms. As a result of these overflows surrounding water quality is impacted, changing flow volume and bacteria levels. Kansas City agreed, as part of a Clean Water Act settlement, to eliminate all sanitary system discharges and reduce CSOs discharge by 2025. The response to this court order was a movement to reduce greenhouse gas emissions, and involve the community in city decisions. ***Now, sustainability has become a core principle and part of Kansas City's identity.*** *The new plan to reduce emissions is a citizen directed effort, with tremendous benefits. To control floods along the Blue River, the city asked for 200 stakeholders input. Their suggestions led to use of natural weirs and jetties, along with natural buffers, to replace concrete channelization. This was very effective, less expensive, and less damaging for habitat and wildlife.*

"We wanted to talk about the CSOs, but the residents wanted to talk about sidewalks and maintenance." - Mayor Pro Tem Cindy Circo

An ideas fair in 2013 shared best practice approaches for community improvements by highlighting citizen empowerment and innovation.

Source: Sustainability in Kansas City

What's Unique about Kansas City: Why Green Infrastructure Worked

Environmental Justice was not a goal for Kanasas City but nevertheless, was a result of this project. Originally, it was an attempt to revitalize a neighborhood by building a tank for stormwater runoff to collect and be sent to a wastewater treatment plant. City Officials' main goal was for less stormwater collection in streets, less runoff entering the treatment system during storms, and to abide by the mandated court order.

Outreach: As the result of community meetings to find alternatives for funding, the project turned its focus to green infrastructure. Residents wanted a project that would increase property values, calm traffic and have other community improvements.

Location: The community where the pilot took place was an older neighborhood, with lots of vacant property. In addition to the program, officials marketed home repairs and remedied code violations. Property values rose, and the neighborhood has grown.

Project HighLighights

- The pilot project took place over 744 acres of an older neighborhood, utilizing green infrastructure to reduce storm waters. Improvements filtered pollution from runoff, and slowed down water to enable percolation through the soil. Projects included:
  - Rain Gardens
  - Stream buffers
  - Planting trees
  - Green Infrastructure
  - Permeable pavers
  - Porous sidewalk
- The expansion of the project to other neighborhoods will ensure equitable development.
- A main focus of the program is preservation of the environment through economic development.

For more information on this project, contact Brad Pearson at **brad.pearson@kcmo.org**

Key Partnerships

- The Wet Weather Solutions Program of Kansas City's Water Services Department was responsible for development of the plan.
- Parks and Recreation and Public Works were instrumental in program implementation.
- Outreach with the public and community groups was an essential component of the planning process.
- Public input was given at a number of meetings. To ensure continued involvement, timelines and reports on the project are available to the community.
- The Blue River Watershed Association collaborated with educators to create an educational program for school children.

"We work with businesses to make the city greener—not because it is a feel good trend, but because sustainability is a good business model." — City Manager and Mayor of Kansas City

Lessons Learned

- Rain Garden Initiative progress has slowed, due to limited finances.
- Funding was a large issue, and finding an approach that incorporates local, state and federal funding would be useful. As would an increase in sales tax for utilities.

Expected Outcomes

- Results from the pilot demonstrate a reduction of stormwater by 36%-76%
- The program will now expand into the rest of the city, and provide similar amenities
- Expansion will replace Gray with Green
  - Improve infrastructure
  - Restore side walks
  - Increase road and sidewalk maintenance
  - Utilize urban planning and green infrastructure to revitalize neighborhoods, further community improvements, and support economic growth
  - Reduce flooding
  - Increase property values and migration
  - Foster community collaboration
  - Create innovative ways for utilization of green infrastructure
  - Calm Traffic
- **Design firms now come forward with suggestions for how it will affect "other needs within the community in the area" — Mayor Pro Tem Cindy Circo**

Measurements of Progress

Throughout the project, success was determined by impacts on:

- Bioretention
- Sewer Rerouting
- Extended Dry Detention Basin
- Extended Wet Dentention Basin
- Rain Gardens
- Stormwater Reuse
- Strategic Sewer Separation
- Infiltration trenches
- Community satisfaction, through participation in meetings that notified the public of details regarding the program

Awards and Recognition

An educational program for elementary school children that explains the water cycle has been acknowledged for its success. The US Water Alliance invited City Staff to present the Middle Blue River Pilot Project at the National Urban Sustainability Leadership Conference in 2012. NACO spotlighted the Middle Blue River Basin pilot project in 2012.

Examples of implemented Green Infrastructure

Source: Investing in Kansas City: Improving Water Quality with Green Solutions

Challenges

- Distressed infrastructure in older neighborhoods made adjustments difficult.
- Persuading the private sector to disconnect from the sewer system was difficult. There was initial resistance to the development of a new system.

Visible Differences

- Restoration of a community
- Community involvement and empowerment
- Focusing on the triple line: economic, social and environmental sustainability, not the bottom line.

For more information on this project, contact Brad Pearson at **brad.pearson@kcmo.org**

Bridgeport, Connecticut

Sustainable Development that Mitigates Community Environmental Justice Issues

The Community

- Median income: $37,571
- 25% living below the poverty line

Connecticut Environmental Justice Act

The Connecticut Environmental Justice Act (Conn. Gen. Stat. Sec. 22a-20a) enacted in 2008 has provided the process framework for environmental justice inclusion as a matter of course and legal right in most major Bridgeport development projects. This groundbreaking legislation recognizes 25 low income municipalities (aka distressed municipalities such as Bridgeport) and low income neighborhoods in 34 other Connecticut towns as environmental justice communities; and mandates meaningful public participation in pursuit of ensuring appropriate public input and achieving environmental benefit agreements whenever siting of potentially major polluting facilities are proposed.

Under the Act, applicants who propose development of major polluting facilities in these environmental justice priority locations and file for a permit or siting approval from the CT Department of Energy and Environmental Protection or the CT Siting must develop a public outreach plan that must be approved, subject to a public meeting at least 60 days prior to a final decision. This plan must also include discussions with the chief elected official and the EJ community about mitigation measures to offset the proposed environmental hazards of the project.

BGreen 2020: Sustainability for the Entire Community

Source: Facebook, "Bill Finch"

Bridgeport, Connecticut's population has a median household income which is almost 30% less than the national median. There has been a need for a program that could promote economic development without exposing low-income and minority residents to environmental and health risks. Bridgeport has responded to this need by developing BGreen 2020, a comprehensive sustainability plan for the entire City.

A key structural element of this sustainability plan is its inclusiveness and grassroots community involvement. The concept arose from a partnership with the Bridgeport Regional Business Council ("BRBC") and is representative of all socio-economic strata and community stakeholders. As a former heavy-industrial coastal urban center with a disproportionately under-served and low income population, Bridgeport has instituted structural processes guaranteed to ensure environmental justice is a cornerstone of the City's future. A primary component of Bridgeport's plans for a sustainable and just environment is community participation.

In Bridgeport's green sustainable development initiatives the impacted community has been reached out to and fully engaged to achieve a consensus regarding project scope, community impact and environmental benefits to mitigate or offset negative effects. The goal, and the result, in each instance has been smart, eco-sensitive, sustainable development with climate change mitigation achievements and environmental justice for all stakeholders. The City's environmental justice community collaboration consistently has been in compliance with the letter and spirit of the Connecticut Environmental Justice Act.

Parks: A Form of Green Infrastructure and Source of Revitalization

In 2012, the City of Bridgeport began efforts to significantly increase its park land in hopes of improving access for the public while revitalizing neighborhoods. The city analyzed access to park land as well as access to cars, income levels, and population density in different areas to assess need.

Bridgeport's park expansion included planting trees in park areas and neighboring streets. Tree canopies in cities help filter common air pollutants like carbon dioxide, ozone, sulfur dioxide and particulate matter. Bridgeport's tree canopy currently makes up 27% of the city's land and a USDA study found that the pollutant removal done by the city's canopy is valued at $860,405. The natural filtering provided by soil on park land reduces stormwater runoff by 97,570,000 cubic feet and saves the city an estimated $751,289 in stormwater treatment. An expanded park system is also expected to protect Bridgeport's communities and reduce damage to neighborhoods from floods and other extreme weather events.

These park projects also stimulated redevelopment in the city, primarily the east side and downtown. A recent study found that commercial and residential properties within .1 mile of a Bridgeport park are valued 11% and 8% higher, respectively, than properties in the next tenth of a mile. Therefore, increasing and improving park spaces is expected to bring more people as well as greater investment into these areas.

For more information on BGreen 2020, visit **http://www.bridgeportct.gov/content/89019/97299/default.aspx 20**

Partnerships and Engagement

- Bridgeport Regional Business Council (BBRC)
- CT. Dept. of Energy and Environmental Protection
- Local Citizen Engagement

"In Bridgeport, we're focused on making our city a place where companies want to invest and hire people, and a place where even more people choose to live, work, and raise their families."

-Mayor Bill Finch

The Neighboorhood Revitalization Zone (NRZ)

Adoption of the Neighborhood Revitalization Zone ("NRZ") model is a further method for inclusiveness in meeting society's current and future sustainability challenges while ensuring environmental justice. The NRZ process is a collaborative system that engages community representatives to work with local governments to revitalize neighborhoods that are disproportionately substandard, unsafe, blighted, environmentally contaminated, and susceptible to the consequences of climate change and in urgent need of environmental justice for the inhabitants of their residential and commercial districts. The NRZ concept is dependent upon community involvement in planning and action geared to producing localized comprehensive redevelopment plans. Such grassroots input is the impetus for advancing environmental justice for all, regardless of race, religious beliefs, income level or other demographics.

The NRZ process was established by CT Public Act 95-340, as amended by P.A. 99-35 as a local legislative methodology for creation of local strategic plans. The over-riding policy objective is to revitalize neighborhoods and create a sustainable environmentally just mini-society through the joint involvement of residents, businesses and government to determine and then fulfill the vision and priorities established by the individual neighborhoods. To date, Bridgeport has formed more than a half dozen NRZs.

HUD Rebuild By Design Program

This collaborative approach also is exemplified by Bridgeport's participation in HUD's Rebuild by Design program dedicated to making the City more resilient to coastal storm impacts and to protecting our vulnerable population from the increasing challenges presented by climate change. Sections of Bridgeport, notably the coastal South End, benefit from being served by both the Rebuild by Design and NRZ initiatives. A major emphasis for this neighborhood is the replacement and relocation of high-density public housing projects sited in coastal flood zones with significant environmental risk from air, soil and water pollution to smart growth, environmentally just, scattered site development.

Bridgeport Projects Developed with Public Engagement

- Mayoral Advisory Committee of community stakeholders to facilitate the transition of a local power plant from coal burning to natural gas consumption
- Complete Streets Process to incorporate public transit, bicycling and pedestrian travel into Bridgeport's transit solutions
- A rewards based program to increase recycling rates
- Mayor's Conservation Corps. – a youth outreach program to encourage citizen participation in recycling, energy audits, storm-water diversion from our sewer treatment system and residential solar panel installation to reduce the volume of mass burn of solid waste
- Conversion of a closed municipal landfill into a renewable Green Energy Park with 9,000 solar panels producing 2.2 mw of energy and 2.8 mw of clean fuel cell output;
- Development of an Eco-technology Park in the City's South and West Ends for sustainable development and industrial symbiosis
- Heating & cooling loop that will provide heat and air conditioning to 6 million sq. ft. of downtown commercial space and to the Univ. of Bridgeport
- An autoclave system to dispose of non-hazardous hospital waste in an environmentally friendly manner
- Sewage and food waste anaerobic digester

Salt Lake City, Utah

Partnering with State, local, and grassroot organizations to address children's health disparities in refugee communities

About the Community

- Designated Refugee Area– representative of over 21 countries
- 39% minority residents
- Approximately 1/4 live below poverty line
- 50% of residents nonnative English speakers

The West Side community just west of Salt Lake City Utah is home to a sizable population of refugees. These citizens hail from many countries around the world, including, but not limited to, Liberia, Sierra Leone, Burma, and Somalia. In a community filled with different cultural and religious values, there is a sense of cultural isolation among many of the residents. The entire community experiences the same threats to their overall quality of life, but there is not enough comfort or trust to reach out beyond their cultural comfort level. EPA's Region 8 partnered with other local, State, and grass-root organizations to reach out to the community, determine their most pressing concerns, and implement programs to address their concerns. What stood out to the project planners was the vulnerability of children to environmental and health risks. Programs were developed to increase protection of children from several different threats.

Source: Michael Wenstrom, EPA Region 8

An unconvential venue to understand the needs of the community: Community sewing groups

In a community made up of many different ethnic groups, outreach and discussions about community threats is a challenge. This is exacerbated by a language barrier that can prevent effective access to communities through conventional social media outlets. To help bridge the gap between government agencies and communities, EPA teamed up with Comunidades Unidas, a local organization committed to serve the needs of the Latino population in the West Side. This unusual collaboration helped shed some light onto the disparities present in the refugee community. Project members were brought to a local sewing club held in the local community center. This provided the chance to talk with local women about the matters they were most concerned with. The women in the group articulated concerns about public health, lack of jobs, and other factors affecting the quality of life. This is important because it allowed EPA representatives to reach out to other government and non-governmental agencies who can more directly address issues that aren't related to environmental protection.

Project Highlights

- Created summary of health data
- Created community profile report
- Organized cleanup of Jordan River
- Worked with 26 community leaders and more that 15 partner agencies
- Used Community Needs Assessment as a tool of Engagement
- Created I HEART ROSE PARK program to advocate for more community involvement
- Green and Healthy Homes Project

Active Participating Organizations:

- Comunidades Unidas
- UT Department of Environmental Quality
- Salt Lake City Health Department
- UT Society for Environmental Education
- Salt Lake City Division of Sustainability
- Salt Lake City School District
- UT Department of Health
- National Children's Study– University of Utah
- Breathe Utah

Lessons Learned

- Partnership building takes a long time
- Most of the Not all concerns of the community are directly related to the environment
- Outreach is a learning process
- You learn to value what the community values
- Must be willing to leave ego behind

Community Leadership Trainings

The Initiative included an 8-week community leadership course led by Comunidades Unidas for parents and youth in the community. This course taught parents how to effectively engage with local stakeholders to address concems affecting their children and their communities. Attendees learned how to utilize public engagement, partnership development, and conflict resolution as tools to build community support and unity, as well as express their concerns to government and local groups in a manner that would ensure swift action. Capstone projects were included in the course curriculum to give students first-hand experience in problem resolution. One example capstone project was an assignment for parents to request a stop sign to be placed on a busy intersection to increase security for children who walk to and from school. Twenty-one students graduated from the training course, thus creating the first group of empowered citizens who can use the skills that they have learned to make lasting , positive changes to their community.

Source: Michael Wenstrom, EPA Region 8

Accomplishments

- Facilitated working partnerships with more than a dozen local, state. And community –based organizations
- Designed a unique community engagement model to fit the needs of the neighborhoods
- Created a profile report characterizing community environmental and health concems
- Created an environmental data map for the West Side community
- Cleaned 1.5 miles of the Jordan River
- Created community-based website to be used as community-wide forum
- Supported Parent Leadership Training for 20 community families
- Designed and Distributed 500 community-specific kits for Green and Healthy Homes

Challenges

One of the major challenges the Initiative faced was the process of reaching out to all parts of the community. With such a wide variety of ethnic groups that isolate themselves from other groups, it was difficult to seek out members from all interested parties. In particular, there was an issue of "minority within minorities." In the West End community, Latinos make up over 50% of the total population. This proves to be a problem for smaller represented communities, such as those from Sierra Leone or Nigeria, who are not comfortable reaching out to a bigger population that has different cultural values. The Latino population, on the other hand, is a little more open to reaching out to other agencies through local grass-root organizations like Comunidades Unidas. As a result, there was substantially more input from the Latino community than from other communities in the EJ Area. However, community outreach is an ever-evolving process. There will be methods developed over time that will enable more communication with other ethnic groups.

Fitchburg, Massachusetts

USING ECONOMIC GROWTH TO EMPOWER LOCAL COMMUNITIES

At a Glance

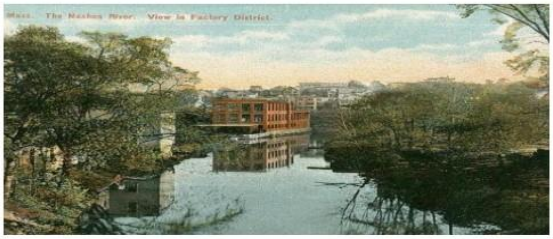
- Older industrial town
- Former site of paper mill industry
- Riverfront Revitalization

Fitchburg, Massachusetts was established and developed along the Nashua River , traditionally relying on the paper mill industry as a main source of economic growth. During the mid-twentieth century, however, the Fitchburg paper mills closed down in order to relocate closer to their associated pulping plants. This upheaval crippled Fitchburg's economy. Unemployment levels rose with the loss of manufacturing jobs, which in turn hurt the commercial sector. Changes needed to be made in order to protect the livelihoods of Fitchburg citizens. However, measures taken to improve the environment also provided economic stability of the town had the unanticipated effect of benefiting especially vulnerable communities in the area. This case study highlights the importance of connecting the people back to the river.

THE COLLECTIVE IMPACT REPORT CARD– A NEW MEASURE OF ECONOMIC GROWTH

Fitchburg, Massachusetts, the *City on the River*, has historically depended on the paper mill industry for economic prosperity. When the mills closed, however, Fitchburg's economy suffered greatly from the job and revenue loss. The unemployment rate rose to levels above the state average, which decreased the overall quality of life for citizens. What was more alarming was the health disparities that were wreaking havoc on the city. Childhood-obesity and post-partum depression were particularly noticeable. Something clearly needed to be done to address Fitchburg's economic problems, but there also had to be measures to protect public health and the environment.

The Collective Impact report Card was developed to provide a more comprehensive measure of Fitchburg's overall health. It not only measures economic factors, such as unemployment levels and per-capita income, but it also focuses on environment, socioeconomic status, and public health. Put simply, this report card aims to measure community health both quantitatively and qualitatively.



Source: Nashua Watershed Association

PROJECT HIGHLIGHTS

- Brownfields Clean-up
- Redevelopment
- Use of Green Infrastructure
- Improving access to the river
- Private sector investments

"In some cases, we're not spending more. In some cases, we're spending less. We're spending ***differently****. And we're still getting results."*

-Mayor Lisa Wong

Revitalizing the Riverfront– Cleaning up the Nashua River

Fitchburg is located along the Nashua River, making the city a part of the Nashua River Water shed. The Nashua River was historically a polluted river, mainly due to storm water run-off from the 32 communities that are located within the water-shed. The river was eventually cleaned up, but there was not much activity along the river for years. Realizing that the Nashua River could provide economic benefits, the city of Fitchburg, along with the city of Nashua in New Hampshire, developed community development plans to revitalize the Nashua River-front.

One main issue that needed to be addressed was community access to the river. Many of the old Fitchburg paper mills were built along the river, thus re-stricting access to the water. Floodwalls, while necessary to protect the city, also served as barriers to the river. The Fitch-burg river restoration project was nominated for and became a Massachusetts Division of Eco-logical Restoration (DER) prior-ity project. With this support, Fitchburg was able to modify a floodwall near the Riverfront Park to create an access point to the river. By creating an access point to the river, Fitchburg was able to increase the total area of community land. This benefits the community by providing more green space, and allowing more businesses to locate to areas close to the river.

Source: Nashua Watershed Society

Inside Story Headline

Fitchburg was born of the Nashua River and reached its glory by tapping into the power of the Nashua River. Again the city is looking to the river to be the catalyst to its revitalization.- *Fitchburg Urban Renewal Plan*

The city of Fitchburg has seen a renewal by citizen and business participation in creating a vision to reconnect the river back to the citizen. Urban revitalization is flourishing by cleaning up the river, improving access, instituting green infrastructure, and citizen engagement to recreate the blue ribbon flowing through the city.

Lessons Learned

- Citizen engagement makes a difference
- Cleaning up and re-storing the river - provides for economic opportunities
- Providing green infra-structure and green-ways along the river promotes healthier lifestyle provides a high quality of life for all the citizens

CHALLENGES

- Restoring flow and controlling storm water run-off
- Improving vital water infrastructure
- Improving greenways and access to the river
- Private sector investments in a clean environment

Prince George's County, MD

Innovative Funding for Water Infrastructure

Description of The Community

With a population of approximately 890,000, Prince George's County is the second most populous county in Maryland. Persons of minority comprise 73.4% of the community. Close to 10% of the residents in the county fall below the poverty level and unemployment rates have hovered at 6% for the last year. It is clear that the county faces many challenges. One of the biggest obstacles for the community in recent years has been the demand on the aging water storage and pipe network that exists below the streets of Prince George's County.[1]

Fast Facts

Location: Prince George's County, Maryland

Who: Adam Ortiz, Director for the Department of the Environment for Prince George's County

When: 2012

What: The launching of a Public Private Partnership (P3) to combat the outdated water infrastructure that plagued the community members of Prince George's County

Alternative Compliance Kickoff Ceremony

Source: Prince George's County Department of the Environment– Flikr

An Original Approach to an Increasingly Common Problem: The Journey of Prince George's County

A series of hot summers and rainy wet seasons in recent years have been detrimental to the stormwater system throughout Prince George's County. With a population continuing to approach almost 900,000 and the new weather norms, the strain on the community's aging water infrastructure has been considerably high. In order to deal with the threat of crumbling storage tanks and exploding pipes, October of 2012, Mr. Ortiz's department launched an innovative pilot program for the Maryland county. The agency implemented a Public Private Partnership (P3) to enhance local business participation in the County's urban stormwater retrofit program. The program has not only developed cleaner best practices, but has also greatly increased community participation in sustainability programs. This ground-breaking approach has fostered new relationships between both the private sector and community participants. The P3 Pilot Program has created an atmosphere for cooperation and has allowed the county to turn combatting the issue of water infrastructure into a full-scale, community-wide effort.

Project Highlights

- Focus on retrofitting drainage of roadways
- First use of the P3 Model for urban retrofitting
- Received more than $1 million in grants for 13 new stormwater projects in 2015
- Once construction is complete, the estimated 40,000-50,000 practices that will require continual maintenance
- Encourages flexibility and innovation in businesses
- Expected to create 5,000-7,000 new jobs for the community

1. "Prince George's County Quickfacts from the U.S. Census Bureau," last modified February 5, 2015, http://quickfacts.census.gov/qfd/states/24/24033.html

KEY PARTNERSHIPS

Prince George's County looked to the following types of groups to create sustainable partnerships:

Private

- Faith-Based Communities
- Local Banks and Financing Institutions
- Realtors
- Non-profits
- Local Entrepreneurs
- Contractors
- Manufacturers

Public

- Political Leaders
- Public Works
- Environmental Resources
- Schools
- State

"Through this partnership...we are able to implement projects that not only reduce polluted runoff from entering local waters, but also educate our residents, neighborhoods, communities of faith, and others on how they can partner with us to help improve our community." - *Director for the Environment Adam Ortiz*

LESSONS LEARNED

- Asking for help through both public and private partnerships promotes success
- Community-wide efforts can increase participation, education, and action towards environmental justice causes
- Innovative approaches to common problems foster improvement

GETTING THE COMMUNITY INVOLVED

Public outreach was a large component of the initial steps in the water infrastructure plan. The county recognized the benefit of public involvement and wanted to gamer support from citizens, elected officials and non-profit partners. Public outreach efforts included citizen focus groups and review groups, public hearings, and access to materials. By getting the public so heavily involved, the county promoted environmental education and initiated a discussion about a truly important issue that affected all members of the community.[2]

SPOTLIGHT: ON FAITH-BASED INITIATIVES

Director Adam Ortiz negotiated with local church leaders in the community to get them involved in the stormwater partnership as well. Churches can gain an instant discount on their stormwater fees by adopting green practices that will reduce runoff amounts, lower pollution levels, and create a cleaner environment. Approximately 30 churches have applied for this new rebate deal since the launching of the partnership since November 2014. Churches can build rain gardens, plant trees, or participate in other environmentally beneficial practices in order to qualify.[3]

Source: Prince George's County Department of the Environment– Flikr

INITIAL CHALLENGES

- Failing septic systems needed improvement
- Minimal opportunities for traditional funding
- Traditional storm water management intended for flood control did not adequately remove pollutants
- Challenges convincing smaller stakeholders and business owners to invest in the project

ACCOMPLISHMENTS

Newer stormwater management practices and improvements have been proven to be more effective for:

- Treatment of nutrients and other pollutants
- Controlling runoff and flooding
- Preventing stream erosion
- Protection of potable water, recreation, fishing, agriculture[4]

LOOKING AHEAD

Stream restoration in Prince George's County, MD

Source: Maryland SHA

Updates to the county water infrastructure system are ongoing. Future projects include further conservation efforts on the water systems throughout the county. Stream restoration and construction mitigation have been top priorities for the Department of the Environment. Continuing to promote the best environmental stewardship principles is of the utmost importance, as well as the continuation of maintaining mutually beneficial partnerships with the public and private sectors.

2. http://resiliency.lsu.edu/planning/prince-georges-county-green-infrastructure-plan/
3. http://www.washingtonpost.com/local/md-politics/churches-receive-stormwater-fee-discounts-by-starting-green-ministriessermons/2014/11/16/7bbb94e4-6914-11e4-b053-65cea7903f2e_story.html
4. http://www.pgplanning.org/Assets/Planning/Programs+and+Projects/Special+Projects/Water+Resources+Master+Plan/Community+meeting+presentation.pdf

Mississippi Mayors

A Regional Approach to Environmental Justice Issues

About The State

- Includes communities with poverty rates of 50%
- Median incomes of about $25,000
- Incarceration numbers can reach 25,000 in some areas
- Mississippi has the highest rate of heart disease and cancer deaths
- 34% of the state's population are obese
- 42% have high cholesterol (the highest percentage out of all states in the nation
- Out of every 1,000 individuals born in the state, 9 die before the age of 1

"If you can help people in Mississippi, you can help anyone in the US. We have all of the issues here in Mississippi, if you can solve them here, you can solve them everywhere." *- Mayor Johnny Dupree, Hattiesburg, MS*

Source: EPA

Strength In Numbers: Tackling Environmental Challenges By Joining Together With the Neighbors Next Door

Rural communities in Mississippi face a seemingly insurmountable amount of challenges to acquire even the basic necessities. Access to health and infrastructure is particularly difficult to achieve. The variety of extreme weather events, most notably Hurricane Katrina, has compounded the difficulties individuals are combatting throughout the state. The Mississippi Conference of Black Mayors has committed to the cause of environmental protection and economic stability for all communities. The formation of a network of over 40 mayors has created the type of atmosphere that promotes innovative ways of dealing with access issues. The city of Hattiesburg, for example, has agreed to share trucks and other similar resources with neighboring towns to facilitate transport of needed materials. Other communities share water infrastructure to serve areas that are particularly isolated.

Location and demographics should not prevent anyone from gaining the same access to important resources. Rural Mississippi towns have found that resource pooling enables small, rural communities the opportunity to receive the utilities they need at a more reasonable cost.

Highlights Of the Approach

- Create a network of African American mayors, health care providers, private businesses, entrepreneurs, local legislators, and community members
- Increasing community awareness and education about environmental justice issues plaguing the state of Mississippi
- Identifying and reducing sources of environmental health and safety risks across rural Mississippi communities

PARTICIPANTS[2]

This initiative arose out of the Mississippi Conference of Black Mayors. Participatory cities include:

Cities

City of Aberdeen, City of Belzoni, City of Canton, City of Charleston, City of Clarksdale, City of Columbus, City of Drew, City of Durant, City of Fayette, City of Hattiesburg, City of Hazlehurst, City of Hollandale, City of Holy Springs, City of Jackson, City of Laurel, City of Leland, City of Lexington, City of Lumberton, City of Meridian, City of Moorhead, City of Moss Point, City of Okolona, City of Philadelphia, City of Port Gibson, City of Quitman, City of Rolling Fork, City of Ruleville, City of Shaw, City of Shelby, City of Vicksburg, City of Yazoo City

Towns

Town of Alligator, Town of Arcola, Town of Artesia, Town of Benoit, Town of Bolton, Town of Brooksville, Town of Cary, Town of Coahoma, Town of Coldwater, Town of Crawford, Town of Crosby, Town of Crowder, Town of Cruger, Town of Doddsville, Town of Duck Hill, Town of Duncan, Town of Eden, Town of Edwards, Town of Friars Point, Town of Glendora, Town of Gloster, Town of Gunnison, Town of Heidelberg, Town of Isola, Town of Itta Bena, Town of Jonestown, Town of Lambert, Town of Louise, Town of Lula, Town of Maben, Town of Marion, Town of Mayersville, Town of Metcalfe, Town of Mound Bayou, Town of Mount Olive, Town of Oakland, Town of Pace, Town of Pickens, Town of Plantersville, Town of Potts Camp, Town of Renova, Town of Roxie, Town of Scooba, Town of Shubuta, Town of Shuqualak, Town of Sidon, Town of Sledge, Town of State Line, Town of Summit, Town of Sunflower, Town of Tchula, Town of Terry, Town of Tutwiler, Town of Utica, Town of Vaiden, Town of Webb, Town of Wintstonville

INITIAL

Affordability is the main issue that plagues the most rural of Mississippi communities. In some areas of the state, the median income level for a family of four just barely reaches $25,000. Community projects that require hundreds of thousands, or even millions, of dollars are very challenging to address. Perhaps most troubling is the fact that members of these communities do not have the ability to acquire basic needs required for healthy lifestyles. Healthy food, access to public health, updated infrastructure, and uncontaminated water supplies are essential to every community, but are also very costly.

Source: EPA

Mayors discuss a new effort to protect the Mississippi River.

ACCOMPLISHMENTS

- Recipient of EPA's 2014 cooperative agreement to reduce lead exposure and $1.4 million initiative to provide mitigating resources for low-income families living in inadequate, aging housing
- Mississippi River Cities & Towns Initiative to address river protection, restoration, and management efforts
- The regionalized approach has allowed for the swapping of ideas, practices, and strategies across rural communities

"Our challenges are great in our communities. But we are not sitting around feeling sorry about it." - *Mayor Thelma Collins, Itta Bena, MS*

LESSONS LEARNED

- Communities can pool resources provide water, waste control, food and electricity resources to all residents
- Creation of a new, influential voice for the state of Mississippi that focuses on local organizing
- Rural areas have an especially challenging time gaining access to a variety of resources and are at a high risk within the environmental justice communities

Source: EPA

1. http://mcbmayors.org/about-us/
2. http://yosemite.epa.gov/opa/admpress.nsf/0/6D6550DCFEF7059785257D550061FE09

Laredo, TX

STRATEGIC PLANNING TO PROMOTE HEALTHIER COMMUNITIES

ABOUT THE COMMUNITY

- Population of 248,000
- 95.6% Hispanic or Latino population
- 91.1% bilingual
- 30.8% persons below the poverty level

Laredo, Texas is unique community located on the border between the United States and Mexico. The city has several environmental justice communities that bear disproportionate burdens of environmental harm, public health disparities, and economic problems. The inflow and outflow of people and pollutants from both sides of the border only add to the public health disparities present in the community. In recent years, Laredo has turned to strategic planning to improve the town's economic condition and address public health issues. Such planning includes providing greater access to outdoor spaces, better educating the public about public health, and establishing new developments that enhance the overall community life.

ACTIVE LIVING PLAN: INCORPORATING PUBLIC HEALTH INTO ALL ASPECTS OF EVERYDAY LIFE

Laredo city officials introduced the Active Living Plan as a means to encourage more community members of all ages to make healthier lifestyle choices. This plan targets the two main indicators of public health: diet and exercise.

One component of the program is to encourage businesses to allow employees to incorporate exercise into their daily work schedule. One of the biggest deterrents to maintaining a regular exercise regime is a conflict with work schedules. This part of the Active Living Plan aims to eliminate this challenge and offer community members the opportunity to exercise.

The Laredo Health department has already adopted this program. Workers have participated in group Zumba classes and walking sessions; this fosters a sense of community in the workplace and improves public health, which in turn increases worker productivity.

The Active Living Plan has also challenged schools to encourage healthier eating options. This involves replacing conventional vending machine options (ie. chips, soda, cookies), with healthier options (ie. water, peanuts, whole-fruit juices). This program is to be extended to both students and faculty, which would ideally spur behavioral changes in favor of healthier foods.

GREENSPACE ORDINANCE

Passed in 2004, the Green space Ordinance aims to maintain the balance between economic development and environmental protection. The ordinance requires developers to allow for green space when constructing a new development. For instance, the new outlet mall scheduled to be built along the Rio Grande River in Laredo will feature a community waterpark on the riverfront. This development allows businesses to set up shop in Laredo, but also gives the community an outdoor public area that will entice more children to play outside. For developments occurring in areas that already have designated green space, developers are encouraged to made additions to existing green space. Overall, the Green Space ordinance encourages more community areas that encourage more time spent outdoors.

Key Partnerships:

- The City of Laredo Health Department
- EPA Brownfields Funding
- The City of Laredo School District
- Local Businesses
- Building Developers

Citizen's Environmental Advisory Council

Active citizen participation in local government has been supported through the Citizen's Environmental Advisory Committee (CEAC). CEAC is a group of professionals and environmental advocates hailing from a diverse range of backgrounds that weighs in on proposed city plans and ordinances, effectively providing a voice for the people. All CEAC meetings are publicly announced, and public comment periods are available for issues brought before the committee. When a consensus is reached on an issue, a recommendation letter is drafted and sent to the decision-making body, the city council. The CEAC has played a tremendous role in the plastic bag ban ordinance, as well as a program to offer deposits on used tires to prevent tire discards into the Rio Grande River.

Lessons Learned:

- Raising public awareness about environmental issues and health risks is vital in the maintenance of a healthy community
- Prevention is more effective than taking action after an incident or health risk occurs
- Environmental justice communities can learn how to access resources

Haynes Recreation Center

The Haynes Recreation Center is a state-of-the-art park in Laredo that provides open access to indoor and outdoor exercise areas and community spaces. This park, funded jointly through public funds, private funds, and EPA brownfields funds, is a prime example of how strategic development can uplift emerging communities.

The primary mission of the Haynes Center is to provide the public with access to recreational facilities as a way to improve their overall quality of life. Some facilities offered by the Center include an indoor and outdoor track, a pool, rooftop gardens, and a playground that is equipped for special needs children.

The Haynes center has been built with green technology in mind. Building features include solar energy, retractable glass walls, and recycled water (using rain water holding tanks). These "green" technologies provide the property increased resiliency against the side affects of climate change that are prevalent in the area, such as drought conditions, and increased strain on energy resources due to hot weather.

The presence of a public recreation center has vastly improved the quality of the surrounding community. With public access to trails and facilities comes increased public participation in regular exercise regimes and a greater appreciation for the outdoors. In addition, A building like the Haynes Center promotes unity and well-being throughout the entire community.

Source: Dr. Hector Gonzalez

Challenges

The Active Living Plan, while overall beneficial for the well-bring of the community, does have its fair share of challenges. One major challenge is the conflict between individual rights and the obligation to protect families and the environment. This is especially prevalent with the measure to cut back on unhealthy foods in schools. So far, this program has only been implemented for children, but it will soon be extended to faculty as well. Critics argue that the faculty have the right to choose what they want to eat. Proponents of the program claim that it is a right for parents and educators to protect children from health and environmental issues. It will take a lot of discussion and compromise to achieve a balance between individual rights and the right to protect the community.

Source: Laredo Health Department

Greensburg, Kansas

GREEN REBUILDING

Greensburg, Kansas was originally comprised of 1400 people prior to the tornado of 2007. The economy in the rural town was based solely on the agricultural, oil, and gas industries. According to the Greensburg Sustainable Comprehensive Plan 2008, Greensburg had 515 single-family residences, 215 rental properties, a school, many businesses along a few downtown blocks, and city offices. As the seat of Kiowa County, Greensburg was also the location for the county courthouse, Kiowa County Memorial Hospital, county library, and other county functions. The city of Greensburg acted as a municipal utility, selling electricity, water, sewer, and trash services to Greensburg customers. Like so many other rural towns across America, Greensburg had been experiencing a steady decline in population over the past several decades. In contrast to a disaster that affects isolated parts of a community, the near-complete devastation in Greensburg made long-range and comprehensive community planning imperative before substantial rebuilding could begin. But rather than let the tragic events of the 2007 tornado get their spirits down, the people of Greensburg decided to rebuild. The resulting energy-efficient Greensburg is not just new, but improved.

REBUILDING IT GREEN: COMBINING ENERGY AND INFRASTRUCTURE GOALS

Source: Greensburg, KS Website http://www.greensburgks.org

On May 4, 2007, Greensburg, Kansas suffered a massive tornado that destroyed 95% of the city. Rather than giving up in the face of adversity, city and community officials saw the destruction as an opportunity. Since then, town citizens and leaders have been committed to rebuilding the town as a model sustainable community. Experts from the U.S. Department of Energy (DOE) and the National Renewable Energy Laboratory (NREL) worked with a variety of community members to make the dream of creating green buildings and energy efficient structures that fully express the environmentally advanced sentiment of Greensburg. The town showcases energy-saving best practices that can be replicated not only in other communities recovering from disaster, but any location focused on sustainability. This process demonstrated the commitment of Greensburg's city leaders to sustainable rebuilding, which encouraged other Greensburg commercial and public projects to consider similar goals and to foster a sustainable business environment.

PROJECT HIGHLIGHTS

Greensburg reached out to experts in the Department of Energy (DOE) and the National Renewable Energy Laboratory (NREL), to begin the process of rebuilding. The town first created a master plan for community redevelopment. Incorporating energy efficiency targets and clear implementation recommendations into the master planning process was vital to Greensburg officials and leaders, all of whom wanted the town to reach its energy efficiency and renewable energy goals. Each building in Greensburg is uniquely tailored to best meet its energy efficiency and renewable energy standards, while still striking an economic balance.

Key Partnerships

Experts from the U.S. Department of Energy (DOE) and the National Renewable Energy Laboratory (NREL) worked to establish connections with Greensburg political leaders, business owners, and residents to incorporate energy efficiency and renewable energy technologies into the rebuilding process.

"It's about us as a society surviving and the ability to endure, and that's what true sustainability is." - Bob Dixson, Mayor of Greensburg, KS

Lessons Learned:

- Set Community-Scale Goals
- Use an Integrated Design Approach
- Incorporate Daylighting and Energy-Efficient Lighting
- Invest in Simple Building Systems

SPOTLIGHT: GREENSBURG CITY HALL

Greensburg City Hall

Built to LEED Platinum standards, this building acts as the perfect example of Greensburg's commitment to sustainability. It strikes an environmental and economic balance, while also serving many practical purposes. The building is home to the administrative offices and council chambers for the city, as well as a town meeting gathering hall.

Source: Greensburg, KS Website
http://www.greensburgks.org

Key Features:

- Well-insulated and air-sealed walls and roof
- High performance windows
- 4.8-kW photovoltaic system on the roof
- High-efficiency ground-source heat pumps
- Humidity sensors allow heat pumps to slow fan speeds and provide dehumidification
- Incorporates daylighting and lighting controls.

OUTCOMES OF PROJECT

The Architecture 2030 Challenge, a pledge for cities to reach a net-zero energy goal by 2030, sets a target of 60% energy savings compared to the national average of energy usage for a type of building. In Greensburg, the annual savings, including renewables, for five of Greensburg's buildings went far beyond the Architecture 2030 Challenge target of 60% savings. Out of the five, four of the buildings in Greensburg go beyond the 70% target of 2015. Six additional buildings are within 10% of meeting the 60% target. Eight of the 13 buildings analyzed are also LEED Certified (five of the 13 are LEED Platinum). Three more Greensburg buildings are anticipated to achieve a LEED Platinum certification in the near future. By pursuing LEED certification and the city-wide initiative for sustainable design, these 13 buildings save a total of $200,000 per year in energy costs.

MOVING FORWARD

In the future, Greensburg leaders and building maintenance operators plan to continue making the city the greenest it can be by:

- Placing daylighting sensors in all spaces that receive abundant daylight
- Placing occupancy sensors in locations with electrical lighting
- Lowering setpoints (when appropriate) for all building controls during times when the building is unoccupied
- Turning off all electronics and other plug loads at night to prevent energy waste
- Reviewing utility bills annually and comparing the energy consumption to past years

Sources relied upon for this report: http://www.nrel.gov/docs/fy12osti/53539.pdf

Santa Barbara, California

Reducing ship emissions to address public health issues in Port cities

Air Quality Quick Facts

- 30 million Americans have been currently diagnosed with asthma
- Children and elders are particularly at-risk for respiratory problems resulting from poor air quality
- Air pollutants are known to thin out the ozone layer, leading to increased exposure to skin cancer and cataracts

Port cities have a complex transport system that include diesel-powered cargo ships and transport trucks. Large quantities of air pollutants are emitted into the atmosphere, which then concentrates in surrounding areas Studies have shown that low-income and minority populations bear a greater burden of air pollution than other communities. The proportion of low-income household in affected areas was 20 percent higher than that of the general population. Similarly, minority communities have been shown to make up a greater proportion of the affected areas than non-minority groups.

The Ports of Long Beach and Los Angeles responded by enacting the Clean Air Action Plan to cut down on diesel emissions. However, critics assert that the plan may be too stringent for ports with lower emission levels. The Santa Barbara Air pollution Control District rose to the challenge by proposing a program to reduce ship speeds as they enter ports.

The Vessel Speed Reduction Trial Incentive Program

Large cargo ships produce large amounts of nitrogen oxides, particulate matter, sulfur, air toxics, and other greenhouse gases as they transport goods to and from ports. Not only do these emissions weaken the Earth's ozone layer, but the accumulation of these emissions exacerbate public health issues for humans, particularly in terms of respiratory health. The Santa Barbara County Air Pollution Control District developed a trial program to slow down ship speeds to 12 knots as a way to cut back on greenhouse gas emissions.

This program arose out of apparent gaps in current air regulations for ports. Plans such as CAAP outline strategies to cut back on particulate matter and sulfur emissions in the short-term, but they do not address solutions to reduce nitrogen oxides or other greenhouse gases. Research and a trial action program have shown that reducing ship speeds, especially as they enter major ports, effectively reduces greenhouse gas and nitrogen oxide emissions as well as particulate and other toxic emissions. This is mainly because reducing speeds by a certain amount results in a fuel consumption decrease that is equivalent to the cube of the speed reduction. Less fuel burning leads to less toxic air emissions.

Source: EPA

Objectives of Vessel Speed Reduction trial Incentive Program

- Assess potential air quality and whale protection benefits from a voluntary slow down program in the Santa Barbara Channel
- Test the shipping industry's willingness to participate in this kind of a program
- Refine data collection and tracking mechanisms
- Lay the foundation for a larger-scale program in the future

"I think that as local officials of a community, we want all of our residents to live a healthy and safe life."

-Supervisor Salud Carbajal

Clean Air Action Plan– Strategy to Reduce Air Pollutants from Ports

The ports of Long Beach and Los Angeles came out with the Clean Air Action Plan (CAAP) to address the emissions from diesel-fueled cargo ships. The CAAP consists of four main parts:

1) a Clean Trucks Program to phase out older diesel trucks from the ports within five years and replace them with a new generation of clean or retrofitted vehicles;
2) recommendations to eliminate emissions of ultrafine particulate matter;
3) a technology advancement program to reduce emissions from other equipment, including commitments to develop shore power for ships
4) a public participation process with environmental organizations and the business community

Other features of the plan include a ban on trucks older than 2007 that transports goods to and from the ports and a requirement to equip all diesel-fueled heavy-duty trucks with particulate filters. The goal of CAAP is to reduce emissions by 45% over the next 5 years.

Benefits of Vessel Speed Reduction

- Reductions in emissions of greenhouse gases, nitrogen oxides, particulate matter, sulfur, air toxics
- Public health benefits
- Climate protection benefits
- Can be implemented by all ships, and without capital investment
- Can be implemented in a relatively short timeframe.
- Has proven to be a successful strategy at California ports.
- Employs well-understood ship speed compliance tracking and emission reduction calculations.
- Could help prevent the problem of backsliding. As the economy improves, and fuel prices fluctuate, ship speeds could increase above their current speeds.
- Protection of endangered whale species that are of critical importance to the pristine marine environments off the California coast, especially the national marine sanctuaries.
- Improved ability of coastal air districts to meet air standards; improved business climate in those regions by achieving pollution reductions through means other than regulating businesses.

Reducing Vessel speeds Protects the Whales As well as EJ Troubled Areas

The Vessel Speed Reduction Trial Incentive Program effectively reduced toxic air emissions, which will undoubtedly conserve the ozone layer and protect human health. However, this program also reaps some benefits for the conservation movement. Reducing ship speeds have served to reduce whale strikes. This is especially critical seeing as the Santa Barbara Channel is part of a migration route for a few whale species. One major take away is that local governments can develop programs that can protect environmental and health rights of underrepresented populations and conserve animals species as well.

Source: John Calambokidis, Cascadia Research

Gary, Indiana

LAND REDEVELOPMENT

Fast Facts about the Community:

- **Population:** 78.,450
- **Land area:** 49.87 square miles
- **Percent of Population that is African-American:** 84.8%
- **Median household income:** $26,885

"Gary has a list of priorities, we understand our assets and the financial incentives available, and we are ready to embrace all partners— local, regional and national, public and private—who see the same potential in Gary that we do," — Mayor Freeman-Wilson

Brownfields are just one of the social and economic challenges residents of Gary face on a daily basis. one of them. In addition to the presence of contaminated and vacant land, the city is plagued with issues of poverty, crime, unemployment, and educational concerns. These impediments to success are common problems shared by urban communities in America.

OLD LAND, NEW USES: PARTNERING WITH ACADEMIC INSTITUTIONS ON A LAND SURVEY PROJECT

Source: Gary, Indiana Website, http://www.gary.in.us/redevelopment/initiatives.asp

It may be a small town, but Gary, Indiana is full of big ideas. Mayor Karen Freeman-Wilson and Redevelopment Director Joseph Van dyk came up with a plan to turn the abandoned structures found throughout their town into useful areas that could help spur community success. Through a partnership with the University of Chicago and LocalData Detroit, the Department of Redevelopment conducted a parcel-by-parcel assessment of the entire City of Gary. The data collected will help the city make better informed decisions, match solutions with funding, and quantify the scope of their work with the existing vacant properties. Partnering with academic institutions added a layer of community involvement, as volunteers, and students of all ages combed the streets of Gary for 18 months to complete this survey. The results will be directly applied when brainstorming solutions for land redevelopment within the community.

PROJECT HIGHLIGHTS AND GOALS

Gary was one of four communities selected nationally by Community Progress to receive support through the spring 2015 Technical Assistance Scholarship Program (TASP). Specifically, Community Progress helped the City of Gary with data collection and information management (IM), looking at both organizational and departmental IM infrastructure and practices. Representatives also worked with the town to identify strategies and solutions for more effective data collection, sharing and analysis as part of a broader, more comprehensive blight prevention strategy.

Key Partnerships

Students and professors from the University of Chicago truly spearheaded this project by partnering with the local government and LocalData Detroit to perform a comprehensive survey of the city. Key players in this process are listed below.

Mayor Karen Freeman-Wilson | Joseph Van Dyk | Tyshon Outlaw | Darius Stevens | Alexis Pops | Michael Morgan | Chris Harris | Jean-Francois Ndomb | Chang Yu | Sabrina Richards | Brandon Whyte | Teresa Zalewski | Carrol Pirtle | Richard Leveritt | Sam Barnett | Katie Buitrago | Tom Plagge | Kingston Wong | Erin Watts | Estela Carbajal | Bernice Lee | Michelle Robinson | Jack Eskin | Valintina Torres | Aaron Rosenberg | Quanic | Alicia Manley | James Dillon | David Smith | Cassie Carpenter | Eric Tawney | Aida Pacheco | Abbey Delgadillo | Doug Nagy | Claire Pritchard | Elnaz Moshfeghian | Aahron Whitehead | Lin Xia | Sandra Hall Smith | Crystal W. | Kristine Clark | Peter Fogel | Christina Baughman | Dami Oyedele | Joyce Lam | Moira Albanese | Liz Stovall | Ellen Szarleta | Carol Brown | Matt Repka | Justin Webster | Ian Ludwig | Eva Thiveos | Michael Crowley | Parul Karna | Atta Ceesay | Erin Rapoport | Kathi Marshall | Robert Conlisk | Brittany Miller | Mariana Pereira | Qi Dong | Christine Mabone | Matt Stegeman | Siru Liu | Meghan McNally | Shana Mabone | Michael Azmera | Xue Gong | Vanesse Dabney | Jennifer Deak | Venkatesh Pillai | Hirokazu Tsuda | Maria | Roy Cast | Elliott Balch | Victor Chan | Federico Pelayo | Annie McNair | Laura Meyer | Robert Manduca | Weichenhu | Vicki Chou | Loretta Marstranzi | Jason Huang | Zhaosong Ruab | David McQuown | Ling Ge | Jordan Besek | Martin | Gretchen Reyes | Shafia Imtiaz | Ann Li | Adam Lechnir | Jocelyn Hare | Colin Lago | Sheila Vemmer | Zach T | Crystal L | Daisuke Seki | Buwei He | Mari | Jiyoung Choi | Arlene Colvin | Christopher | Constance Boozer | Giancarlo Lazzaro | Mengxin Sun | Kenya Maclin | Becky Spavins | Christian Pecaut | Joe Quille | Nohely Arteaga | Sheila Taylor | Becca Sherman | Annika Johnson | Alyssa | Corey Chan | Santiago Matallana | Eric Baxter | David Welgus | Fumi | Yang Xu | Kyle Prisby | Russ Hare | Charles Smith | Emily Bao | Jose Requena | Yangfan Gao | Kazeem | Fumiaki | Daniel Hughes | Elisa Blanco | Greg Mance | April Vanmilligan | Fiona | WenWen | Virginia Podkul | Lxia | Matt Hampel | Sara Ellis | Kyle Terry | Jimmy Body | Paty Sprague | Cecelia Black | Gregory Henry | Asmurquhart | Sharon Kim | Xiaorui Tang | Barry Rapoport | Joy Holliday | Marnie van der Voort | Kotaro Uegaki | Steve Broadwell | Alejandro Albanez Rivas | Yvette Williamson | Jessica Palfi | Davion | Marcus | Larissa Dragu | Bradley Crawford | Zach Honoroff | Masahiro Mamiya | Jonathan Guy | Ben Keys | Hector Dox | Seven Torres | Binghui Gong | Dhathri Chunduru | Angelique Parrott | Cha'Yra | Karen Morris | Gia Hunt | Rudy Moreno | Ursina | Trumere Butler | Derrick | Shernette | Marcel Evans | Esperanza Johnson | Chen Lin

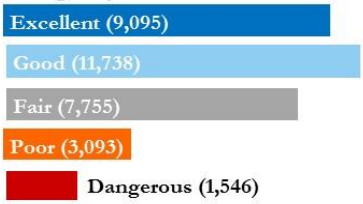
RESULTS

58,235 Parcels surveyed

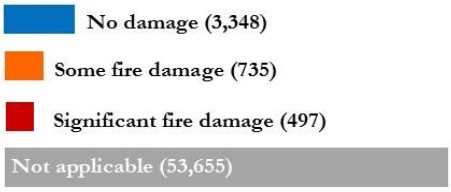
Is there a structure?

Occupancy

Property condition



Fire damage on blighted buildings



LESSONS LEARNED

- Utilizing the many resources available to a local community are enhanced by its ability to work with neighboring development partners.
- Collecting such comprehensive data allows the city to make smarter more calculated decisions on how to best address demolition and redevelopment.
- Partnering with academic institutions and other private partnerships is a great resource for communities struggling with environmental justice issues.

Two students survey the Gary, IN area.

Source: University of Chicago
http://csl.uchicago.edu/feature/graduate-students-take-policy-challenges-gary

MOVING FORWARD

The completion of this survey marks the first step towards a comprehensive land redevelopment program. Next steps that the City of Gary has prioritized include:

1. **Organize key city stakeholders and leaders** into a Brownfield/Redevelopment Working Group that will make commitments of time and resources and be accountable to city leadership.
2. **Prioritize redevelopment projects.** There is a need for the city planning and economic development staff to have a clear road map of priority projects. Using the working group for this task will help to bolster collaborative communication.
3. **Develop specific Master Plans** for each prioritized site. Once site prioritization has been established, a very specific, site-oriented master plan should be developed for each area of redevelopment.

Sources relied upon for this report: U.S. Census Bureau, http://garymaps.com/reports/, http://www.gary.in.us/redevelopment/initiatives.asp