



# INSIDE THE INNOVATION OF HUD'S OFFICE OF ECONOMIC RESILIENCE

August 11, 2015

Dear Friends and Colleagues,

We have accomplished a lot together this past year, under the leadership of Secretary Julián Castro. This year, the U.S. Department of Housing and Urban Development is marking its 50<sup>th</sup> anniversary as a federal partner to states, cities, tribes, and towns with a shared goal of creating strong, sustainable, and inclusive communities.

HUD's Office of Economic Resilience is helping communities build on their strengths to create more competitive and resilient economies prepared for the challenges of the future—including the challenge of climate change.

Last week, President Obama announced the Clean Power Plan, which he called the "single most important step America has ever taken in the fight against climate change." This effort will spur investment in clean energy technologies and lower the costs of renewable energy for American families, especially in low-income communities.

The effects of climate change already are being felt across the country. HUD is helping to expand the deployment of energy efficiency and clean energy technologies through a series of programs that will reduce utility costs for American households while doing our part to cut greenhouse gas emissions.

HUD's Renew300 Initiative sets an ambitious goal of 300 megawatts of renewable energy installed in federally subsidized housing—triple the goal initially outlined in the President's 2013 Climate Action Plan. Through the Better Buildings Challenge, HUD has engaged 90 multifamily housing partners who have committed to increasing energy efficiency in 400,000 multi-family households. HUD's Sustainable Communities Initiative is helping 143 communities and regions realize their visions for greater economic competitiveness, stronger community partnerships, and preparedness in the face of new climate realities.

HUD's Office of Economic Resilience has developed a series of briefs that will take you inside the innovation of our grantees and partners, the people involved in these projects and the tools they have developed that are models to others. We created these briefs to introduce planners, policymakers, community leaders, and interested citizens to community leaders that are seizing new opportunities to embrace a more prosperous future. Visit our [Innovation Series](#) website to find the full set of briefs and see a video that gives you a quick tour of OER's work.

We will continue to track the innovations of our partners and grantees and are excited to share new products and best practices to build healthy, strong, and resilient communities. We encourage you to visit the [SCI Resource Library](#) and [Renew300](#) site to learn more, as well as OER's home page, [www.hud.gov/resilience](http://www.hud.gov/resilience).

Sincerely,

Danielle Arigoni  
Acting Director, HUD Office of Economic Resilience



# RENEW300

INCREASING RENEWABLE ENERGY FOR LOW-INCOME FAMILIES



Solar photovoltaic (PV) panels on the roofs of North Lincoln Homes; the Denver Housing Authority is a Renew300 Partner (Denver, CO)

## EXPANDING CLEAN ENERGY ACCESS TO ALL AMERICANS UNDER RENEW300

**HUD's Renew300 initiative triples the federal renewable energy target set in the President's Climate Action Plan from 100 megawatts to 300 megawatts.** Launched in 2013, the President's Climate Action Plan calls for a target of 100 megawatts (MW) of installed capacity of on-site renewable energy at federally subsidized housing by 2020. In July 2015, HUD and the U.S. Department of Energy (DOE) partnered to expand this target to 300MW by allowing the inclusion of community and shared solar systems, thus launching the Renew300 initiative. By allowing community and shared solar, interested building owners and residents can now participate towards this goal, regardless of whether their properties are suited for on-site renewable energy generation systems.

**Renewable energy has very real economic and ecological benefits, encouraging clean jobs for our communities and driving the economy.** According to solar provider Everyday Energy, solar photovoltaics produced more jobs per unit than fossil fuel or other renewables, with over 100,000 workers currently employed in the solar power industry. In addition to creating jobs, renewable energy offers a significant opportunity for costs savings. In total, 300MW roughly translates to 426,000,000 kilowatt hours per year. At 11 cents per kilowatt hour, this adds up to nearly \$47 million in annual energy savings. Renew300 also represents tangible savings for the natural environment and will help to improve public health outcomes in the long term. The 300MW target is equivalent to approximately 293,749 tons of greenhouse gas emissions avoided each year, the equivalent of over 33,000,000 gallons of gasoline consumed.

**HUD is supporting federally-assisted residential building owners and operators by increasing their access to resources for renewable energy and providing technical assistance to help partners meet their goals.** Residential scale renewable energy installations are beginning to reach "grid parity" with traditional sources of power, and HUD expects this trend to continue over the next several years. HUD, the Department of Energy, Treasury, USDA, and other agencies are working to partner with banks, philanthropies, and other stakeholders to encourage investments and help match resources with viable renewable energy projects. HUD is also supporting Renew300 partners by providing technical assistance and resources on its renewable energy web portal and recruiting new partners to meet the 300MW goal.

## BY THE NUMBERS

**300MW**

HUD's goal is to reach 300 megawatts of installed renewable energy capacity on federally assisted housing by 2020

**\$47 MILLION**

Estimated annual energy savings or revenue from 300 MW of solar panels, at today's average energy cost of 11 cents per kilowatt hour

**100K**

Estimated number of workers employed in the solar industry

**60,000**

Installing 300MW of renewable energy reduces GHG emissions equivalent to taking 60,000 cars off the road.



# HUD STRATEGIES TO MEET RENEW300

HUD is working with the Department of the Treasury, the U.S. Department of Agriculture, and other federal partners to meet the ambitious goals of Renew300. The following strategies are being taken by HUD to help support the adoption of on-site renewable energy and community solar in federally subsidized housing across the nation:



IDENTIFY SOURCES OF CAPITAL, FINANCING, AND ADDITIONAL TECHNICAL ASSISTANCE AVAILABLE FOR OWNERS AND OPERATORS



RECRUIT NEW PARTNERS BY HOSTING A SERIES OF PUBLIC EVENTS PROMOTING ON-SITE RENEWABLES AND COMMUNITY SOLAR SYSTEMS



DEVELOP STANDARDIZED CONTRACTS, TEMPLATES, AND POWER PURCHASE AGREEMENTS (PPAs) FOR OWNERS AND OPERATORS



BUILD LINKAGES BETWEEN FINANCIAL AND HOUSING INDUSTRY LEADERS AND PROVIDE RESOURCES TO FACILITATE STREAMLINED RENEWABLE ENERGY PROJECTS

## RENEW300 CASE STUDIES

### DENVER'S PIONEERING POWER PURCHASE AGREEMENT

#### Denver Housing Authority

The Housing Authority of the City and County of Denver (DHA) became one of the first public housing authorities in the country to install solar photovoltaic systems across an entire sector of their portfolio using a Power Purchase Agreement (PPA).

DHA sought a long-term renewable energy source for its housing portfolio that would ensure predictable utility costs. After soliciting proposals through a competitive process, DHA partnered with Oak Leaf Energy Partners, Enfinity America Corporation, and Namaste Solar to establish a long-term contract for the installation and operation of this large-scale solar electric project. These private partners own and manage the systems and provide solar energy for the multifamily properties. DHA also secured low-cost debt financing through Qualified Energy Conservation Bonds.

PPAs provide a cost-effective financing solution building owners and managers that cannot afford the initial costs of installing renewable energy systems. In Denver, the PPA allowed DHA to install over 10,000 panels on 350 sites serving 665 residences with no up-front capital investment required. DHA's solar initiative created 40 new green jobs in Denver and is estimated to reduce 3,479 tons of carbon emissions.

**Read more at:** <https://www.hudexchange.info/onecpd/assets/File/Renewables-in-Practice-Case-Study-Denver-Housing-Authority.pdf>

### CREATIVE SOLUTIONS TO FINANCING SOLAR FOR AFFORDABLE HOUSING

#### National Housing Trust

Energy costs are a critical component of housing affordability. Fluctuating utility prices can quickly make housing unaffordable for low-income families on tight budgets.

NHT/Enterprise Preservation Corporation, the real estate affiliate of the National Housing Trust, preserves affordable housing by purchasing and renovating properties at risk of converting to market rate. In response to the volatility of energy costs, NHT/Enterprise Preservation Corporation installed solar systems on their multifamily properties and established a new business entity to own and operate these systems, called NHT Renewable.

NHT Renewable's first solar project was completed in Fall 2014 with the installation of 14 solar energy systems across 13 buildings in Washington, D.C. While continuing to expand solar across their existing portfolio, NHT Renewable is assisting peer developers who seek to do the same. NHT Renewable has also created a suite of templates and legal documents for use when undertaking solar projects on properties with multiple investors and lenders.

The NHT Renewable approach yields multiple benefits for stakeholders: energy savings, stabilized power costs, and no up-front investments are all incentives for property owners to install solar. These solar installations also create green jobs and reduce carbon emissions from multifamily properties.

**Read more at:** <https://www.hudexchange.info/onecpd/assets/File/Renewables-in-Practice-Case-Study-NHT.pdf>

# TECHNICAL RESOURCES FOR RENEW300

HUD, Treasury, and USDA are partnering with the Department of Energy (DOE) and the Environmental Protection Agency (EPA) to provide federally-assisted housing owners technical resources to meet their renewables goals. These and other resources are described below and also can all be found on HUD's Renew300 website:

## HUD'S RENEW300 WEBSITE

The HUD [Renew300 website](#) provides a one-stop shop for those interested in renewable energy installation on federally-assisted housing. On the Renew300 website, stakeholders interested in renewable energy can:

- **Become a Renew300 Partner** by committing to the installation of renewable energy at your federally assisted property or join into an existing or planned community solar installation
- **Request direct technical assistance** designed to help federally-assisted property owners scope, finance, and install renewable energy projects
- **View the latest technical resources**, HUD guidance, case studies, and other online resources around renewable energy projects and approval processes

## OTHER RENEWABLE ENERGY RESOURCES

### U.S. Department of Energy SunShot Initiative:

The SunShot Initiative drives research, manufacturing, and market solutions to make the abundant solar energy resources in the U.S. more affordable and accessible for all Americans.

<http://energy.gov/eere/sunshot/sunshot-initiative>

### National Renewable Energy Laboratory:

NREL develops clean energy and energy efficiency technologies and practices, advances related science and engineering, and provides knowledge and innovations to integrate energy systems at all scales.

<http://www.nrel.gov/>

### U.S. EPA Renewable Energy Ready Homes Resources:

EPA developed the Renewable Energy Ready Homes (RERH) specifications to educate builders on how to assess and equip new homes with a set of features that make it easier and less expensive for homeowners to install solar energy systems after the home is constructed. Resources on this web page include the RERH specifications and checklists and the RERH Solar Site Assessment Tool.

[http://www.energystar.gov/index.cfm?c=rerh.rerh\\_index](http://www.energystar.gov/index.cfm?c=rerh.rerh_index)

### Better Buildings Challenge for Multifamily Properties:

The Better Buildings Challenge (BBC) website provides best practices, guides, tools, and webinars for BBC partners and allies, some of whom are pursuing renewables.

<http://energy.gov/eere/better-buildings>

### Database of State Incentives for Renewables & Efficiency (DSIRE):

DSIRE provides a comprehensive source of information on incentives and policies that support renewable energy and energy efficiency in the United States. DSIRE is operated by the N.C. Clean Energy Technology Center at N.C. State University and funded by the U.S. Department of Energy.

<http://www.dsireusa.org/>

### Federal Financing Guide for Clean Energy Deployment:

This guide targets state, local, and tribal leaders, along with their partners in the private sector, to make it easier for them to find capital for energy efficiency and clean energy projects.

<http://energy.gov/eere/slsc/downloads/guide-federal-financing-energy-efficiency-and-clean-energy-deployment>

### Solar Powering America:

Solar Powering America, provides resources on solar energy in the U.S. Resources include lists of solar-related databases, funding programs, guides, interactive tools, newsletters, webpages, and white papers.

<http://energy.gov/eere/solarpoweringamerica/solar-powering-america-home>

### SunShot Initiative Community and Shared Solar Page:

This page includes SunShot-funded cooperative awards and other resources for organizations interested in investing in solar together.

<http://energy.gov/eere/sunshot/community-and-shared-solar>

## HOW TO JOIN RENEW300

**Are you a federally-assisted housing owner or operator? Do you want to install renewable energy sources on your property or join into a community or shared solar installation?**

If you are interested in joining Renew300, please visit the website at: <https://www.hudexchange.info/programs/renewable-energy/>



For more information, please visit the Renew300 website: <https://www.hudexchange.info/programs/renewable-energy/>

[hud.gov/resilience](http://hud.gov/resilience)



# ECONOMIC RESILIENCE



The City of Burlington created a new Downtown and Waterfront Plan to nurture new economic drivers and build on natural competitive advantages (Burlington, VT)

## CREATING STABILITY AND OPPORTUNITY

**America's accelerating economic recovery is inspiring communities to seek new ways to enhance regional competitiveness and ensure their economies are more resilient to change.** Resilience is the ability to recover quickly from shocks and disruptions. This can mean being prepared for the next storm, or preparing for and responding to job losses caused by a local factory closure, population and demographic changes, shifts in the national and global economy, and other disruptions that can alter a region's economy — but also can present new economic opportunities.

**A critical component of HUD's mission for the past 50 years has been to support planning and urban development efforts that expand opportunity for Americans.** HUD's Sustainable Communities Initiative (SCI) grants awarded in 2010 and 2011 constitute HUD's most comprehensive community and regional planning effort in decades. The SCI awarded funding to 143 communities through Regional Planning Grants and Community Challenge Planning Grants, serving forty percent of U.S. residents. HUD's \$250 million investment opened the door to hundreds of millions of dollars of public and private investment and engaged more than 3,300 core partner groups nationwide.

**HUD's SCI grants helped rural and urban areas pursue locally-driven solutions to long-term economic development issues.** These communities used HUD funds to refocus and strengthen their economies — increasing opportunity for Americans and helping families feel more secure in a world of constant economic change.

**Using a variety of strategies, HUD's grantees have taken a deliberate approach to adapting their economies for a changing future.** Some of these strategies include improving access to jobs through more housing and transportation choices; supporting entrepreneurship to take advantage of new demographic and market trends; revitalizing downtowns and corridors as anchors for development; planning for a changing climate; and helping localities link assets in a regional economy.

## BY THE NUMBERS

**\$1.2  
BILLION**

New capital investment in Flint, MI with new job growth strategies and vacant land redevelopment

**700**

New jobs anticipated along redeveloped Bridge Corridor in Bernalillo County, NM

**15,000**

Projected new jobs with full implementation of the Memphis Aerotropolis Master Plan

**39**

Career pathways identified by the Baltimore Opportunity Collaborative for unemployed residents



# STRATEGIES FOR INCREASING ACCESS

HUD SCI grantees have embraced the following strategies to enhance economic stability and competitiveness:



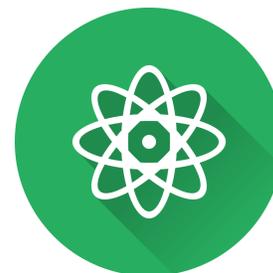
INVEST IN  
LOCAL ASSETS



DIVERSIFY  
FOR RESILIENCE



CONNECT PEOPLE  
AND PLACES



INNOVATE  
AND ADAPT

## SCI GRANTEE CASE STUDIES

### BRIDGING THE JOBS-ACCESS GAP IN BALTIMORE

#### Baltimore Metropolitan Council | The Opportunity Collaborative

[The Opportunity Collaborative](#) is a consortium formed by state and local governments, businesses, universities, philanthropies, and community leaders in greater Baltimore to strengthen the regional economy and to connect all residents to opportunity through the creation of a [Regional Plan for Sustainable Development](#), funded by a HUD SCI grant. The work of the Opportunity Collaborative is especially relevant in the wake of the 2015 civic unrest in Baltimore, which highlighted the stark economic and social disparities that exist in the Baltimore region as a result of prevailing economic forces, persistent residential segregation, and the legacy of historical discriminatory practices.

The Collaborative mapped out the complex barriers that prevent many Baltimore residents from accessing employment. Many workers in metropolitan Baltimore struggle to find affordable housing near the growing job centers that are concentrated far from the urban core, and low-income households dependent on public transportation are unable to make the commute because the region's transit system does not connect to these decentralized employment locations.

As a result, the Collaborative's [Last Mile project](#) sought to bridge the job access gap by teaming up the Central Maryland Transportation Alliance with the BWI Business Partnership to create stronger transit connections to the region's airport district. This innovative partnership will connect people to a major employment center, increase access to jobs for everyone in the region, and ensure that critical regional employers can attract new talent and retain existing workers.

Education and training is another serious barrier to employment, particularly for communities of color in the region. The Collaborative's [workforce analysis](#) revealed racial

inequities in educational achievement and fewer networking, mentoring, and training resources in lower income communities that were predominantly African American.

To overcome these disparities and address unemployment among the region's low skilled workers, the Collaborative identified promising career pathways and workforce strategies in the region's high-growth industrial sectors, such as healthcare and transportation/logistics.



The Collaborative supported initiatives like the [Job Opportunities Task Force](#), which expanded job-readiness services to the west side of Baltimore City, and the Green Housing/Grow Jobs Program, which will train public housing residents to conduct energy efficiency retrofits and place participants in permanent employment. The Opportunity Collaborative has provided a roadmap to regional economic resilience that invests in local talent, supports a diverse workforce and regional economy, and connects workers to emerging opportunities.

Learn more at: [www.opportunitycollaborative.org/](http://www.opportunitycollaborative.org/)

# CAPITALIZING ON FOOD HUBS: A GROWING BUSINESS OPPORTUNITY

## Mid-Ohio Regional Planning Commission | The Food District at Weinland Park

When the [Mid-Ohio Regional Planning Commission](#) evaluated ways to strengthen the local economy, building a robust regional food system rose to the top of their list of strategies. Developing a value-added agricultural sector would not only ensure access to healthy, locally-produced food, but also preserve farmland threatened by development in the growing Columbus metropolitan area. MORPC's [Central Ohio Local Food Assessment](#) pointed to opportunities to improve the region's food distribution system, develop food enterprise incubators, and increase the local food processing capacity which would make agriculture more profitable.

The Mid-Ohio Regional Planning Commission used their HUD SCI grant to build on this work and address the lack of access to fresh food in places like Weinland Park—a diverse urban neighborhood in transition. The community developed a plan to establish a new multifaceted facility (known as the [Food District](#)) for food processing, distribution, and classes in entrepreneurship. The Community Economic Development Corporation of Ohio will implement the project in phases over several years once a site is selected.



The Food District will ultimately equip the Columbus area with a culinary business and workforce training center to foster community education while creating a regional network of food hubs to help keep billions of dollars in the local economy.

Learn more at: <http://thefooddistrict.org/> and <http://www.morpc.org/Sustainability/local-foods/index>

# BUILDING ON A COMPARATIVE ADVANTAGE TO STRENGTHEN RESILIENCE

## City of Memphis, TN | Memphis Aerotropolis Master Plan

The **City of Memphis'** International Airport is the economic center of the logistics industry in the greater Memphis region and exemplifies the "Aerotropolis" concept. This concept focuses on economic development based on airport access and global connections. However, due to lack of coordinated planning, the Memphis airport area is currently prone to blight, poverty, crime, and poor aesthetics.

As a HUD SCI grantee, the City of Memphis developed an [Aerotropolis Master Plan](#) to provide a framework for the coordinated revitalization of a 50-square mile area surrounding the airport. The master plan outlines how the area can

**create 15,000 jobs, increase property values by \$1.2 billion, and generate \$30 million in additional annual tax revenue** using strategies that will market the area's assets, focus on workforce development, and promote neighborhood revitalization. By combining transportation, housing, economic, and social needs in their Aerotropolis Master Plan, the City of Memphis now has a comprehensive plan for creating meaningful and lasting change by leveraging a critical resource.

Learn more at: <http://www.memphischamber.com/Economic-Development/Aerotropolis.aspx>

# RE-ENERGIZING ECONOMIES IN A RESILIENT COMMUNITY

## City of Flint, MI | Imagine Flint



The **City of Flint** lost more than half its population over the past four decades largely due to auto plant closures. The City developed the [Imagine Flint Master Plan](#)—the first comprehensive long-range plan in 50 years—using a HUD SCI grant to guide Flint's transformation into a more vibrant city that is adaptable to change.

The master plan designates job growth areas, calls for repurposing of vacant land and has helped direct strategic investments— **already bringing 42 projects into the city which are creating or retaining nearly 2,000 jobs and pouring over \$1.2 billion in capital investments** into Flint. Residents, businesses,

and city leaders are working together to implement the plan through revisions to the city's zoning code, the creation of a blight elimination framework, infrastructure improvements, and demonstration projects.

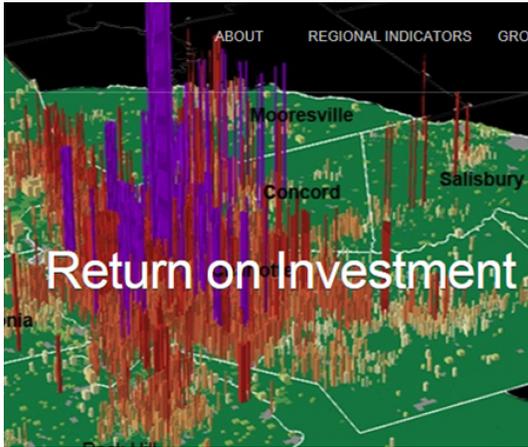
The City was one of seven communities awarded a 2014 HUD Choice Neighborhoods Planning Grant, this for the South Saginaw Corridor, a priority development area identified in the Imagine Flint Master Plan. Imagine Flint was awarded a 2014 Planning Excellence Award for Public Outreach by the Michigan Association of Planning.

Learn more at: <http://www.imagineflint.com/>

# TOOLS FOR INCREASING ECONOMIC RESILIENCE

**LOCAL TOOLS:** The following tools were developed by HUD SCI grantee communities.

## CONNECT OUR FUTURE REAL ESTATE DEVELOPMENT TOOLS



[CONNECT Our Future](#) is a consortium leading the development of the first regional plan for the 14-county, bi-state Charlotte, NC region, which is expected to nearly double in population by 2050.

Through CONNECT, the Centralina Council of Governments and its partners helped the region create a Regional Growth Framework, which has provided communities with new tools for navigating investment and development decisions.

The [Return on Investment Tool](#) estimates

the potential revenue generated by different development types so that jurisdictions can weigh costs of infrastructure and services and determine where to allocate resources.

The [Brownfields-Greyfields Toolkit](#) highlights financial tools and methods of analysis for reusing brownfield and greyfield sites (former industrial, commercial or retail sites) and stimulating new development in under-utilized areas.

**Access these tools at:**

<http://www.connectourfuture.org/tools/>

## RENEW EAST ARKANSAS DATA WAREHOUSE

The East Arkansas region has experienced protracted population and job losses. With a HUD Regional Planning grant, the East Arkansas Planning and Development District (EAPDD) was able to develop a unique user-friendly data platform, the [Data Warehouse](#), as part of the [reNEW East Arkansas](#) project that illuminated some surprising growth trends.

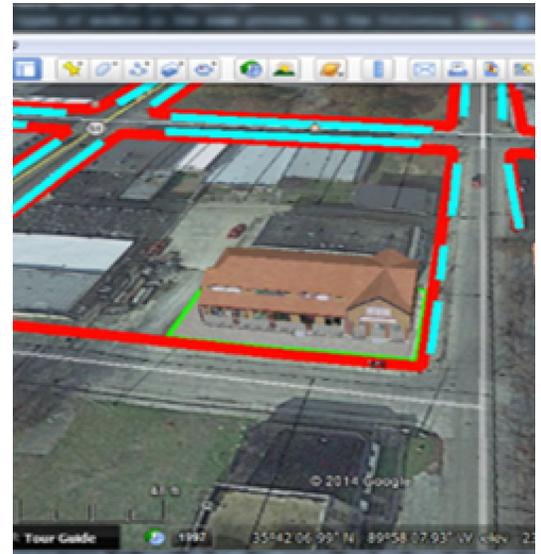
The data revealed that several counties were actually gaining population in the 25-to-44 year age group—the prime cohort for employment opportunities. The region is now working to expand entrepreneurship programs to target this demographic, particularly in the area of value-added agriculture and its regional

food economy. The data also revealed that tourism drew more than half a billion dollars into the region, highlighting the need for local governments to support and expand this economic sector.

reNEW East Arkansas is promoting the Data Warehouse as a tool to help local governments plan strategically for housing, transportation, and infrastructure investments. While data is currently available only for Arkansas, reNEW is exploring ways to scale up the tool so that it can be modeled in a variety of locations.

**Access this tool at:**

<http://eapdd.com/data-warehouse/>



## PROSPEROUS PLACES ANALYTICAL TOOLS



The Capital Area Council of Governments (CAPCOG) in Austin, TX developed a suite of services and analytics tools designed to help municipalities in Central Texas deliver services in a cost-effective manner while meeting the needs of all community residents. These tools came out of a three-year initiative called the [Sustainable Places Project](#) that was funded by a HUD Community Challenge Planning grant. CAPCOG expanded this work into the [Prosperous Places Program](#) to continue refining this suite of services. The program provides a variety of tools

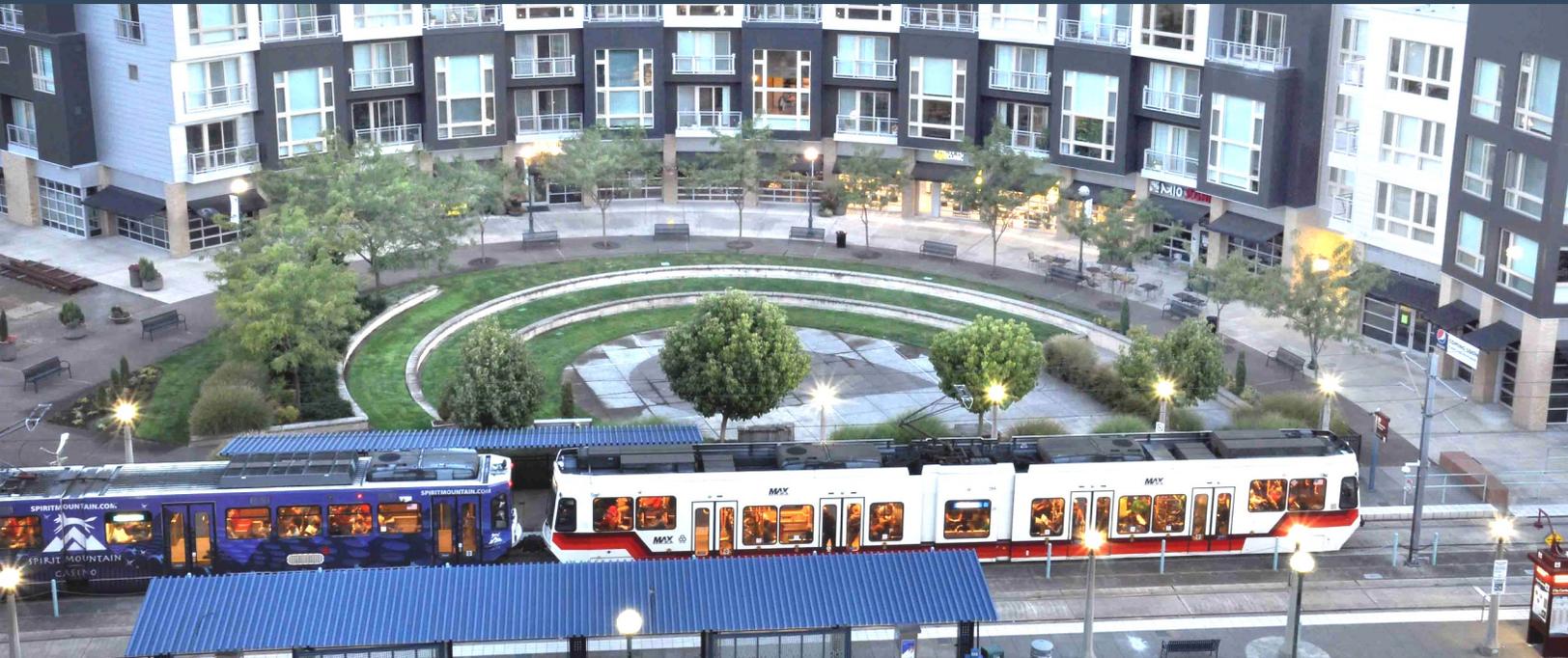
in three core areas: strategic site analysis, placemaking analysis, and staff support services. These tools can include anything from 3D growth scenario visualization, site certification, public outreach support, and measurements of project accessibility and walkability. The Prosperous Places Program has already been employed in Austin, Dripping Springs, Hutto, and Lockhart.

**Access these tools at:**

<http://www.capcog.org/divisions/community-and-economic-development/prosperous-places-program>



# ACCESS TO OPPORTUNITY



Transit-Oriented Development at the Beaverton Central MAX light rail station; the [City of Beaverton](#) was a HUD Community Challenge Planning grantee (Beaverton, OR)

## INCREASING HOUSING AND TRANSPORTATION CHOICES FOR ALL

**Housing and transportation choices have a profound effect on the ability of Americans to access jobs and can shape the economic health of entire regions.** From dense urban downtowns to small rural towns, a lack of housing and transportation choices can limit access to opportunity and stifle economic growth by isolating residents from jobs and other essential services.

**A critical component of HUD's mission for the past 50 years has been to support planning and urban development efforts that expand opportunity for Americans.** HUD's Sustainable Communities Initiative (SCI) grants awarded in 2010 and 2011 constitute HUD's most comprehensive community and regional planning investment in decades. HUD's SCI awarded funding to 143 communities through Regional Planning Grants and Community Challenge Planning Grants, serving forty percent of the U.S. population. HUD's \$250 million investment opened the door to hundreds of millions of dollars of public and private investment and engaged more than 3,300 core partner groups nationwide.

**Communities with diverse housing and transportation options can ease cost burdens on American families.** The combined cost of housing and transportation constitutes the largest single expense for the majority of American households. Preserving and developing a mix of housing and transportation options provides flexibility and choice that can help families withstand economic shocks and stresses by adjusting their travel and living patterns to current budget realities.

**Successful communities nurture their vision for economic growth by expanding access to opportunity for all residents.** By increasing the quantity and diversity of housing and transportation choices, these places encourage businesses to locate in their communities, helping to create thriving hubs and corridors. Local governments are modernizing land-use rules, taking advantage of new investments in transportation, and ensuring residents are well connected to new economic opportunities and other services, such as schools and stores.

## BY THE NUMBERS

**\$32  
MILLION**

Invested by the Twin Cities in MN to fulfill a regional goal of expanded transit-oriented development

**\$48  
MILLION**

New investment in mixed-income, affordable housing, and community facilities near light rail in Dallas, TX

**\$4.5  
MILLION**

Invested in infill redevelopment in 2013-2014 by the Randolph County Housing Authority in Elkins, WV to provide affordable housing with access to employment options

**20%**

Percentage of housing reserved for affordable units in major new development areas under Somerville, MA's new zoning code



# STRATEGIES FOR INCREASING ACCESS

HUD Sustainable Communities Initiative grantees have employed the following strategies for improving housing and transportation choices in order to increase access to opportunity in cities and regions across the country:



FUND TRANSIT-ORIENTED DEVELOPMENT WITH TOD GRANT PROGRAMS OR REVOLVING LOAN FUNDS



REMOVE REGULATORY BARRIERS FOR TOD AND PRESERVE AFFORDABLE HOUSING NEAR TRANSIT



INCREASE MULTIMODAL TRANSPORTATION OPTIONS AND ADOPT COMPLETE STREETS POLICIES



PRIORITIZE MULTIMODAL PROJECTS IN STATE IMPLEMENTATION PLANS AND TRANSPORTATION IMPROVEMENT PROGRAMS

## SCI GRANTEE CASE STUDIES



City of Phoenix, AZ

The City of Phoenix is leading the [Reinvent Phoenix](#) project to establish a transit-oriented and walkable development model for districts along the city's new [Valley Metro](#) light rail transit system. The intent of TOD is to create safe, convenient, accessible, and comfortable environments for walking, bicycling, and using public transit.

In a city historically not known for walkability, action plans for **five transit-oriented development districts** are promoting a community-based vision for the future and identifying investment strategies that will expand opportunities for local residents.

To encourage private investment near transit stations, **the city allocated \$500,000 for competitive matching predevelopment grants** and on July 1, 2015, the Phoenix City Council approved its new [Walkable Urban Code](#) to foster transit ridership, pedestrian safety, and community health.

Learn more at: <http://reinventphx.org/>



City of Somerville, MA

The City of Somerville completed the city's first-ever Comprehensive Plan, [Somerville Vision](#), and led the neighborhood-based [Somerville By Design](#) planning effort in anticipation of the [MBTA Green Line](#) extension and six new rail transit stations in the city.

Under the project, the city has rewritten the Somerville Zoning Ordinance under the [Somerville Zoning Overhaul](#) to modernize land use regulations, incentivize TOD, and ensure adequate affordable housing. In addition, they passed the first-ever [Complete Streets ordinance](#) in the state of Massachusetts.

In total, it is estimated that the planning efforts and zoning revisions **will generate 30,000 new jobs, 125 acres of open space, and 6,000 new housing units, including 1,200 affordable units near rail transit stations.**

Learn more at: [www.somervillebydesign.com/](http://www.somervillebydesign.com/)



City of Dallas, TX

The City of Dallas led the [Dallas TOD](#) planning project to focus investment in **five DART light rail station areas in south Dallas** to encourage the development of housing and community amenities that meet local needs.

Together, the station area plans are spurring mixed-use development by using innovative combinations of funding sources to begin construction on pilot projects in each station area. One of the pilot projects is a 44,000 square foot community health clinic that opened in Spring 2015 and saw 1,500 patients in its first week. Employing more than 100 people, it is adjacent to the Hatcher Street station.

In total, this effort is **estimated to bring a planned 682 new workforce and mixed-income housing units near light rail transit stations** in historically disinvested neighborhoods in south Dallas.

Learn more at: [www.dallastod.com/](http://www.dallastod.com/)

# CONNECTING HOUSING, TRANSPORTATION, AND JOBS IN THE TWIN CITIES

## Metropolitan Council | Corridors of Opportunity

In the **Minneapolis-St. Paul region**, the [Metropolitan Council](#) used HUD grant funding to lead [Corridors of Opportunity](#), a broad-based initiative to accelerate the build-out of a regional transit system for the Twin Cities that will spur economic growth and ensure equitable access to opportunities for all.

It focused on seven transit corridors that connect local places, institutions, and commercial districts to each other and to the entire Minneapolis-St. Paul metropolitan region. Corridors of Opportunity engaged stakeholders along the corridors on nearly two dozen planning and implementation activities that promoted transit-oriented development, affordable housing, small business support and investment, and community outreach and engagement.

One of the main initiatives under the project was providing grants to support new equitable TOD projects and the preservation and creation of affordable housing units near transit. As a result of the project, five transitways in the region developed corridor-wide action strategies for increasing TOD. Corridors of Opportunity combined their HUD funding with funds from the [Living Cities Integration Initiative](#) to support low-interest loans for projects along the three transitway corridors.

Guided by the TOD strategy funded by the HUD grant, the Metropolitan Council repurposed unused dollars from its existing [Livable Communities grant program](#) to create a special, one-time \$32 million TOD grant program, which now continues

on an ongoing basis; this program is funded by a region-wide property tax and other Council funds. Current annual funding of approximately \$7-8 million provides grants to cities to support a variety of TOD projects throughout the region.

### LOCAL IMPLEMENTATION CAPACITY (LIC) GRANT PROGRAM

Corridors of Opportunity awarded \$953,000 to eight local affordable housing developers and cities under the [LIC Grant Program](#) to provide predevelopment funding for TOD projects. Three site-specific predevelopment grants along the Green Line light rail train were funded, as well as an additional five general predevelopment grants which funded technical studies and community engagement efforts along the Green Line LRT.

Learn more at: <http://www.corridorsofopportunity.org/>



The LIC Grant Program provided critical predevelopment funds to enable the development of Hamline Station along the new Green Line LRT line in St Paul, MN. Hamline Station will feature 108 units of affordable and supportive housing and over 14,000 sq. ft. of commercial space.

# ANALYZING ACCESS IN A RURAL AND SMALL TOWN WEST VIRGINIA SETTING

## Randolph County Housing Authority | Housing and Transportation Connections

**Randolph County** is a rural region in West Virginia with high poverty and unemployment rates that has struggled to help local residents access jobs. The county has very limited public transportation options and nearly 20 percent of local residents lack access to personal vehicles. Moreover, population growth is stagnant and estimates show the number of senior citizens living in the region is projected to double by 2035. These shifting demographics require new housing and transportation solutions.

The [Randolph County Housing Authority](#) (RCHA) used their SCI grant to conduct a thorough analysis of housing and transportation needs in the region.

The research pointed to opportunities to improve bus transit service that connect important regional destinations as well as opportunities for infill development in downtown Elkins, the region's primary

employment center, where nearly 33% of housing space was undeveloped.

Using a robust community engagement process and the data collected via their needs analysis, they identified strategies for improving housing and transportation choices in the county. The following three reports were completed as part of the project and informed these strategies:

1. [Randolph County Housing and Transportation Study](#): Assessed housing and transportation needs county-wide
2. [Country Road Bus Transit Study](#): Assessed opportunities for expanding Country Roads Transit bus routes in Elkins and county-wide
3. [Neighborhood Mobility Plan](#): Assessed walkability and access to economic opportunity in Highland Park

As a result of the project findings, RCHA and its partners are working to diversify

housing options for a variety of ages and incomes and have worked with Country Roads Transit to expand fixed-route service destinations. **In 2013-2014 alone, RCHA and its partners constructed or rehabilitated 40 units of housing in Randolph County, contributing more than \$4.5 million in construction funding to infill development and redevelopment.**

Moreover, Randolph County is moving ahead with a [trail connector](#) that will link the Allegheny Highland Trail to the Elkins Depot Welcome Center in downtown Elkins, a recommendation from the Neighborhood Mobility Plan to enhance mobility for Highland Park residents.

Learn more at: [www.rchawv.org/community-planning.html](http://www.rchawv.org/community-planning.html)

# TOOLS FOR ADVANCING ACCESS TO OPPORTUNITY

**FEDERAL TOOL:** The following tool was developed by HUD and the U.S. Department of Transportation.

## HUD LOCATION AFFORDABILITY PORTAL

In 2013, HUD and DOT launched the [Location Affordability Portal \(LAP\)](#), a user-friendly source of robust, standardized data on the combined cost of housing and transportation at the neighborhood level.

The LAP features two tools—*My Transportation Cost Calculator* and the *Location Affordability Index*—that illustrate from different perspectives how housing location impacts affordability.

The *My Transportation Cost Calculator* generates transportation cost estimates based on user-entered

information, providing households, real estate professionals, and housing counselors customized comparisons of housing and transportation costs in different neighborhoods.

The *Location Affordability Index (LAI)* can be used to make data-driven decisions about local and regional planning and investment. The maps and data tools generated by the LAI can also be used to communicate with the public about different development scenarios.

**The LAP can be accessed here:** <http://www.locationaffordability.info/>

**LOCAL TOOLS:** The following two tools were developed by HUD SCI grantee communities.

## ENVISION TOMORROW PLUS (ET+)

[Envision Tomorrow Plus \(ET+\)](#) is an open-access scenario planning package that allows users to analyze how their community's current growth patterns and future growth decisions will impact a range of measures from public health, fiscal resiliency, and environmental sustainability.

ET+ provides a quick visualization of development decisions and current growth trajectories and can be used by communities to develop a shared vision for the future. It can be applied at scales from a single parcel to whole metropolitan regions.

ET+ consists of approximately 18 additional analysis tools and scenario

indicators developed and incorporated into the standard [Envision Tomorrow](#) tools and indicators developed by Fregonese Associates. The new models were applied and tested in the Wasatch Front region of Utah and in the Austin, TX and Kansas City, MO regions as part of their HUD SCI planning projects.

In addition, an online version of the tool, [Envision Tomorrow Online \(ETO\)](#), was created to broaden access to scenario development beyond people with experience and knowledge of ArcGIS desktop products.

**ET+ can be accessed online here:** <http://et.tacc.utexas.edu/Home.aspx>

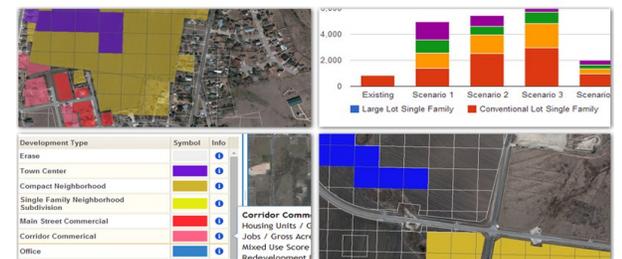
### Envision Tomorrow Plus

An online forum for users of ET+



envision tomorrow

Demo Map Create Account Login



Welcome to Envision Tomorrow Online (ETO)

## MARC SUSTAINABLE CODE FRAMEWORK

The Mid-America Regional Council (MARC) developed this tool using HUD Community Challenge Planning Grant funding under their [Creating Sustainable Places Initiative](#).

The [Sustainable Code Framework](#) is a tool for local governments that allows communities to explore different code options based on their development objectives. The framework also contains a database

of existing projects that highlights best practices for sustainable principles, including ones that promote housing and transportation choices. The Sustainable Code Framework website contains close to 100 examples that demonstrate how to align codes with sustainable development principles.

**This tool can be accessed here:** <http://codes.sustainable-kc.org/>



# EQUITY AND INCLUSION



*Pine Ridge Reservation residents share equity and inclusion strategies with HUD Secretary Julián Castro and U.S. Senator Tim Johnson in October 2014 (Porcupine, SD)*

## INCLUSIVE GROWTH BUILDS STRONG AND RESILIENT REGIONS

**“A child’s future should not be determined by the zip code he lives in,” states HUD Secretary Julián Castro.**

Unfortunately, educational attainment, employment, upward mobility, and even healthcare can be affected by one’s street address and neighborhood.

**In communities throughout the country, local leaders are identifying obstacles that limit access to opportunity for Americans.** These include land-use decisions, housing policy, transportation investments, and lending practices that make it difficult for people to find quality housing, good schools, public services, stable jobs, or healthy foods—and reflect lasting patterns of segregation with a disproportionate effect on low-income families and communities of color.

**By helping all citizens reach their full potential, we are helping to increase US competitiveness.** Inclusive regions with lower income inequality, less segregation, and better access exhibit greater economic growth and stability with more chances for upward mobility.

**A critical component of HUD’s mission for the past 50 years has been to support planning and urban development efforts that expand opportunity for Americans.** HUD’s Sustainable Communities Initiative (SCI) grants awarded in 2010 and 2011 constitute HUD’s most comprehensive community and regional planning effort in decades. HUD’s SCI awarded funding to 143 communities through Regional Planning Grants and Community Challenge Planning Grants, serving forty percent of the U.S. population.

HUD’s \$250 million investment opened the door to hundreds of millions of dollars of public and private investment and engaged more than 3,300 core partner groups nationwide.

**HUD’s grantee communities are empowering people historically not involved in community planning and policymaking to get involved in community decisions that affect their daily lives.** Grantee activities are leading to new jobs, housing, transportation, and economic opportunities. With the economic and demographic shifts facing our country, ensuring equitable access to opportunity is not just a civic responsibility, but an economic imperative.

## BY THE NUMBERS

**109  
MILLION**

Total population living in regions that are now measuring access to opportunity as an indicator of economic competitiveness

**99**

Transit systems targeting improved access to job centers for low-income workers

**40**

Local demonstration projects designed to eliminate barriers to opportunity

**3,000+**

Average number of individual residents engaged in a HUD SCI grantee’s planning project



# STRATEGIES FOR ENHANCING EQUITY

HUD Sustainable Communities Initiative grantees have employed the following strategies to enhance equity:



BUILD INCLUSIVE GOVERNANCE STRUCTURES



IDENTIFY REGIONAL BARRIERS TO OPPORTUNITY



PRIORITIZE INVESTMENTS TO EQUALIZE OPPORTUNITY



IMPROVE LOCATION OF TRANSPORTATION ASSETS

## SCI GRANTEE CASE STUDIES



Greater Memphis Area, TN

The Mid-South Regional Greenprint Consortium, led by Shelby County Government, created the *GREENPRINT 2015/2040* plan to address transportation, community health and wellness, social equity, and economic development through an integrated network of green spaces and trails in Greater Memphis.

Emphasizing equitable participation and strong representation from minority and low-income communities, the project engaged more than 3,000 residents who provided crucial feedback on the plan and identified underserved areas where Greenprint investments could provide maximum benefit. The Greenprint network of trails will link households across the region, including underserved neighborhoods, to key destinations, such as major employers and services.

The Greenprint Consortium committed to the establishment of an outreach council that will monitor potential displacement stemming from Greenprint investments. Other activities include the publication of an outreach toolkit for effective public engagement and incentivizing affordable housing on or near Greenprint corridors.

**Learn more at:**

<http://midsouthgreenprint.org/>

### Latino Public Participation and Community Indicators Project

*Developing a Bottom-Up Understanding of Inclusion and Livability in Lane County, Oregon*



Dr. Gerardo Sanchez and Rosal Hennessy, Department of Planning, Public Policy and Management, Incorporating Findings from Sightline Institute, November 2012



Lane County, OR

As part of the Lane Livability Consortium, the University of Oregon led a research/outreach effort to engage the growing Latino community in Lane County. The project produced equity indicators and engagement tools to help public agencies build trust and measure progress on issues important to the Latino community. By providing safe spaces for residents to share concerns and ideas, utilizing trusted informal networks for disseminating information, and improving cultural competency of agency staff, the project reduced isolation, fostered networking within Latino and immigrant communities, and yielded insights on local plans that may not have been captured otherwise.

Municipalities will incorporate these findings in the updated Eugene-Springfield Consolidated Plan, which guides the use of HUD block grant funding for affordable housing and community development, and will influence the fair housing plans jurisdictions will begin in Fall 2015. Other Oregon towns look to replicate the process, including training staff on outreach to Latino and other marginalized communities.

**Learn more at:** [www.livabilitylane.org/](http://www.livabilitylane.org/)



Piedmont Triad, NC

The Piedmont Triad region in NC exemplifies a national trend of increasingly concentrated poverty in suburban areas. The Piedmont Together Consortium found the best way to achieve sustainable economic growth was to confront the deep disparities preventing all residents from contributing to regional prosperity. Elected officials, the business community, and leaders of disinvested communities jointly developed an Equitable Growth Profile, discovering regional GDP would be \$9.5 billion greater if racial gaps in income were eliminated.

Piedmont Together hosted two Equity Summits to generate tools for increasing access to opportunity. Mayors have been supportive of strategies that would assist disengaged youth, improve transit access, and strengthen career pathways. A workforce training program was launched to build job-readiness skills for living wage jobs. Throughout the planning process, Piedmont Together prioritized inclusive and meaningful engagement with economically vulnerable communities, and has won state planning awards for their approach.

**Learn more at:**

[www.piedmonttogether.org/](http://www.piedmonttogether.org/)

# EQUITY IN THE PUGET SOUND REGION (Seattle, WA)

## Connecting Housing, Transportation, and Jobs through Thoughtful Transit Expansion

The Puget Sound region received a HUD Community Challenge Planning Grant and a Regional Planning Grant under the SCI. While the project teams and scope of work were distinct for each grant, stakeholders shared a common organizing framework: capitalize on investments in transit to support equitable development and enhance access to opportunity.

## REGIONAL: GROWING TRANSIT COMMUNITIES

**The Central Puget Sound Region is poised to make a \$25 billion investment in regional transit infrastructure in the coming decades—and is committed to maximizing benefits for low-income communities and communities of color.**

To accomplish this goal, the Growing Transit Communities (GTC) Partnership developed an equitable development growth strategy for 74 station areas. The Partnership conducted an [opportunity mapping analysis](#) to guide corridor planning and inform regional transportation and housing voucher investments. Forty-two (and counting) jurisdictions and local organizations have become signatories to a [Regional Compact](#) that identifies actions to accomplish equitable transit expansion.

With an Equity Co-Chair and a cross-sector stakeholder body, the Regional Equity Network (REN), the GTC empowered low-income communities and communities of color to participate in planning and decisionmaking. The REN convened a Puget Sound Equity Summit to establish a shared agenda for advancing equity priorities.

The region devoted more than 20 percent of its HUD SCI grant to GTC's Equity Grant Program, which supported 43 community-based organizations as they reached out to citizens, built capacity, and conducted research to inform station-area projects.

### REGIONAL EQUITABLE DEVELOPMENT INITIATIVE (REDI) FUND

The GTC Partnership also created a new business tool to overcome the logistical and financial challenges associated with building affordable housing near transit. The [Regional Equitable Development Initiative \(REDI\) Fund](#) is helping developers purchase land for future affordable housing or to rehabilitate or preserve existing affordable housing near transit. The City of Seattle, King County, the State of Washington, and ARCH, a regional coalition for housing, were GTC partners that collectively committed \$5 million to seed the REDI fund.



## LOCAL: COMMUNITY CORNERSTONES



Community members shared their visions for the future of Seattle during the development of the city's new Comprehensive Plan, Seattle 2035

Seattle's [Community Cornerstones](#) project was initiated in response to accelerated development pressures along a new light rail that runs through lower-income communities in Southeast Seattle. One of the most ethnically diverse areas of the city, Southeast Seattle is home to many refugees and recent immigrants.

To preserve economic and cultural diversity while also supporting newcomers, the project established a TOD acquisition fund to create affordable housing and a commercial stabilization program for small immigrant and refugee-owned businesses. In addition to the \$3 million HUD Community Challenge Planning grant, the City leveraged \$5.9 million in local public and private sources to support community anchors and prevent displacement.

Community Cornerstones engaged more than 700 residents, building the capacity

of immigrant and refugee communities to participate in community decisions. In response to residents' request for a shared Multicultural Community Center, the City secured a grant to help with the center's planning, and the project is moving forward under the leadership of historically underrepresented communities in Southeast Seattle.

Building on the work of Community Cornerstones, Seattle's City Council unanimously adopted a [resolution](#) in 2015 that cements race and social equity as the lens of the City's new Comprehensive Plan, [Seattle 2035](#), which guides the city's growth and zoning decisions over the next 20 years. The City has developed tools to measure displacement risk and access to opportunity. This approach will ensure that growth does not displace low-income communities and communities of color, and that all residents have what they need to reach their full potential.

# TOOLS FOR ADVANCING EQUITY AND INCLUSION

The following tools were developed by HUD and SCI Capacity Building Intermediaries to help communities advance equity and inclusion.

## HUD FAIR HOUSING AND EQUITY ASSESSMENT (FHEA)

Seventy-four HUD Regional Planning grantees completed the **Fair Housing and Equity Assessment (FHEA)** as a requirement under the grant program. HUD designed this tool to assist grantee communities in evaluating access to opportunity in their regions, particularly as it pertains to infrastructure and housing. Successful grantees completed a thorough **data analysis**, facilitated **deliberation** of the data by community stakeholders, led a collaborative **decision-making** process, and set priorities for **investment** to address adverse neighborhood and environmental conditions, often resulting from historic patterns of discrimination. These examples are useful models for communities implementing HUD's new Affirmatively Furthering Fair Housing (AFFH) rule.



### DATA

Grantees teamed with universities and other experts to collect data and learn as much as possible about the trends in their region. In Austin, TX, CAPCOG created a [Change Index](#) to measure how indicators of opportunity shifted in the past decade.

Together North Jersey worked with Rutgers University to create an online mapping and data tool that allows viewers to visualize demographic and economic change, health exposures, and school quality.



### DELIBERATION

The [Smart Valley Places FHEA](#) demonstrated the barriers to opportunities for African American, Southeast Asian, and Latino communities in the San Joaquin Valley, CA.

During the deliberation phase, those communities prioritized code enforcement, supermarket access, and infrastructure improvements in high poverty communities; workforce development; and new investments in lower-cost homes in higher opportunity neighborhoods.



### DECISION-MAKING

The City of Madison, WI used their FHEA to evaluate potential locations for a new community center and to inform a common council resolution advancing their equity agenda.

The City is also developing an [Equity Impact Model](#) to inform government policies and practices. Dane County, WI drew upon the FHEA to conduct racial equity trainings and has hired an Equity Coordinator for County initiatives.



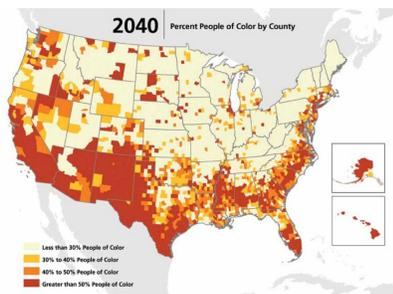
### INVESTMENT

Based on their FHEA, the Twin Cities Metropolitan Council in MN used proximity to concentrations of poverty and other equity criteria in [scoring elements](#) for awarding competitive transportation funds.

The Chicago region's housing authorities are collaborating to prioritize rental housing subsidies for families near quality schools.

## NATIONAL EQUITY ATLAS

The National Equity Atlas is an online tool that equips policymakers with data to track and measure demographic changes and indicators of racial and economic inclusion at the regional, state, and national level.



This database is publicly available and draws on historical data and demographic projections through 2040. Equity Profiles, produced in partnership with local leaders, use this data to tailor strategies for inclusive growth.

The National Equity Atlas was developed by PolicyLink, one of the SCI Capacity Building grantees that provided technical assistance to SCI grantees, and the USC Program for Environmental and Regional Equity.

The tool can be accessed here: [www.nationalequityatlas.org](http://www.nationalequityatlas.org).

Several HUD SCI grantees used this tool to understand demographic trends in their regions.

- In **Kansas City**, local and national partners formed a Regional Equity Network to inform policymaking. With data from its Regional Equity Profile, the Mid America Regional Council (MARC) directed \$1 million in transportation funds toward investments to further equal access and greater opportunity.
- After **Rhode Island's** Equity Profile revealed racial disparities in the state's labor market, then-Governor Chafee of Rhode Island issued an [executive order](#) to increase diversity among government employees and contractors, launching the Office of Diversity, Equity, and Opportunity.
- The **Southeast Florida** Regional Partnership used the findings of their Equity Profile to galvanize community leaders, the public and private sector, nonprofits, and philanthropies to create a Regional Opportunity Network. This partnership will work to close health, education, and income gaps and promote equitable economic growth.



# CLIMATE RESILIENCE



Barrier islands in Florida protect the coastline and infrastructure from flooding; the [Seven50 Prosperity Plan](#), a HUD Regional Planning grant project, focused on climate resilience

## PREPARING COMMUNITIES FOR THE RISKS AND OPPORTUNITIES OF A CHANGING CLIMATE

**Natural disasters are occurring more frequently and are increasingly severe.** All levels of government, individual households, and businesses are shouldering the high cost of disaster recovery. Communities are looking for new ways to become more resilient to these changes and challenges.

**Planning for severe weather and other climate changes increases the safety of neighborhoods** and improves a community's ability to recover quickly after an event, reducing losses and costs. While disasters are expensive for everyone, they have the most devastating effects on low- and moderate-income families and households without the personal resources to bounce back. Resilience is the result of careful planning efforts rooted in an awareness of community assets and vulnerabilities. Natural hazards and climate change do not recognize political boundaries. Inter-jurisdictional collaboration and regional planning are essential to becoming resilient to a changing climate.

**A critical component of HUD's mission for the past 50 years has been to support planning and urban development efforts that expand opportunity for Americans.** The Sustainable Communities Initiative (SCI) grants awarded in 2010 and 2011 constitute HUD's most comprehensive community and regional planning effort in decades. HUD's SCI awarded funding to 143 communities through Regional Planning Grants and Community Challenge Planning Grants, serving forty percent of U.S. residents. HUD's \$250 million investment opened the door to hundreds of millions of dollars of public and private investment and engaged more than 3,300 core partner groups nationwide.

**HUD is committed to helping communities recover from natural disasters and be more resilient to future shocks and stresses.** Most recently, in 2014, HUD launched the \$1 billion [National Disaster Resilience Competition](#) in order to expand opportunities for eligible states and jurisdictions to employ innovative approaches to resilience and recovery.

## WHAT IS...?

CLIMATE RESILIENCE	The ability to prepare for and adapt to changing conditions; and to withstand, respond to, and recover rapidly from disruptions
HAZARD MITIGATION	Taking action before the next disaster to reduce human and financial consequences later
CLIMATE ADAPTATION	Adjusting natural or human systems in a changing environment that reduces negative effects and takes advantage of opportunities

## BY THE NUMBERS

70%	Increase in rainfall during heaviest storm events in the Northeastern U.S. region (1958-2010)
37%	Reduction in average stream flows in major Southwestern rivers and basins since 2001
\$1	Spent on mitigation saves an average of \$4 in recovery costs following a natural disaster
\$43 BILLION	In CDBG-Disaster Recovery funds administered by HUD to states and localities to assist with recovery between 2005-2013



# STRATEGIES FOR CLIMATE RESILIENCE

HUD SCI Grantees have employed the following strategies to enhance their capacity to withstand and recover from natural disasters. The path to resilience is a progression of steps, though communities can tailor their approach depending on local needs and resources.



IDENTIFY LEADERSHIP, STAKEHOLDERS, AND DATA SOURCES



CONDUCT RESILIENCE ASSESSMENT



DEVELOP GOALS BASED ON ASSESSMENT



CREATE A RESILIENCE PLAN



IMPLEMENT RESILIENCE PLAN AND MONITOR PROGRESS

## SCI GRANTEE CASE STUDIES

### BUILDING PLANNING AND INVESTMENT AROUND RESILIENCE GOALS

#### Gulf Regional Planning Commission | Plan for Opportunity: Gulf Coast Sustainable Communities

During the initial stages of their regional planning process, the Mississippi Gulf Coast Sustainable Communities Initiative realized they were missing a crucial component: *resilience*. Much of the region lies within the 100-year floodplain, and rising sea levels will only increase the number of people at risk for significant loss during a major storm event. In Mississippi, homeowners have the fourth-highest insurance premiums in the country. Since Hurricane Katrina, wind insurance premiums have increased 90%, and many families struggle to maintain housing affordability with this added cost burden.

The project team expanded their consortium to help inform a series of [resilience assessments](#). A Resilience Committee comprised of representatives from vulnerable communities evaluated the resilience of five regional systems that would be affected by major climate events: housing, transportation, economic development/workforce, water, and food. These resilience assessments identified the greatest threats and vulnerabilities of each system.

The resulting resilience strategies addressed potential challenges and identified responsible parties, an action timeframe, and indicators to measure progress. One strategy was the integration of hazard mitigation plans into local comprehensive plans. As the guiding instrument for land use planning and public investments, comprehensive plans play a role in reducing risk associated with developing in hazard areas. By linking the two planning processes, both yield stronger outcomes and ensure complementary objectives and actions.

Jurisdictions were also encouraged to join the Community Rating System (CRS) run by the National Flood Insurance Program. The CRS rates communities based on their floodplain management and disaster preparedness, using

these ratings to determine discounts in flood insurance premium rates. Well-rated communities are not only more resilient to natural disasters, but also save on insurance costs.

Collaborative efforts by groups like the Mississippi Alabama Sea Grant Consortium and the Southern Mississippi Planning and Development District have facilitated the participation of local governments, resulting in three new jurisdictions joining the CRS and seven existing members improving their ratings, lowering flood insurance costs for residents and businesses.

The Gulf Coast learned the value of assessing all vulnerabilities and risks that could potentially disrupt essential regional systems, and the importance of having the right stakeholders at the table to develop a comprehensive plan for resilience.

Learn more at: <http://www.gulfcoastplan.org/>



*A comprehensive resilience approach along Mississippi's Gulf Coast will protect vulnerable local economies, businesses, and residents*

## INSTITUTIONALIZING CLIMATE MITIGATION AND ADAPTATION

State of Rhode Island | RhodeMap RI

The **State of Rhode Island** has the highest ratio of shoreline per capita in the United States, leaving it highly vulnerable to sea level rise. In 2014, a state-level [Climate Change Coordinating Council](#) was established to lead the development of comprehensive resilience strategies.

Rhode Island completed a number of vulnerability assessments that will be used to set priorities for state and local planning. To help municipalities incorporate assessments into local comprehensive plans, the State released [preliminary guidance](#) based on a pilot adaptation project and is developing a Comprehensive Planning Guidance Handbook. The Rhode Island Coastal Resources Center also released a [guide](#) to help coastal businesses mitigate the effects of climate change.

Rhode Island set a state precedent with the inclusion of climate resilience in their recently released [Economic Development Plan](#), created with the support of their SCI grant. The plan called for an evaluation of the economic opportunities created by climate change in addition to the risks. Technology accelerators, green infrastructure job training programs, and product research and development are a few potential niches identified. By looking at the economic opportunities of a changing environment, Rhode Island is getting ahead of the curve to anticipate products and tools that will soon be in demand as many more places adapt to climate change.

Learn more at: <http://www.planning.ri.gov/statewideplanning/sustainable/ndex.php>

## WORKING ACROSS JURISDICTIONS TO COMBAT CLIMATE CHANGE

South Florida Regional Planning Council | Seven50

The **Southeast Florida Regional Partnership** used its [Seven50: Southeast Florida Prosperity Plan](#) (Prosperity Plan) to frame regional priorities along six themes including Climate and Energy Resilience. The Prosperity Plan builds on the work of the [Southeast Florida Regional Climate Change Compact](#), created by four consortium partners in early 2010, and suggests adaptation and mitigation [strategies](#) to create more resilient communities, environment, and economy.

Resilience approaches are needed to confront very real threats: after just one foot of sea level rise, 65% of schools and 71% of emergency shelters in Monroe County would be below sea level; a 3-foot rise (standard in vulnerability assessments), \$31 billion of real estate and public investments in Miami-Dade, Broward, Palm Beach, and Monroe Counties would be inundated.

The Prosperity Plan considers a variety of water management systems, engineering practices, and natural barriers. Mitigation strategies include green building techniques, renewable energy and energy-efficient design, and other activities to reduce the region's contributions to greenhouse gases and climate change.

Learn more at: <http://seven50report.org/>

## PLANNING AND PARTNERING BEFORE DISASTERS OCCUR

Regional Plan Association | NY-CT Sustainable Communities

When Hurricane Sandy hit in 2012, many communities were unprepared for the physical and social disruptions that resulted. The planning efforts of the [New York-Connecticut Sustainable Communities Consortium](#) proved vital to the region's recovery, integrating established, pre-storm relationships with forward-looking resilience actions. Fortunately, the Consortium completed two climate resilience studies less than a month before Sandy's landfall. Those were critical to helping the city respond quickly and strategically to the widespread damage.

The [Urban Waterfront Adaptive Strategies Study](#) identified approaches to make urban coastal areas more resilient to the hazards of sea level rise. [Designing for Flood Risk](#) focused on preparing buildings to withstand coastal flooding. These two studies informed and guided disaster-affected areas to rebuild with climate resilient strategies in mind and ensured that community-led planning work was integrated into recovery efforts.

Learn more at: [www.sustainablenyct.org/](http://www.sustainablenyct.org/)

## USING GREEN INFRASTRUCTURE TO BUILD RESILIENCE

Rutgers: State University of NJ | Together North Jersey

**Together North Jersey** used part of their HUD SCI grant to fund a series of Local Demonstration Projects including the award-winning [Hoboken Green Infrastructure Strategic Plan](#). The City of Hoboken is home to a disproportionate quantity of subsidized and low-income housing, and the City's most vulnerable populations are concentrated in the most flood-prone areas. This project provided a green infrastructure framework to improve the resilience of Hoboken's transit system and the surrounding communities resulting in a cost-effective approach to green and grey infrastructure to improve local stormwater management. The Hoboken Plan received the 2014 Outstanding Plan Award from the American Planning Association-New Jersey chapter.

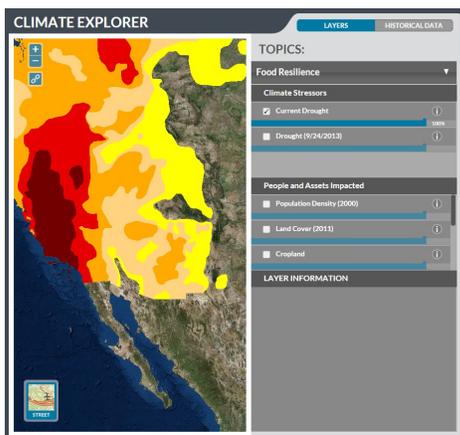
Learn more at: <http://togethernorthjersey.com/> and see [HUD's Green Infrastructure Report](#) for more info on SCI projects that planned for green infrastructure.



# TOOLS FOR CLIMATE RESILIENCE

**FEDERAL TOOLS:** The following tools were developed by federal agencies.

## U.S. CLIMATE CHANGE TOOLKIT



The [U.S. Climate Resilience Toolkit](#) was created in 2014 by a partnership of federal agencies and organizations led by the National Oceanic and Atmospheric Administration (NOAA) in response to the [President's Climate Action Plan](#) and [Executive Order](#) to prepare the nation for the impacts of climate change. It is useful for communities at any stage of planning and provides a wealth of resources, such as a 5-step resilience guide, a free climate science tool library, case studies, data, and training courses.

The [Climate Explorer](#) is an interactive visualization application developed for the U.S. Climate Resilience Toolkit that maps a variety of climate stressors as well as people and assets affected by potential hazards. The Toolkit provides a map to find experts at NOAA, USDA, Department of the Interior, and State Climatologist Offices and is intended for citizens, resource managers, planners, tribal leaders, businesses, and policymakers.

**The toolkit can be accessed here:**  
<https://toolkit.climate.gov/>

## HUD AND OTHER FEDERAL RESOURCES

### HUD Climate Resilience Portal:

Planning and preparing for natural hazards when undertaking HUD-funded activities. [www.hudexchange.info/manage-a-program/community-resilience](http://www.hudexchange.info/manage-a-program/community-resilience)

### FEMA Mitigation Planning:

Resources to plan, prepare, and mitigate before, during, and after natural disasters. <https://www.fema.gov/hazard-mitigation-planning-resources>

### HUD National Disaster Resilience Competition:

Supports innovative local resilience projects for eligible communities experiencing federally declared disasters in 2011, 2012, and 2013. <https://www.hudexchange.info/programs/cdbg-dr/resilient-recovery/>

### National Climate Assessment:

Federal advisory committee with expert analysis of climate change effects. <http://nca2014.globalchange.gov/>

**LOCAL TOOLS:** The following tools were developed by HUD SCI grantee communities.

## EAST CENTRAL VERMONT BUYOUT PROGRAM

Following flooding from Tropical Storm Irene in 2011, Two Rivers-Ottawaquechee Regional Commission, East Central Vermont's SCI grant consortium lead, assisted with the buyout of 108 sites with funding from FEMA and HUD CDBG-DR. The changing climate also has prompted the region to consider economic development strategies that pivot from snow and ice dependent activities to new opportunities in a warmer climate.

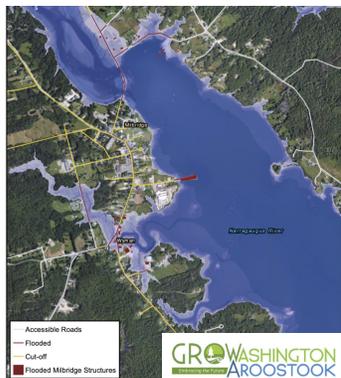
Voluntary buyout (property acquisition) programs can be a [cost-effective tool](#) for hazard mitigation. Buyouts relocate residents

out of harm's way, allow owners to receive fair compensation for properties, and increase natural flood storage. Under the SCI grant, the East Central region in Vermont is pursuing a buyout program as an adaptation strategy for reducing losses from flooding identified in their [final regional plan](#). Ultimately, this approach could frame a state level buyout program.

### The FEMA Guide to Buyouts can be accessed here:

[www.fema.gov/application-development-process/hazard-mitigation-assistance-property-acquisition-buyouts](http://www.fema.gov/application-development-process/hazard-mitigation-assistance-property-acquisition-buyouts)

## GROWASHINGTON-AROOSTOOK STORM SURGE MODELING IN MAINE



As part of the GROWashington-Aroostook regional plan developed under a HUD SCI grant, the Washington County Council of Governments (WCCOG) and the University of Maine at Marchias (UMM) produced five [climate vulnerability assessments](#) (CVAs) that model storm surge scenarios, provide adaptation options, and identify vulnerable populations and infrastructure to assist first responders.

WCCOG and UMM also developed an [online mapping tool](#) to serve the county's 44 rural

communities. Many smaller communities do not have the budget to support advanced mapping software and this user-friendly tool is accessible to anyone with an Internet connection, with no special training or software required. This tool was awarded the 2014 Project of the Year by the Northern New England Chapter of the American Planning Association.

**This tool can be accessed here:**  
[www.gro-wa.org/](http://www.gro-wa.org/)

