

M I D - S O U T H R E G I O N A L
GREENPRINT

2015 Annual Report

OVERVIEW:

The Greenprint Annual Report provides an overview of the progress that has occurred over the past year related to implementation of Greenprint 2015/2040. In summary, the Greenprint plan has been adopted by 19 jurisdictions, endorsed by many organizations and businesses, and recognized for three prestigious planning awards. Many Greenprint-related projects have advanced and were showcased at the first biannual Greenprint Summit. In April, a Greenprint Coordinator was hired to coordinate the transition from planning to implementation. The coordinator will continue to work with partner organizations and jurisdictions to accelerate Greenprint implementation into the future.

BACKGROUND:

In November 2011, Shelby County Government was awarded a \$2.6M grant from the US Department of Housing and Urban Development to prepare the Mid-South Regional Greenprint and Sustainability Plan (“Greenprint”). Over the course of the next three years, a consortium of more than 80 local jurisdictions, organizations, businesses, agencies and individuals worked together to develop the plan, under the guidance of the Memphis-Shelby County Office of Sustainability. In February 2015, the final plan, *GREENPRINT 2015/2040*, was published and distributed to the public. Today, consortium partners are actively building out the proposed trail network and addressing many of the recommended targets for action.

GREENPRINT ADOPTION PROCESS:

Greenprint adoption by the plan’s represented jurisdictions demonstrates the community’s commitment to implementation and authorizes responsible agencies to execute their actions. As of December 1, 2015, Greenprint 2015/2040 has been formally adopted by 19 jurisdictions including (in order of adoption):

Shelby County, Tennessee	City of Olive Branch, Mississippi
City of West Memphis, Arkansas	City of Lakeland, Tennessee
City of Memphis, Tennessee	City of Piperton, Tennessee
Crittenden County, Arkansas	City of Sunset, Arkansas
DeSoto County, Mississippi	City of Southaven, Mississippi
Town of Arlington, Tennessee	City of Braden, Tennessee
City of Hernando, Mississippi	Town of Collierville, Tennessee
City of Millington, Tennessee	City of Horn Lake, Mississippi
City of Germantown, Tennessee	City of Gallaway, Tennessee
Town of Walls, Mississippi	

Greenprint advocates will continue to encourage formal adoption of Greenprint by additional jurisdictions to demonstrate unified support for the plan across the Mid-South Region.

AWARDS:

Greenprint 2015/2040 was the subject of three planning awards this year, recognized as:

- Winner of the 2015 Excellence in Sustainability Award for a Plan by the Sustainable Communities Division of American Planning Association
- Winner of the 2015 Outstanding Plan Award by the Tennessee Chapter of American Planning Association
- Winner of the 2015 Honor Award for Regional Planning by the Tennessee Chapter of American Society of Landscape Architects

PEER CITY TRIPS AND IMPLEMENTATION PROPOSAL:

To develop the Mid-South's regional green space network, Greenprint 2015/2040 recommends establishing an implementation entity to support existing efforts and work with Mid-South jurisdictions to build out the remaining connections. Since the proposed network is so large, spanning nearly 700 total miles across four counties in three states, it is imperative the entity established be equipped with the authority and resources necessary to achieve its goal.

At the end of September 2015, Greenprint travel teams visited the cities of St. Louis, Houston, and Atlanta to meet with the model entities that have succeeded or are in the process of funding and implementing their own multimodal networks. The travel teams met with staff and board members of the Great Rivers Greenway District (St. Louis, MO), the Houston Parks Board (Houston, TX), and Atlanta Beltline Inc. (Atlanta, GA), respectively. During each visit, the teams gained a more comprehensive understanding of the organizational structures, funding mechanisms, partnerships, policies and strategies that enabled each to achieve success. The conversations revealed useful insight behind the decisions and historical context that enabled the successful formation of effective implementation agencies.

In the first half of 2016, the Greenprint Coordinator will work with the Greenprint Executive Committee and the Greenprint Finance & Policy Committee to issue a proposal to fund and manage implementation of Greenprint 2015/2040. The proposal will be based on a thorough review of peer city best practices and a feasibility analysis of local funding options and administrative opportunities. The proposal will also include a list of priority projects that will serve as the framework for the future development activity.

GREENPRINT SUMMIT:

On November 16, 2015, the first biannual Greenprint Summit was held at the Germantown Great Hall in Germantown, Tennessee. Nearly 300 Mid-South residents attended the event to learn more about the plan and the progress of the many related projects and initiatives. The Summit featured a partner exhibition and a series of presentations that highlighted different aspects of the plan's implementation.

Thirty organizations participated in the partner exhibition, including: the City of Germantown, TN, the City of Memphis, TN, the City of West Memphis, AR, Clean Memphis, Crosstown LLC., DeSoto County Parks and Greenways, Explore Bike Share, Friendship Foundation, Greater Memphis Greenline, Grow Memphis, Innovate Memphis, Kitchen Community, Knowledge Quest, Livable Memphis, Meeman-Shelby Forest State Park, Memphis Light Gas and Water, Memphis Metropolitan Planning Organization, Memphis Tilth, Mid-South Greenways, Mississippi River Corridor Tennessee, Overton Park Conservancy, Roots Memphis, Self + Tucker Architects, Shelby County Resilience Council, Shelby Farms Park Conservancy, Tennessee Department of

Environmental Conservation, Town of Arlington, TN, Vollintine-Evergreen Community Association, Wolf River Conservancy, and the YMCA of Memphis and the Mid-South.

The presentations included a mayors' panel, a presentation by the Greenprint Coordinator on lessons learned from the peer city trips, and a Greenways panel that highlighted the new developments impacting the Mid-South's trail network. The mayors' panel included Mid-South Mayors Mark H. Luttrell Jr. (Shelby County), A C Wharton Jr. (Memphis), Mike Palazzolo (Germantown), Mike Wissman (Arlington), and Henry Coats (Piperton). The panel was moderated by Memphis Daily News publisher Eric Barnes. The greenways panel featured Shelby Farms Park Conservancy, Wolf River Conservancy, Vollintine Evergreen Community Association, the City of West Memphis, and DeSoto County Greenways. It was moderated by Kym Clark of Action News 5.

The next Greenprint Summit will take place May 2016. The exact date and time are still yet to be determined.

GREENPRINT PROJECT CERTIFICATION:

Local organizations and jurisdictions that are actively involved in Greenprint implementation can now be recognized for their contributions by certifying their projects, programs, and initiatives through the new Greenprint Project Certification Program. If a Greenprint Partner can demonstrate that their project addresses at least one of the Greenprint's recommended actions and relates to the larger vision of the plan, they are eligible to submit the project for certification through the online application at MidSouthGreenprint.org/certification. Certifying a project demonstrates commitment to the values and objectives promoted in the plan, and in some cases, may make a project more competitive for certain funding opportunities.

SHORT-TERM TARGETS

The Mid-South Greenprint identifies 31 recommended actions be completed in the first 5 years of Greenprint Implementation. Four of the 31 actions have recommended deadlines by end of 2015 and 15 additional actions have deadlines by the end of 2016.

2015 targets include:

- Develop and implement a Complete Streets design manual for Memphis by 2015 (Complete)
- Create regional coordination agency or organization by 2015 (In Progress)
- Establish or designate an organization to coordinate the promotion of green space across all healthcare programs by 2015 (In Progress)
- Increase the mode share of work commute trips made by bicycling, walking or transit within the region to 5% by 2015 (In Progress – 2013 Census Data indicated the percentage of people that commute to work by walking, biking, or transit for the region is 3%)

2016 targets include:

- Create and implement educational programs for healthcare providers and school districts by 2016 (In Progress)
- Develop a regional food system assessment to address issues of access, economics, and food system sustainability by 2016 (Complete)
- Double the number of gardens on public school campuses by 2016 (Anticipated completion – Fall 2017)

- Create a pilot program to address last mile connections by 2016 (Anticipated completion – Fall 2016)
- Build a coalition of partners to initiate a housing energy efficiency program by 2016 (In Progress)
- Identify greatest sidewalk needs within 0.5 miles of Greenprint corridors and prioritize for repair or installation by 2016 (Anticipated completion – Spring 2016)
- Establish a formal transportation management association (TMA) by 2016 (In Progress)
- Establish geotourism as a regional tourism subsector by 2016 (Complete)
- Create three native landscaping demonstration projects by 2016 (Complete)
- Expand regional geodatabase and establish data sharing platform by 2016 (Complete)
- Perform inventory of parks, greenways, and waterways access to assure equity by 2016 (In Progress)
- Convene a regional outreach council by 2016 (In Progress)
- Grow regional consortium partnerships under identified or new coordinating agency or organization by 2016 (In Progress)
- Publish advocacy toolkit in various formats by 2016 (Anticipated Completion – Spring 2016)
- Provide education on economic benefits and financing options for green infrastructure by 2016 (Complete)

GREENPRINT TRAIL NETWORK

The Mid-South Greenprint recommends developing nearly 500 miles of greenway trails and 200 miles of on-street connections. As of December 2015, the following connections have been established:

- **Greenways:** 59/499 miles = 11.9% of total Greenways established
- **On-Street Connections:** 41/196 miles = 20.9% of total On-Street connections established

RECENT IMPLEMENTATION ACTIVITY

The following projects, programs and initiatives are the efforts of Greenprint partner organizations and agencies. It is recommended that these entities submit these projects for Greenprint Certification at www.MidSouthGreenprint.org/certification.

Big River Strategic Initiative (BRSI):

- **Big River Crossing (Harahan Bridge Project):** Big River Crossing is the centerpiece of the \$39M Main Street to Main Street Multi-Modal Connector project (“Main to Main”) that will create bike paths and walkways from Uptown Memphis to West Memphis, Arkansas. Construction has begun on the Harahan Bridge and on the greenway that will connect the bridge to West Memphis. The Main Street Memphis portion of the Main to Main project is substantially complete and construction of the Memphis approach to the bridge can be seen from Virginia Ave and Channel 3 drive. Completion of the Big River Crossing is expected in mid-2016.
- **Big River Parkway:** Big River Strategic Initiative (BRSI) has a memorandum of understanding with the St. Francis Levee District to develop a soft surface trail system, 73 miles from Marion to Marianna Arkansas. BRSI received \$100K Economic Development Grant from the State of Arkansas to build 48 pass-through gates on the levee for bike-pedestrian traffic and a commitment from the USACE for materials to resurface the levee road with fine gravel. The St. Francis Levee District has committed resources to install the fine gravel on the existing levee roads. This project is expected to be completed in mid-2016. The ultimate goal is a levee top trail that runs from St. Louis to New Orleans.

- **National Geographic Geotourism:** BRSI has raised \$500K thus far to establish a Geotourism zone along the entire Mississippi River Valley. This project establishes a geotourism map and website for the region. Any small or medium size business can submit their info to be posted on the National Geographic Website. Partners include National Geographic, National Park Service, US Fish and Wildlife Service, Mississippi River Parkway Commission, MS River Cities and Towns Initiative.

Binghampton Development Corporation (BDC)

- **Hampline:** The Hampline provides safe access for bikes and pedestrians to the Shelby Farms Greenline and Overton Park. The design for the Hampline is complete and has been submitted to TDOT. The Greenprint sub-award funded the Tillman section of the project. City-funded sections of the Hampline are complete. The Tillman section (along with the other state-funded sections) is awaiting final approval at TDOT. Construction has been postponed and is expected to begin Fall 2016.
- **Addressing Blight:** BDC is working with partnering organization, the Community Development Council of Greater Memphis, on public policies to address blight. This policy work relates specifically to the Greenprint short-term target of drafting state legislation to offer property tax waivers or freezes for infill development by 2018.

City of Bartlett

- **Fletcher Creek Greenway:** The Fletcher Creek Greenway runs alongside Fletcher Creek, connecting Memphis and Bartlett. The total project will have a multi-use trail running from Highway 64 on the south to Brunswick Road on the north following Fletcher Creek, approximately 4.4 miles. City of Bartlett is seeking to fund 80% with Federal Dollars and 20% local dollars. The total project cost is estimated to be \$6 million, so the local match is \$1.2 million. Phase 1 consists of construction of 2 trailheads and construction of the trail from US 64 to Yale road. All right of way has been purchased and the project is under final design. Phase 1 should be completed by Fall 2016. Future Phases will be included in the next TIP for construction as funding is available.

City of Collierville

- **Hinton Park:** On November 11, the Town of Collierville opened the town's new 110 acre park. Much more than a neighborhood park, Hinton Park features 110 acres of open fields and indigenous oak trees, a grass-covered overlook with a whimsical path, five-acre fishing lake, two playgrounds (one with outdoor musical instruments), two nine-hole disc golf courses, and three miles of asphalt trails.

City of Memphis

- **Memphis Heritage Trail Green Infrastructure Retrofit:** The Memphis Heritage Trail Green Streets Retrofit Initiative will supplement the trail's cultural components with environmental solutions to help improve the quality of life in the metropolitan downtown Memphis area. Environmental solutions recommended in the street retrofit are stormwater management, construction of a pedestrian-friendly streetscape, traffic calming solutions, and locations for public spaces and green infrastructure. There are three segments to the street retrofit, along Martin Luther King Boulevard

(formerly Linden Avenue) from Main Street to Danny Thomas Boulevard. The estimated cost of the retrofit is \$6.2 million.

- **Universal Life Insurance Building Renovation:** The historic Universal Life Insurance Company Building at 480 Dr. Martin Luther King Jr. Ave. is set for a \$6.2 million renovation, with completion projected for August 2017. The building renovation is expected to generate more than 200 construction jobs. The installation of a 50 kilowatt solar system will include a “green collar” job training program for local residents. The Universal Life Insurance Building will serve as office space for minority businesses, including Memphis Office of Resources & Enterprise (MORE), Black Business Association (BBA), Memphis Area Minority Contractors Association (MAMCA), Contractor Assistance Program (CAP), Small Business Administration (SBA), Tennessee Small Business Development Center (TSBDC), and Renaissance Business Center (RBC).
- **See also:** Greater Memphis Greenline (below) and Wolf River Conservancy (below)

City of Millington

- **Millington Greenways Plan:** The Millington Greenway Master Plan is a long range plan for connecting 20 miles of greenway throughout the City of Millington, including connections reflected on the Greenprint Concept Map. The plan links Millington’s park system by trails and bike lanes, and seeks to conserve open spaces, provide alternative transportation, and promote healthier lifestyles. The cost to implement the plan is estimated at \$15 million.

City of West Memphis

- **West Memphis Eco-Park:** The City of West Memphis is working with Big River Strategic Initiative and Crittenden County, Arkansas, to develop an Eco-Park on the Arkansas bank of the Mississippi River, directly across from Downtown Memphis. The size of the park will total approximately 1,800 acres bordered by I-40 & I-55, the river and the Levee. In the planning phase of the Greenprint, the City of West Memphis received a \$50K sub-planning grant, which it used to contract the University of Memphis planning department for preliminary study of the area. Additionally, BRSI funded a survey of eco-park site. On May 12, 2015, the West Memphis MPO allocated \$1.25M in CMAQ funds for trails in the proposed park, connecting The Harahan Bridge and West Memphis to this unique destination.

Clean Memphis

- **High Profile Clean-Up Projects:** Clean Memphis utilizes community service workers to perform monthly cleanup 'sweeps' in high-profile areas of the city like the Civil Rights Museum, Sun studios, Stax, the Medical Center, the Aerotropolis, and several parks and green spaces. Clean Memphis organizes cleanups along the Shelby Farms Greenline, future Greenline areas, and the Wolf River and its tributaries.
- **Service Learning Projects:** Clean Memphis offers classroom presentations, 3-dimensional Watershed and Landfill/Recycling demonstrations and other educational activities. The educational process culminates in a service project (cleanup and beautification project) on school grounds, in parks, or as part of the larger community
- **Support existing community partnerships and zone collaboratives:** Clean Memphis organizes routine cleanup projects, expands the community volunteer base to include area schools, churches, and businesses, and assists neighborhood leaders in identifying code enforcement issues and

working with other agencies for resolutions. Clean Memphis also provides or secures additional resources to assist community groups in cleanup and reduction of blight.

Community LIFT

- **Frayser Town Center Plan:** The Downtown Frayser plan addresses a priority for the community to create a central gathering space. Through the sub-planning grant from Mid-South Regional Greenprint, consultant Ray Brown Urban Design and Universal Commercial Real Estate LLC were hired to develop this concept in conjunction with Frayser stakeholders. Several engagement sessions were held, in addition to planning, urban design, and real estate development services that helped determine the optimal location, size and land uses for a business improvement district for the Frayser neighborhood, to be known as The New Downtown Frayser. This plan was presented to the City Council around the same time the Raleigh Springs mall redevelopment was presented. They were advised to wait until the next budget cycle to make requests for City investments to carry out the Downtown Frayser plan.

Crosstown, LLC

- **Crosstown Greenline Connector:** This connector is an urban pedestrian and bike trail in Memphis designed to extend the existing Vollintine & Evergreen Greenline, once the L & N Railroad that served the historic Sears Distribution Center, southwest from its current termination point north of North Parkway, across the railway bridge and North Watkins, through the Crosstown Development Project site. The Crosstown Greenline Connector will provide a better, safer connection from surrounding neighborhoods to the resources available in the newly renovated Sears building, including an art gallery, a charter public high school, and a wellness center that provides healthcare for the working uninsured. The design includes rail bridge acquisition, abatement, lighting for aesthetics and safety, bike lanes, walking paths, exercise equipment, and seating. The cost to implement the design is estimated between \$150,000 and \$200,000.

DeSoto County Greenways and Parks

- **Native Landscaping:** Native plantings have been completed along wildlife openings at ARK trails.
- **Arkabutla Lake & Olive Branch Trails:** In partnership with the North MS Trails Association, 10 miles of trail have been installed at Arkabutla Lake and Olive Branch.
- **Horn Lake Creek Greenway:** Developed as a sub-planning project of the Mid-South Greenprint, DeSoto County Greenways has identified the Horn Lake Creek Greenway as a priority for greenways development in DeSoto County. The project is organized into two phases: Southaven to Highway 51 (1 mile) and Horn Lake Road to Highway 51 (2 miles). Preliminary estimates suggest each phase would cost approximately \$1.5 million to complete or \$3 million overall. Currently, construction is continuing on the Johnson Creek Greenway and work has begun on the east-west section of the Horn Lake Creek Greenway.
- **Four Rivers Regional Food Hub:** DeSoto County Greenways and Parks is supporting the Four Rivers Regional Food Hub to address issues of access, economics, and food system sustainability in Northwest Mississippi.

- **Geotourism:** DeSoto County Greenways is working with DeSoto County Tourism to establish geotourism as part of regional tourism by actively promoting our County's scenic byways, cultural, historical, greenways, parks and recreational venues.

Explore Bike Share

- **Explore Bike Share:** Explore Bike Share is an initiative led by Doug Carpenter and Associates to determine the feasibility of a bike share program in Memphis. Explore Bike Share issued an RFP, which closed on October 4. The committee plans to soon choose a partner to provide the bicycles and the rental system for the project. Bikes will ideally on the ground by Fall 2016.

Germantown Parks and Recreation Department

- **Extension of Wolf River Greenway:** The Wolf River Greenway, which currently encompasses around 2.6 miles of trail near Germantown, will eventually extend all the way to Harbor Town. The paved trail was opened in December 2010, and is accessible for persons with disabilities. The trail connects by way of a pedestrian bridge over the Wolf River with multi-use trails in the 2,900 acre Shelby Farms Park, the 6.5 mile Shelby Farms Greenline and to adjacent neighborhoods via bike lanes. The \$40 million expansion of the Wolf River Greenway should be completed by 2019. Once complete, the Wolf River Greenway is expected to add 1,126,000 more bicycle trips in the county per year and 4,650,000 more walking trips

Greater Memphis Greenline and the City of Memphis

- **Chelsea Greenline:** Greater Memphis Greenline (GMG) proposes to convert an abandoned rail corridor approximately 2.6 miles long into a greenway through north mid-town, connecting residential, commercial, and employment areas. The trail would begin one block from Buckman Laboratories on the east and Washington Park in the Uptown area. Acquisition/easement consultant selection is underway by the City of Memphis. Approximately \$1.5 million is currently included in the Transportation Improvement Program (TIP) with approximately \$2 million needed in construction funds. GMG is working to create several public engagement opportunities as the implementation process moves forward over the next four years. In July, dozens of artists helped paint the Memphis Flood wall, an event designed to draw attention to the trail project.

GrowMemphis

- **Memphis Tilth:** GrowMemphis is joining Urban Farms, Bring it! Food Hub, The Cannery, and Memphis Center for Food and Faith, to become a food system umbrella organization named Memphis Tilth.
- **Policy Changes for Urban Agriculture:** GrowMemphis has led policy research to accelerate urban agriculture in Memphis and Shelby County. Three prime areas of opportunity for local policy change have been identified: 1. (Land Access) Development of a simple lease program to allow residents to access vacant properties within the Shelby County Land Bank for the purposes of urban agriculture without having to purchase them; 2. (Water Access) Changes to demolition standards to keep water lines intact on formerly residential properties to make more lots viable for urban agriculture; and 3. Communication and marketing around soil such as current city and county resources for free

agricultural/gardening materials (compost, wood chips, etc.) and testing soil for toxins. Much of this work involves advocacy and marketing, and it is estimated these changes are achievable for around \$48,000.

Innovate Memphis

- **Commute Options Initiative:** Innovate Memphis will launch a Commute Options Travel Demand Management Initiative in 2016. The Commute Options team will work with Memphis-area employers to help employees and students take transit, walk, rideshare and bicycle to work and school. Commute Options will provide outreach and incentives, and coordinate with employers and transportation service providers to expand options. The initiative will start with four to six large employers and expand throughout Memphis after the pilot period. The project is funded with a Congestion Mitigation and Air Quality (CMAQ) federal grant and a local match. Innovate Memphis and its I-Team was formerly the Mayor's Institute for Excellence in Government.

Kitchen Community

- **Learning Gardens:** The Kitchen Community (TKC) is a non-profit organization that builds learning gardens in schools across the country. TKC's regional Memphis team is carrying out the initiative to build 100 learning gardens in the next two years at Shelby County, Achievement School District and Jubilee Catholic Schools. Learning gardens are outdoor classrooms that create experiential learning opportunities for students, allow students to build a stronger relationship to fresh food, and add to the aesthetics of school yards with accessible garden designs. Once a school receives a learning garden, the Memphis education team provides ongoing educational support to schools through seasonal planting days at schools, follow-up trainings at schools, and a workshops series providing teachers with the skills and knowledge to maintain their learning gardens and utilize them as outdoor classrooms. Today, TKC will have materials that show their design process, and also demonstrate the content and methods used for conducting teacher workshops throughout the school year.

Knowledge Quest

- **Green Leaf Learning Farm Expansion:** Knowledge Quest recently received six donated parcels from the County Land Bank and purchased one for expansion properties. They have installed 24 permanent raised beds on the current organic portion of the farm and renewed organic certification to include additional space on current farm area and all expansion properties (including apartments). They were awarded a \$2,000 grant from Tennessee Parks and Recreation Association for purchase of tree stock for orchard. They received infrastructure support from the Memphis Grizzlies Foundation to support the build of a new outdoor classroom & meeting space, complete hoop house, and other infrastructure needs on phase I of farm. Green Leaf Learning Farm has expanded to South Memphis Farmer's Market and Downtown Market for the 2015 Market season and has been able to increase overall farm staff and capacity by 50%.
- **Residences of Green Leaf:** Knowledge Quest was awarded over \$300k in Quality Energy Conservation Bonds to support the renovation of the Residences of Green Leaf through the Memphis Green Communities Grant. They were awarded \$10k from Community Foundation Give365 for the renovation of a shotgun house into a packhouse.

- **Community Supported Agriculture:** Knowledge Quest has developed infrastructure for Community Supported Agriculture program, with implementation goal of Spring 2016.
- **Gardening School Programs:** Knowledge Quest is actively working with its adopted schools - Cummings Elementary, Larose Elementary, and Hollis F. Price High School - to develop and establish gardens and robust gardening programs that connect with efforts at Knowledge Quest and Green Leaf.
- **Gaston Park:** Knowledge Quest is continuing to develop Private-Public partnerships to continue enhancements at Gaston Park.

Livable Memphis & Community Development Council of Greater Memphis

- **Complete Streets Manual:** The Memphis Complete Streets Project Delivery Manual was completed in Fall 2014 and released publicly in February 2015; the City of Memphis is working with staff and development stakeholders on implementing the manual in a phased approach. Next steps include the completion of a Roadway Regulatory Plan and amending the Memphis-Shelby County Unified Development Code to reference and strengthen the capability to enforce those policies and procedures present in the manual.

Memphis Bioworks Foundation

- **Alternative Fuels Analysis:** Memphis Bioworks has led an analysis on the feasibility of alternative fuels in order to inform fleet manager decisions on a future transition to alternative vehicles. The next step is to identify a specific municipal fleet for a pilot project in which a small sample of vehicles will be chosen within a particular vehicle category as an experiment group to demonstrate the effectiveness for an identified alternative fuel. For example, a one year pilot project to test operating costs and emissions reductions for ten light duty passenger trucks (general maintenance trucks) is estimated to cost between \$150,000 and \$200,000 including incremental costs of replacement vehicles, data acquisition systems to track comparative outcome data, and personnel to conduct analysis.

Memphis Light Gas and Water

- **Alternative Energy Projects:** MLGW is spearheading several projects involving compressed natural gas (CNG), liquefied natural gas (LNG) and landfill gas to offset the use of more polluting gasoline and diesel. On average, CNG is 33 to 50 percent cheaper per gasoline gallon equivalent (gge) than regular gasoline. Pioneering the opening of a CNG station demonstrates MLGW's leadership in providing customers alternative fuels options. MLGW has an LNG storage facility which allows for the storage of gas during the summer periods of low usage and then as a reserve during winter peak periods. The facility stores 300,000 bbls. (Equivalent to one billion cubic feet) in above-ground storage tanks. Lastly, the new North Shelby landfill program provides methods to clean, enhance, and compress landfill gas in order to provide pipeline quality gas to the MLGW system.
- **Native Grass Planting at Kennedy Park:** MLGW is replanting 13 acres of Electric Transmission Right of Way in Kennedy Park with Native Warm Season Grasses and native wildflowers.

Memphis Metropolitan Planning Organization

- **Livability 2040: Regional Transportation Plan:** A 20-year, comprehensive plan for all elements of the Memphis MPO regional transportation network, including roads, public transportation, bicycle facilities, pedestrian facilities, and freight infrastructure. The plan is in the final public review phase. The plan embraces the livability principles to ensure that the planning process cultivates and sustains livable communities.
- **2014 Regional Bicycle and Pedestrian Plan:** A Plan intended to identify opportunities for enhancing bicycle and pedestrian travel. The recommendations should be used as a guide for local jurisdictions in taking advantage of such opportunities. The Plan relies on four main goals to identify methods for improving bicycle and pedestrian infrastructure including Safety, Connectivity, Accessibility and Mode Shift. These goals were used to perform a comprehensive analysis which resulted in a composite map displaying levels of corridor need to improve bicycle and pedestrian facilities in the Memphis MPO region. The Regional Bicycle and Pedestrian Plan will serve as the bicycle and pedestrian component of the Memphis MPO's Regional Transportation Plan.

Mid-South Greenways Alliance

- **Greenways Advocacy:** The Mid-South Greenways Alliance is a voluntary *ad hoc* group of parks, greenways, and open space stakeholders from throughout the region. They are the only neutral convener in the region for green infrastructure planning and development and boasts a strong history of collaboration and communication across jurisdictional boundaries. The member organizations are allied under a vision of a regionally interconnected system of greenways, blueways, bike lanes, parks, trails, wilderness areas, working lands, and open space to sustain natural life support system for future generations.

Mississippi River Corridor – Tennessee, Inc.

- **Mississippi River Camp Restoration Plan:** The MRCT has recently received a Contract from the Tennessee Department of Environment & Conservation (TDEC) to produce a Restoration Plan for the historic CCC Mississippi River Camp located inside Meeman-Shelby Forest State Park. The MRCT has partnered with the Department of City & Regional Planning at the University of Memphis and will be working with their staff, professors and graduate students to produce the comprehensive plan. The Camp was built in 1933 and has been closed for approximately 12 years. It contains a large assembly hall with kitchen, approximately 24 cabins, bath house and large swimming pool. When the camp has been restored, it will become a unique destination site for visitors looking for places to stay that feature outdoor recreational activities. A ramp with access to the Mississippi River is located down the street from the camp and will serve as a put in site for river tour/paddles down to Memphis with a team of professional outfitters.

Overton Park Conservancy

- **Poplar/Cooper Entrance:** A new bike/pedestrian connector trail will be designed in 2016 to connect the intersection of Poplar at Cooper with the park entrance at Veterans Plaza Drive, and will extend west to the park entrance at Veteran's Plaza Drive, providing better access from the MATA stop at Poplar Avenue and Cooper Street. A second crosswalk and pedestrian-activated light will be added on the west side of the Poplar/Cooper intersection.

- **North Parkway Sidewalk:** The sidewalk adjacent to the Zoo on North Parkway will be repaired and extended to the park entrance at the eastern boundary of the Zoo's maintenance area. This step is necessary for the City to install on-street parking and a bike lane along that section, connecting cyclists to and through Overton Park, and adding about 100 on-street parking spaces that could be used for Zoo employees or visitors.
- **Parking and Traffic Planning:** Overton Park Conservancy (OPC) issued a Request for Proposal (RFP) on November 5, 2015 for professional assistance in developing a Parking & Traffic Plan for Overton Park and each of the institutions housed within the park. This plan will help determine the optimum traffic flow (vehicle, pedestrian and bicycle) and parking solutions for visitors to the park and all of the amenities and institutions contained within the park. OPC is soliciting written proposals from consultants or consulting teams for this project, which will include an extensive public engagement component commencing in early 2016. OPC sees this effort as the first step in a park-wide master planning process.

Roots Memphis

- **Roots Memphis Urban Farm:** Roots is a growing cooperative of young and beginning farmers producing clean and ethical food. Roots produces an assorted variety of vegetables and flowers and currently supports a growing CSA, with pick-up and delivery locations throughout town.
- **Roots Memphis Farm Academy:** A farmer incubator program that trains and launches new, sustainable farmers in the Memphis region by combining sustainable farm skills training and small farm business management classes with an incubation process that connects graduates to land, financing, markets, and ongoing technical assistance and consultation.

Shelby County

- **Disaster Resilience:** A series of three storm systems in April 2011 caused significant damage in Shelby County. Due to the severity of the damages, Shelby County was identified by the U.S. Department of Housing and Urban Development (HUD) as Tennessee's most impacted area. These three events resulted in Presidentially Disaster Declarations and serve as the basis for the County's eligibility to participate in the National Disaster Resilience Competition (NDRC). The NDRC is a national competition for \$1 billion for activities that advance resilience efforts in states, territories, and local jurisdictions. The breadth of the impact across Shelby County from the April 2011 storms impact emphasizes the need for a thoughtful and comprehensive long-term recovery process. The County is in the process of assessing remaining recovery needs in the fields of housing, infrastructure, economic revitalization, and the natural environment and analyzing the risks and vulnerabilities that face Shelby County as well as how they will change over time due to the effects of climate change and other factors. Building upon the significant efforts that have taken place since the disaster – most notably the Mid-South Regional Greenprint and Sustainability Plan – Shelby County has developed a plan for how to address remaining unmet needs and account for evolving risks while creating a more resilient county, better prepared to respond to and recover from future disasters. On October 27, 2015, Shelby County Government submitted an application requesting \$71 million from the NDRC to address three areas hardest hit in 2011: (1) flood protection, recreational amenities, and urban agriculture along Big Creek in Millington, benefitting low to moderate income residents and the U.S. Naval Support Activity Command Center; (2) flood protection, recreational amenities, and connectivity through greenways and complete streets to increase access to economic opportunity in Wolf River communities of Memphis; and (3) flood protection, vacant lot remediation, food

production, and community programs to increase economic and social capital in South Cypress Creek in Southwest Memphis. Each of these projects involves connecting greenway infrastructure identified on the Greenprint network in a manner that provides long-term resilience.

Shelby Farms Park Conservancy

- **Heart of the Park:** Heart of the Park is a visionary reimagining of Patriot Lake - a well-loved but ecologically dysfunctional lake in the center of the Park, which was created when dirt was needed to cap a nearby landfill. The Heart of the Park will become a vibrant and diverse community hub, an environmental teaching tool, an important part of the business plan to sustain the Park, a gathering place for health and recreation, relaxation and big water adventure. Plans include a new visitor center, a restaurant/retreat center, event stage, boat rental kiosk, water play, and much more. Shelby Farms Park Conservancy completed its capital campaign, raising \$70M, and hosted a groundbreaking event at the end of April 2015. Targeted completion of this project is Fall 2016.
- **Shelby Farms Greenline:** The Shelby Farms Greenline is a 6.5 mile urban trail connecting Midtown Memphis to Shelby Farms Park—the largest park of its kind in the country. Managed and operated by the nonprofit Shelby Farms Park Conservancy, the trail is an incredible community asset that provides new opportunities for recreation, exercise, togetherness, healthy activity, commuting and more.

Tennessee Department of Environment and Conservation

- **Meeman-Shelby Forest State Park:** Meeman-Shelby Forest State Park is a 13,476-acre hardwood bottomland area bordering the mighty Mississippi River 13 miles north of Memphis featuring mature Bald Cypress and Tupelo swamp. Most of the facilities are on top of the majestic Chickasaw Bluffs that rise from the bottomlands and are covered with large oaks, American beech, hickory and sweet gum. The park offers activities focused on the nature and beauty of the park. Meeman-Shelby Forest offers more than 20 miles of hiking trails that wind throughout the park.

Town of Arlington:

- **Loosahatchie Greenway:** Developed as a sub-planning project of the Mid-South Greenprint, the Town of Arlington identified two phases of trail along the Loosahatchie River. The first phase includes approximately one mile of trail, 3,000 feet of boardwalk, and a trailhead and is estimated to cost \$1.2 million. The second phase includes a path south to Highway 70 and north to the river along Collierville Arlington Road of less than one mile and a trailhead and is estimated to cost \$500,000. The Town has included in its CIP the purchase of land for phase 1, and searching for grants to further the project.
- **Forrest Street Park:** In June 2014, the Town of Arlington was awarded a \$250,000 matching grant through the Tennessee Department of Environment and Conservation for the development of the Forrest Street Property through the Parks and Recreation Department. This project is now in the Construction process with an anticipated completion in mid-2015. The park will be 11 acres in size, and will be a multi-phase project. The first phase, now under construction, will include recreational fields for soccer, lacrosse and football. Future phases will include walking trails, restroom facilities and gazebo. Forrest Street Park is within the Town of Arlington's Historic Depot Square District, the historic Town Center.

- **Depot Square Community Garden:** The Town is constructing a community garden in our Historic Depot Square on a 1.2-acre parcel. The gardens will include raised beds where residents can plant vegetables. The Arlington Parks Department has worked with area Master Gardeners on the plans, and will be working with area schools for educational opportunities for students on the benefits of gardening.
- **Memphis-Arlington Bike-Ped Trail:** In May 2015, The Board of Mayor and Aldermen awarded a contract for the construction of a portion of the shared use path along Memphis-Arlington. The Memphis-Arlington Bike-Ped Trail will be an extension of an existing trail, which currently ends at the Arlington Sports Complex. Construction of this next phase will extend from the Sports Complex eastward, and will provide a connection between the Arlington Elementary School, and Arlington Middle School. The length of the new addition will be 0.59 miles. A grant from TDOT was received for construction of this project, along with matching funds from the Town of Arlington.

Vollintine Evergreen Community Association

- **V&E Greenline Entrances, Street Crossings, and Stationhouse Walkway:** Consultant Ritchie Smith Associates completed the construction drawings and submitted them to the City of Memphis, which *de facto* approved the drawings. The proposed public improvements include concrete wheelchair ramps at eight street crossings. Adjacent to the ramps, the concrete curb and sidewalk will be rebuilt. Drainage improvements will be made as needed. For the actual street crossings, zebra striping will be added to create a highly visible crosswalk. Traffic signs will be placed in advance of and at each crosswalk to alert motorists that they are approaching a V&E Greenline crosswalk. This project is shovel ready. The Memphis City Council has allocated funding in its Capital Improvements Budget (CIP) for construction of these public improvements and the Division of Engineering has started preparing bid documents, with construction expected in the summer of 2016. The V&E Greenline is seeking funding for private entrance improvements. The private improvements are on land owned by the V&E Greenline. These improvements include powder coated steel bollards and signs that will be durable requiring little maintenance. Plastic trash barrels will be replaced with powder coated steel trash receptacles that will be compatible with other V&E Greenline elements. The V&E Stationhouse Walkway was recently completed which makes the facility more accessible and has added creative signage and a water fountain to the walkway.

Wolf River Conservancy and the City of Memphis

- **Wolf River Greenway:** The Conservancy and the City of Memphis have partnered to complete the 21 miles of the Wolf River Greenway within the Memphis city limits. Approximately 3 miles have been completed and are open to the public. The user count for the 12 month period that ended June 30, 2015, showed 183,000 people used the trail. The entire 18 mile corridor has been surveyed. There are approximately 12 miles of trail in design & engineering, including one new river access point. Public engagement was completed this fall. Wolf River Conservancy is still in the process of acquiring land and right-of-way in select areas. A ground-breaking was held at Kennedy Park on September 25 and the remaining 18 miles are targeted for completion by 2019.

The Works

- **South Memphis Greenline:** The South Memphis Greenline proposes to convert an abandoned rail corridor approximately 2 miles long into a greenway through the heart of South Memphis, connecting residential, commercial, and employment areas. The project has received Federal Transportation Improvement Program funding for its design and engineering phase. That work will begin upon completion of TDOT review of the proposal. Preliminary estimates for construction are between \$2 million and \$2.5 million, but could change depending on the scope of environmental mitigation needed.
- **South Parkway median restoration:** This project is focused on addressing pedestrian safety and connectivity issues seen on a segment of South Parkway between I-240 and Lauderdale Street. This section of South Parkway no longer has a landscaped median as can be found on the majority of the Parkway system (North, South, and East Parkways) in residential areas. The removal of this section's landscaped median has resulted in a 75-foot wide thoroughfare that encourages high-speed traffic and has only two marked pedestrian crossings in its one-mile length. This segment of South Parkway is home to five churches, two elementary schools, and the only public park in the neighborhood, and consequently sees heavy pedestrian use. The current estimate for construction and landscaping is \$260,000.

YMCA of Memphis and the Mid-South

- **Healthy Food Options:** The goal of the Healthy Convenience Store Initiative (HCSI) is to provide healthy food options to residents in communities that are food deserts and whose health statistics and socio-economic characteristics indicate a great need for access to food that promotes a healthier and better quality of life. El Amigo Supermarket, the Healthy in a Hurry pilot store, is currently in the implementation phase of the Healthy Convenience Store Initiative. Cosmetic renovations and designs were applied to the Healthy in a Hurry section to make the healthy offerings appear welcoming and encourage exploration, leading to purchase. Bilingual English and Spanish recipe cards were placed in the healthy area to strengthen awareness of the ease of choosing healthier food choices. An opening launch event held on April 18, 2015 reintroduced the store as a balanced solution for shopping in the neighborhood while raising community awareness about the availability of nutritious food options. The event included bilingual cooking demonstrations of quick, easy, and economic meals that utilized the healthier food options available in the store. Health Innovations representatives have been holding a conversation over the course of the 2015 with the store owner about how to successfully apply business practices to reinforce the designation of El Amigo as Healthy In a Hurry convenience store. Consistency of product quality, awareness, and resident nutrition education are proving to be requirements for sustainability. Future projects associated with this initiative will focus on collaborations with medical providers in the target areas as well as point-of-sale enhancements in stores that already provide healthier food options.