A Retrospective of the City of St. Louis
Urban Vitality & Ecology Initiative

Highlighted Accomplishments: 2013-2016

Connecting people to nature where they live, work, learn and play
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The Sustainability Office leads citywide efforts to foster an enhanced connection between people and urban natural resources on a daily, weekly and monthly basis.

**Urban Ecology Accomplishments of Note**

- Developed an eco-literacy measurement tool used to conduct a citywide baseline assessment of knowledge and values
- Spearheaded *Milkweeds for Monarchs: The St. Louis Butterfly Project* in the City, and promoted the importance of urban monarch conservation efforts across the country
- Guided a five-city grant effort to create an Urban Biodiversity Inventory Framework and online tool for cities to utilize.
- Led the City's participation in the global Biophilic Cities Project
- Piloted an Urban Waters green infrastructure outreach project and created rainscaping materials with UVE partners
- Orchestrated Sustainable Neighborhood projects to incorporate greenspace at a small scale and assembled online toolkit for implementing neighborhood-level sustainability initiatives
- Supported the Sustainable Land Lab project and the Old North St. Louis and Delmar Sunflower+ vacant lot enhancement efforts.

**UVEI Participation**

Launched the City of St. Louis Urban Vitality & Ecology Initiative in 2013, and served as the backbone for the multi-faceted collaboration of urban ecology stakeholders. Oversaw development of the City’s Connecting to Nature Map. Participated in all UVE working groups and efforts.
The Department of Health is dedicated to participating in the Mayor’s initiative to promote sustainability and increase urban ecology awareness.

- Partnered with college students from Xavier University, Truman State University, Saint Louis University, and Washington University to assist with the following:
  - Education and outreach on mosquitos and vector control efforts to thwart Zika virus
  - Increased mosquito trapping and surveillance in the city
- In summer 2016, guided this intern group as a cohesive unit to offer education to a wide variety of groups, including children’s camps, PIER Events, health fairs, Science Center events, and Missouri Botanical Garden events
- Interns researched, established, and documented development of a mosquito surveillance project in conjunction with the Missouri Department of Health and Senior Services. These efforts laid the groundwork for re-establishing mosquito surveillance in the City.

Urban Ecology Mission
To assure a healthy St. Louis community through quality public health services and partnerships by providing continuous protection, prevention, and promotion of the public’s health.

UVEI Participation
The Department of Health is dedicated to participating in the Mayor’s initiative to promote sustainability and increase urban ecology awareness.

Urban Ecology Accomplishments of Note
City of St. Louis Urban Vitality & Ecology Initiative
HIGHLIGHTED WORK (2013-2016)

CITY OF ST. LOUIS
Department of Parks, Recreation and Forestry

Willmore Park is one of 109 located across the City, encouraging people to have daily contact with nature. The 2012 Tree Canopy Assessment found the park’s canopy to be 21%, which is comparable to the City’s overall tree canopy of 18%.

Urban Ecology Accomplishments of Note

- In partnership with MSD, established 11 rain gardens, 2 detention basins, a sand filter and a hydrodynamic separator to improve water quality in accordance with EPA regulations.
- Along with partners, planted Pollinator Gardens in several Parks and Fire stations throughout the City with the goal of conserving and enhancing wildlife biodiversity.
- Refurbished and constructed multi-use paths to help engage our residents with nature throughout the Park system.
- Automated Forest Park Waterway to reduce fresh water into the river system while maintaining important habitat.
- Implemented a 5-year-plan for the removal and replacement of 14,000 Ash trees from City streets and parks, due to the invasion of the Emerald Ash Borer. Each tree removed will be replaced by a one of several diverse, resilient tree species.
- Planted approximately 3,000 new street trees by fall 2016, with the assistance of Forest ReLeaf and funds allocated by aldermen.
- Continued to offer youth summer camps at eight locations throughout the city of St. Louis, along with additional recreational programming throughout the year.

https://www.stlouis-mo.gov/parks

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Urban Ecology Mission
To maintain and sustain all 109 parks and the City’s tree canopy in order to meet the outdoor needs of any and every resident or tourist in the Greater Metropolitan area.

UVEI Participation

Staff attend Quarterly meetings and are members of the UVE CORE Team.
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Parks and Forestry divisions frequently participate in activities related to urban ecology.
SLDC has contributed to the UVE initiative by attending regular stakeholder meetings and working towards the creative re-use of vacant properties in the City of St. Louis.

SLDC has worked to facilitate several vacant land initiatives throughout the City, including the following:

- Claver Works Landscaping Program
- Energy Efficient Homes Competition
- Olin School of Business Sustainability Case Competition
- Fresh Coast Capital urban tree farming project
- MSD Green Infrastructure Program
- Urban Farming – Family Roots Program
- Sustainable Land Lab Competition
- Garden Lease Program and Side Lot Program
- Mow-to-Own Program

SLDC is committed to accepting purchase offers for projects that lead to a sustainable and creative re-use.

Urban Ecology Accomplishments of Note

A vacant lot in Old North St. Louis made more attractive through the Sunflower+ Project, a winner of the Sustainable Land Lab Competition.

Urban Ecology Mission

The Land Reutilization Authority (LRA) within the SLDC Real Estate Department works to return underutilized parcels into active use, develop innovative and sustainable new uses and provide opportunities to improve vacant land for the City.

UVEI Participation

SLDC has contributed to the UVE initiative by attending regular stakeholder meetings and working towards the creative re-use of vacant properties in the City of St. Louis.

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City of St. Louis Urban Vitality & Ecology Initiative
HIGHLIGHTED WORK (2013-2016)

CITY OF ST. LOUIS
Planning & Urban Design Agency

Youth mapping exercise for the UVE Initiative’s Baden Pilot Project

Urban Ecology Accomplishments of Note

- **Vacancy**: Developed a shared vision and strategies with the Center for Community Progress to address vacancy in the City of St. Louis
- **Fresh Coast Capital**: Provided plans for the conversion of 42 vacant lots in the Wells-Goodfellow neighborhood into an urban tree farm, promoting creative reuse and local job opportunities
- **$13.5 Million Vacancy Demolition Plan**: Collaboratively developed a green zone plan with the Metropolitan St. Louis Sewer District and Missouri Department of Conservation to strategically convert the overabundance of vacancy in the Combined Sewer Overflow region into open space, piloted in the Wells-Goodfellow Neighborhood
- **UVE Initiative Pilot Project Mapping**: Developed maps for the planning and community engagement in the UVE Pilot Project neighborhoods of Baden and Wells-Goodfellow
- **Urban Monarch Conservation Mapping**: created St. Louis Riverfront Butterfly Byway and the USFWS monarch grant maps.

UVEI Participation

The City of St. Louis Planning & Urban Design Agency has been able to provide plans, advice and guidance for the Urban Vitality & Ecology Initiative, better connecting St. Louis residents to nature where they live, work, learn and play.

www.stlouis-mo.gov/planning/

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ACADEMY OF SCIENCE OF ST. LOUIS

Urban Ecology Accomplishments of Note

- Leads Annual BioBlitz in Forest Park or Tower Grove Park:
  - Environmental Stewardship: over 1,000 species identified
  - Outreach: over 500 participants annually
  - Species Identification: 359 total species of vascular plants identified during one BioBlitz
  - Conservation: identification of species that are rare for Missouri have been found, including: Ceropales longipes – a forest-dwelling cleptoparasitic spider wasp was sited -this is the first Missouri record (found in Kennedy Woods); Florilegus condignus – a solitary bee strongly associated with wetlands (found in Steinberg Prairie); one species of bat (eastern pipistrelle) was previously unknown at Forest Park.
- Academy of Science – St. Louis initiatives: BioBlitz, Science Careers-Student Explorations, Teen Science Café, Academy of Science - St. Louis Science Fair, Junior Academy of Science and Science for the Public events.

Urban Ecology Mission
Since 1856, the Academy seeks to advance the public understanding of science and promote interest in the sciences to students and adults through accessible, year-round seminars and educational initiatives.

UVEI Participation
The Academy of Science – St. Louis BioBlitz is an exploration and inventory of the biodiversity of urban parks. Led by biologists and experienced naturalists, students and families with nature lovers and budding scientists trek into different habitats listing as many species as they can find!
Brightside's Demonstration Garden educates visitors about native landscapes and sustainable best practices that can be replicated at home and in neighborhood gardens.

Stormwater Best Management Practices in the Demonstration Garden include a rain garden, a vegetative bio-swale, porous concrete, pervious asphalt, permeable pavers, rain barrels, and a cistern to capture roof-top rainwater. In 2014, a porous pathway of recycled glass/Missouri River Rock was added, making Brightside's Garden the only demonstration garden in the region with four unique porous surfaces on site.

Neighbors Naturescaping enables community groups to enhance public spaces in their city neighborhood by providing native plants, tools, technical assistance and educational opportunities for residents and volunteers.

St. Louis Urban Gardening Symposium (SLUGS) offers educational workshops on gardening for wildlife, rain gardening, and how to work with the natural landscape to enhance your home and neighborhood.

Brightside’s Blitz Blooms and daffodil plantings engage thousands of volunteers each year to plant more than 200,000 flowers in public spaces throughout the city.

Urban Ecology Accomplishments of Note

- Brightside’s Demonstration Garden educates visitors about native landscapes and sustainable best practices that can be replicated at home and in neighborhood gardens.
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Urban Ecology Mission
To improve the quality of life in our community by educating, engaging, and inspiring St. Louisans to make our region cleaner, greener, and more environmentally sustainable.
Urban Ecology Accomplishments of Note

- Expanded and enhanced pollinator habitat in St. Louis parks, schools, greenways, commercial and residential areas.
- Performed prescribed burn in Forest Park’s Deer Lake Savannah.
- Installed and stewards multiple urban trails/greenways for Great Rivers Greenway.
- Provides bioretention/green infrastructure for Metropolitan Sewer District.
- Stewardship contractor for South Grand Community Improvement District’s native landscaping and raingardens.
- Expanded and maintains St. Louis’s only remnant prairie, located in Calvary Cemetery, and installed St. Louis’s first Certified Green Burial Area in Bellefontaine Cemetery.
City of St. Louis Urban Vitality & Ecology Initiative
HIGHLIGHTED WORK (2013-2016)

EAST-WEST GATEWAY

The city neighborhood of Baden, shown here with a historic hydrology data overlay developed by East-West Gateway, was chosen as the UVE Initiative’s pilot project site.

Urban Ecology Accomplishments of Note

- Completed Regional OneSTL plan for Sustainable Development in December 2013.
- Organized Leadership network to help partner organizations implement OneSTL.
- Completed annual update on area wide Sustainability metrics.
- Developed a revised land cover classification methodology for urbanized areas as part of the agency's Ecological Initiative efforts.
- Participated in the vendor selection process to construct 30 acres of native landscape in the Butterfly Byway.
- Developed a historic hydrology data layer from historic maps of St. Louis.

Urban Ecology Mission

OneSTL is a plan for creating a prosperous, healthy, and vibrant St. Louis region. The Plan includes a vision, goals and objectives that outline what the people of St. Louis want for the future of the region as well as strategies, tools and resources for achieving the OneSTL vision. OneSTL Network Members will implement the plan.

UVEI Participation

Served as member of Core Group and participated in several working groups. Provided data services for assorted UVEI projects. Collected data for a spatial data repository and generated a series of maps to illustrate potential pilot project locations.

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Nature Works: Established a “Green Workforce” development program that has been recognized by the U.S. Department of the Interior as a 21st Century Conservation Corps.

Transformed Upper Muny Parking lot into Festival and Parking Plaza, resulting in 25,000 square feet of new green space with 5000 new plantings, 100 new trees, and rain gardens.

Kennedy Forest Ecosystem: Completed Timber Stand improvements including over 3,000 new trees and over 5,000 native plugs, adding 118 new species.

Improved riparian corridor with the removal of more than 7 acres of invasive plant species along the waterways, installation of 36 native plant species, and creation of catchment devices to trap debris when refinishing bridges over the waterway.

Improved health and habitat of Round Lake Vista with 350 new trees and shrubs, 7,800 wildflower and grass plugs adding 116 species.

Collaborated with STL Parks Department and City Water Division to install efficient, modern valves near four waterway sites on park’s west side, with anticipated 5% reduction in City tap water use.

Urban Ecology Mission
We are on a mission to restore, maintain and sustain Forest Park as one of America’s great urban public parks, for the enjoyment of all—now and forever.

Urban Ecology Accomplishments of Note

UVEI Participation

Transformed turf area into Monarch Garden, improving biodiversity with 2,337 native wildflowers and grass plugs adding 116 species.

Supported community eco-literacy by continuing annual BioBlitz biodiversity inventory and Voyage of Learning Teachers’ Academy.
Staff and volunteers work to promote the benefits of trees while growing native species at our nursery in Creve Coeur Park. Trees are distributed for free for planting on public and nonprofit lands.

- Forest ReLeaf has distributed over 190,000 trees for public and nonprofit plantings.
- In response to the Emerald Ash Borer infestation in St Louis City, Forest ReLeaf has begun to replace ash trees with native species. To date, 1,200 new trees have been planted.
- Trees have been planted in several St Louis area parks including Willmore, Lucier, Penrose and Marquette.
- Forest ReLeaf’s CommuniTree Gardens Nursery and Arboretum is Certified Gold by the St Louis Audubon Society.
- Forest ReLeaf conducted the first St Louis Urban Tree Canopy assessment identifying existing canopy and potential areas for replanting.

Urban Ecology Mission

*Planting Trees, Enriching Communities.*

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UVEI Participation

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City of St. Louis Urban Vitality & Ecology Initiative
HIGHLIGHTED WORK (2013-2016)

GATEWAY GREENING

In the last three years, the Gateway Greening Urban Farm has grown nearly 46,000 pounds of fresh, local produce, served nearly 150 City Seeds clients, and saw more than 10,000 volunteer hours completed.

We have created 39 new school and community gardens throughout St. Louis City and County, including 3 gardens at county library branches in partnership with St Louis County Library. In 2016, we estimate that garden expansions have added nearly 7,000 square feet of growing space in St. Louis. That is enough to grow an additional 3.7 tons of fresh, local produce each year.

Our Dig It STL program provides teens with an opportunity for gainful summer employment. This program seeks to help local teens develop an understanding of food systems, as well as leadership and environmental stewardship skills. Since its inception in 2015, teens have earned $49,000 in wages and performed more than 5,000 hours of positive work.

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Urban Ecology Mission
Gateway Greening’s mission is to educate and empower people to strengthen their communities through gardening and urban agriculture.

Urban Ecology Accomplishments of Note

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UVEI Participation

In collaboration with UVEI stakeholders, Gateway Greening participated in supporting agriculture initiatives in St. Louis that contribute to our urban ecosystem, including community gardens, urban farms, and empowering communities to create place-based development projects.
In 2016, installed over 5,600 square feet of pollinator habitat along the Riverfront Trail of the Mississippi Greenway to support the City of St. Louis Butterfly Byway Initiative and provide valuable habitat to the monarch butterfly and other pollinators.

Planted over 2,400 native flowers, sedges, and shrubs at the Mary Meachum Visitor Center, McKinley Bridge Bikeway, and the Old Chain of Rocks Bridge with the assistance of 30 volunteers and support from Brightside St. Louis, Gateway Greening, Forest ReLeaf of Missouri, Missouri Master Naturalist Great Rivers Chapter, St. Patrick Center, Southwest Airlines, and the Urban League of St. Louis.

Enhanced the regional greenway network by adding 7.5 miles of bike paths in the City of St. Louis which extended the River des Peres and Mississippi Greenways. The River des Peres addition features native landscaping to benefit urban wildlife, a living wall and stormwater best management practices. The extension of the Mississippi Greenway from Biddle Street to Chouteau Street offers walkers and bikers a new way to engage with the downtown riverfront.

Collaborated with the City of St. Louis, Metro, MoDOT and other stakeholders to develop the North Riverfront Open Space and Redevelopment Plan, adopted in November 2015.
Shaped a vision and developed a plan for how the Cityshed Mitigation (buyouts) and Rainscaping Programs would complement each other.

Explored win/win opportunities to address vacancy in the City of St. Louis by forming an agreement with St. Louis’ Land Clearance for Redevelopment Authority.

Urban Ecology Mission
Providing innovative, effective wastewater and stormwater management to protect our environment and the health and safety of our community.

UVEI Participation
Participated in the Baden and Harlem Pilot Projects.
City of St. Louis Urban Vitality & Ecology Initiative
HIGHLIGHTED WORK (2013-2016)

MISSOURI BOTANICAL GARDEN

The Garden’s work focuses on enabling meaningful connections between city residents and nature-rich gardens and green-space.

Urban Ecology Accomplishments of Note

• Milkweeds for Monarchs Education & Outreach
  o Installed 50 school monarch gardens with 500+ native plants (milkweed and 30+ other pollinator-attracting species).
  o Developed exhibits, spaces and programs for 100,000 visitors to learn about and experience monarchs and their story.
  o Co-hosted an Educator Workshop and co-published an Educator Guide to creating urban school monarch gardens.

• Monarch Garden & Urban Prairie Research
  o Surveyed vegetation in 37 monarch habitat areas in the City, providing a baseline for future urban conservation research.
  o Provided recommendations for enhancing plantings and maintenance to improve monarch habitat value in urban areas.

• UVE Baden Pilot Project
  o Constructed and maintained a community garden, providing teen jobs, healthy food access, and accessible green space.
  o Organized a Dig In! community action day for residents to plant over 60 native trees in a neighborhood park.
  o Hosted workshops and field trips for youth and residents interested in learning more about gardening and green space.

Urban Ecology Mission
To discover and share knowledge about plants and their environment in order to preserve and enrich life.

UVEI Participation
With a multi-disciplinary team of educators and ecologists, the Missouri Botanical Garden cultivated connections between city residents and urban nature in ways that improve quality of life for all. The Garden serves as fiscal agent for the City’s Urban Biodiversity Inventory Framework and the City-MDC-MBG Cooperative Agreement, and staff serve on the UVEI Core Group and several working groups.

MISSOURI BOTANICAL GARDEN
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ST LOUIS MUNICIPAL BUILDING
City of St. Louis Urban Vitality & Ecology Initiative
HIGHLIGHTED WORK (2013-2016)

MISSOURI DEPARTMENT OF CONSERVATION

Urban Ecology Accomplishments of Note

Provided $210,000 supporting the UVE Coordinator, UVE Planner and UVE GIS Analyst, and cost share and staff time producing:

- **UVE Framework:** development and implementation of a collaborative vision and goals
- **UVE Coordination:** communication and engagement with partners
- **UVE Pilot Projects:** Baden and Wells Goodfellow neighborhood planning and engagement
- **Summer Camps:** nature-based youth summer camps through the Department of Parks, Recreation & Forestry, initiated in 2016
- **City of St. Louis Connecting to Nature Map:** a map highlighting the many spaces and places where residents can connect to nature
- **St. Louis Riverfront Butterfly Byway:** Cost share and technical assistance supporting implementation of 12 projects
- **Grants:** over a dozen grant applications submitted raising over $200,000 in cash and technical assistance.

Urban Ecology Mission

The Missouri Department of Conservation aims to connect people to urban natural resources in ways that maximize economic impact and social benefits.

UVEI Participation

The Missouri Department of Conservation was one of the founding organizations of the City of St. Louis UVE Initiative. Through this collaboration MDC has been able to better achieve its mission of providing opportunity for all citizens to use, enjoy, and learn about fish, forest and wildlife resources.

https://mdc.mo.gov/

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City of St. Louis Urban Vitality & Ecology Initiative
HIGHLIGHTED WORK (2013-2016)

MISSOURI STATE PARKS
A division of the Missouri Department of Natural Resources

W.O.W. St. Louis, held in Forest Park, teaches outdoor recreational skills and ecological stewardship in a family friendly environment.

Urban Ecology Accomplishments of Note

- Participated in the Milkweeds for Monarchs initiative by developing a Monarch Garden at the Scott Joplin House State Historic Site.
- Partnered with numerous state and local agencies to host Wonders of Wildlife St. Louis in Forest Park. This family based outdoor education event promotes outdoor recreation and ecological stewardship.
- Conducted week long day-camps with St. Louis Youth to promote outdoor recreational activities and ecological stewardship at Missouri state parks and historic sites.

Urban Ecology Mission

To preserve and interpret the state’s most outstanding natural landscapes and cultural landmarks, and to provide outstanding recreational opportunities compatible with those resources.

UVEI Participation

Served as member of Core Group and participated in several working groups. Partnered with numerous state and local agencies to sponsor outdoor education and recreation programs targeted at St. Louis City youth and families.
Arch Grounds

**Green Infrastructure:** Installed water cisterns in Luther Ely Smith Square to capture and filter 75,000 gallons of water for irrigation. Installed bioswales to collect excess nutrients and direct stormwater to underground retention structures.

**Native Plantings:** Planted 220 trees in Luther Ely Smith Square, offering shade in summer months, while diverse and native plantings offer visual interest all year long. The North Gateway has many local trees and plantings, including two acres of prairie grass.

**Urban Forest:** Replaced 800 Ash trees with double the number of trees, including London Planetrees and a variety of native species, including oaks, hickories, hackberries, redbud and hawthorns.

**Soil Enhancement:** Used radish plants to improve the soil, by opening root space for water and air, decompacting the soil. They decompose during the spring, adding nutrients to the soil. Installed engineered topsoil at the new planting and lawn areas to produce healthier plants with less watering, less fertilizing, and less runoff. A soils improvement program uses compost tea applications to eliminate the need for nitrogen fertilizer.

**Hosted Canoemobile:** Hosted Canoemobile, an outdoor education experience during which 83 underserved youth and 38 individuals with disabilities learned about nature and history on public lands and paddled canoes on public waterways.
Urban Ecology Mission

Youth Exploring Science (YES) provides opportunities for inquiry-based learning to 250 teenagers throughout their high school careers.

YES Teen Ambassadors addressed nutrition access, food deserts, and nature issues and constructed raised plant beds at City recreation centers.

Urban Ecology Accomplishments of Note

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Urban Ecology Mission

The Saint Louis Science Center seeks to ignite and sustain lifelong science and technology learning throughout the community.
SAINT LOUIS UNIVERSITY

Urban Ecology Accomplishments of Note

- Conducted a multi-year survey (2013-2016) of the bee community in the city of St. Louis. This resulted in nearly 10,000 individual bee specimens.
- Identified one hundred and twenty two (122) species of bees within city limits. Another forty six (46) species were identified as occurring in adjacent suburbs within the I-255/270 loop.
- Carried out workshops on the importance of the conservation of native pollinators during 2016. Over 120 people attended these workshops. SLU will continue offering the workshops in 2017.
- Performed outreach to the community at large at numerous events and institutions in the city of St. Louis and surrounding urban areas, e.g., St. Louis Zoo, St. Louis Science Center, Brightside St. Louis, and EarthDance Farms.

Urban Ecology Mission

Our mission is to conserve native pollinators in urban environments. To do this, we conduct ecological and social work in neighborhoods across the city of St. Louis.

UVEI Participation

Our interest is understanding how bee communities respond to social and environmental parameters in order to better conserve them. We actively collaborate with UVEI so that stakeholders can make better-informed decisions that benefit people and nature.
Urban Ecology Accomplishments of Note

- The Saint Louis Zoo welcomed over three million visitors in each of the years 2013 through 2016 to an urban ecology oasis located in the City of St. Louis.
- The Saint Louis Zoo conducted more than 20,000 urban ecology Education programs between 2013 and 2016, reaching more than 3.8 million participants. This includes more than 1,000 Outreach programs between 2013 and 2016, reaching more than 37,000 residents of the City of St. Louis.
- The Saint Louis Zoo Surveyed 37 monarch butterfly/pollinator habitat gardens in the City of St. Louis for bee diversity and abundance and monarch butterfly activity and reproduction.
- Saint Louis Zoo and Missouri Botanical Garden Educators collaborated on 50 pollinator gardens created at schools throughout the City, in partnership with more than 100 teachers and 1,000 students. Milkweeds for Monarchs messaging, through Zoo exhibits, programming, articles, social media, etc., reached many tens of thousands of visitors, members and followers.
- The Zoo’s Institute for Conservation Medicine conducted box turtle treks and presentations in several City of St. Louis schools, emphasizing the connections between urban wildlife, humans, diseases and conservation.
THE NATURE CONSERVANCY OF MISSOURI

Urban Ecology Accomplishments of Note

- Launched and co-led the Water Matters initiative with Nine Network of Public Media, a multi-stakeholder initiative bringing focus to the connection between water and the health of lands, people and economies in the St. Louis region. Since 2014, the initiative has focused on why water matters and what people can do to protect the health of our irreplaceable water resources.
- Delivered a keynote at the 2013 Mayor’s Sustainability Summit.
- Created a Meramec River Conservation Action Plan and coordinated with stakeholders to improve river health, including work at Castlewood State Park, a top recreation area for St. Louisans.
- Helped St. Louis urban youth earn about natural water systems and create an original sculpture interpreting the connections between trees and river health in partnership with St. Louis ArtWorks. Sculpture now on display at Queeny Park.

Urban Ecology Mission

The mission of The Nature Conservancy is to conserve the lands and waters on which all life depends.

UVEI Participation

Participated in UVEI stakeholder meetings.
Attended regular UVEI meetings to support and engage with the work of fellow stakeholders in the City of St. Louis.

- The Gaddy Bird Garden was revitalized. Invasive trees and shrubs were removed, along with natives being planted to replace them.
- A new water feature was installed in the Gaddy Bird Garden to benefit wildlife.
- Two savannahs were established, totaling a little more than an acre.
- Two riparian planting zones were established along 1,400 feet of waterway.
- Two birding kits were developed for public use.
- The health and diversity of the Park’s wonderful collection of trees and woody shrubs was restored, maintained, and improved.

Tower Grove Park is an Audubon Society-designated Important Bird Area and a natural refuge for many bird species, including this Blue Heron.

Urban Ecology Mission

The mission of Tower Grove Park is to be an exemplary, well preserved and well presented, wooded Victorian park of international significance that provides important recreational, educational, and cultural opportunities for the public in a way that is compatible with its unique and historic character.

UVEI Participation

Attended regular UVEI meetings to support and engage with the work of fellow stakeholders in the City of St. Louis.
History and Museum Studies
- Surveyed 37 monarch butterfly habitat installations in the City of St. Louis, observing use patterns and interviewing visitors about the site.
- Conducted ethnography at five monarch butterfly habitat installations, learning how people maintain and use the sites, and how the installations fit in the broader neighborhood context.
- Collected 105 resident-generated photo narrations of places in the Wells Goodfellow neighborhood to assist greening infrastructure planning in the Harlem Creek watershed.
- Gathered photos and narratives from Shaw and Botanical Heights residents about their neighborhoods’ cultural and natural heritage sites.

Whitney R. Harris World Ecology Center
- Encouraged grad students to conduct research in urban areas, including at Bellefontaine Cemetery (bat research) and throughout the City (bee research).
- Hosted annual community outreach events on topics of general interest in environmental sciences. The 2016 topics were:
  - Mosquitoes as disease agents in the Anna and Whitney Harris Conservation Forum, held at the Saint Louis Zoo.
  - A talk by Frances Beineke at the Jane and Whitney Harris Lecture at the Missouri Botanical Garden.
- Presented the annual World Ecology Award; the 2016 awardee was Dr. Sylvia Earle, oceanographer whose efforts are focused on saving the world’s oceans.

Urban Ecology Mission
The History and Museum Studies programs at UMSL produce research that helps communities harmonize their natural and built environments.

The Harris Center’s primary mission is the training of undergraduate, MS and PhD students in modern conservation science.

Urban Ecology Accomplishments of Note

City of St. Louis Urban Vitality & Ecology Initiative
HIGHLIGHTED WORK (2013-2016)
Leadership, staff and volunteers of Two Rivers National Wildlife Refuge have participated in St. Louis City Urban Vitality and Ecology Initiative organizational meetings and events since 2014.

- In 2014, provided assistance to St. Louis City Parks and Recreation in establishing native plant gardens at various city parks that would benefit various species of pollinators.
- In March 2015, led a native seeds packet assembly activity at the national announcement of the Department of Interior’s 1,000,000 volunteers on public lands initiative (Let’s Move Outside).
- In the summers of 2015 and 2016, assisted South City YMCA in establishing and maintaining a monarch butterfly garden in Sublette Park and provided environmental educational programs to 800 St. Louis City youth through the YMCA Day Camp program.
- In the summers of 2015 and 2016, partnered with the Boy Scouts of America to provide fishing camps to 100 children through the St. Louis City Parks and Recreation Department.
- In 2016, engaged UVEI stakeholders to develop the St. Louis Urban Refuge Program (SLURP).
- Assisted the City’s Milkweeds for Monarchs program by providing monarch garden interpretive panels, STL Monarch Mix seed packets, and Fish and Wildlife Service banners.
- Supported the St. Louis Butterfly Byway in a variety of ways.

Urban Ecology Accomplishments of Note

Urban Ecology Mission
Engage urban communities to foster stewardship in their cities and beyond by providing opportunities for urban residents to find, appreciate, and care for nature.

UVEI Participation
Leadership, staff and volunteers of Two Rivers National Wildlife Refuge have participated in St. Louis City Urban Vitality and Ecology Initiative organizational meetings and events since 2014.
As part of the Baden pilot project, a team of WU researchers from Environmental Studies, Arts & Sciences, Landscape Architecture, the Tyson Research Center, Engineering, and Social Work:

- Collected baseline urban ecology data. High school students in the Youth Conservation Corps (MBG’s Baden Community Garden youth workers and the Shaw Institute for Field Training (SIFT) program) participated in data collection during the summers of 2015 & 2016.
- Integrated urban ecology principals into the creation of an open space plan in a project led by Prof. Rod Barnett.

Baseline research was done in partnership with Riverview West Florissant Development Corporation and Our Lady of the Holy Cross Church. It included a survey of perceptions of local greenspace and physical activity, as well as an assessment of characteristics of the natural environment, including soil geochemistry in current and future basin sites, vegetation in neighborhood green spaces, and mosquitos present in the neighborhood.

Partnered with the City in holding a Sustainable Land Lab Competition, a small grant opportunity to incentivize design and implementation of strategies for creative reuse of vacant land.
The City of St. Louis is grateful to the many Urban Vitality & Ecology Initiative stakeholders that have participated in this effort. Their extraordinary work is serving to expand opportunities for people in St. Louis to connect with nature where they live, work, learn and play.