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URBAN DESIGN & PRESERVATION from the Winter 2015 newsletter

St. Louis Is Aflutter For Monarchs

by Catherine Werner, Sustainability Director for the City of St. Louis

Can butterflies make a difference in an urban area? St. Louis thinks they can. Connecting people with nature is a sustainability priority in the City of St. Louis, Missouri. "We know that as much as nature needs people, people need nature - perhaps even more so in an urban environment," says Mayor Francis G. Slay. The City's sustainability initiative, run out of the Mayor's Office, seeks to address social, economic and environmental issues, and produce triple bottom line outcomes for those who live, work, learn and play in the urban core.

St. Louis is a relatively compact and dense 62 square miles. Bordered by the Mississippi River along its entire eastern boundary, nearly every bit of the city has been developed to accommodate its peak population of about 850,000 people in the mid 20th Century. With only 319,000 people currently, the city can boast of pre-eminent parks and trails, but is also taxed with an over-abundance of underutilized and vacant land. Therein lies a complex challenge -- and an incredible opportunity.

Studies show that there are numerous social, economic and environmental benefits that can result from connecting with nature, such as reduced stress and anxiety, improved health and well-being, and enhanced educational performance. In 2013, the City and its partners at the Missouri Department of Conservation and the Missouri Botanical Garden collaboratively launched the City of St. Louis Urban Vitality & Ecology Initiative. The goal of this long term and citywide effort is to double the eco-literacy rate in the City, by fostering a connection between people and urban natural resources. The City's Planning and Urban Design Agency has been working closely with the Mayor's Office to map current conditions along with natural heritage features, and assess a variety of opportunities to incorporate urban ecology for a more vibrant and sustainable city.

Four key strategies in play are to create more greenspace, increase biodiversity in natural areas, improve ecosystem service functions, and find ways to make it easier for people to connect to nature on a daily basis. While some of the Urban Vitality & Ecology Initiative objectives have the future in mind, in the short term, Mayor Slay wanted

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For more information about Milkweeds for Monarchs:

The St. Louis Butterfly Project, visit www.stlouis-mo.gov/monarchs or contact Catherine Werner, Sustainability Director for the City of St. Louis. WernerC@stlouis-mo.gov.

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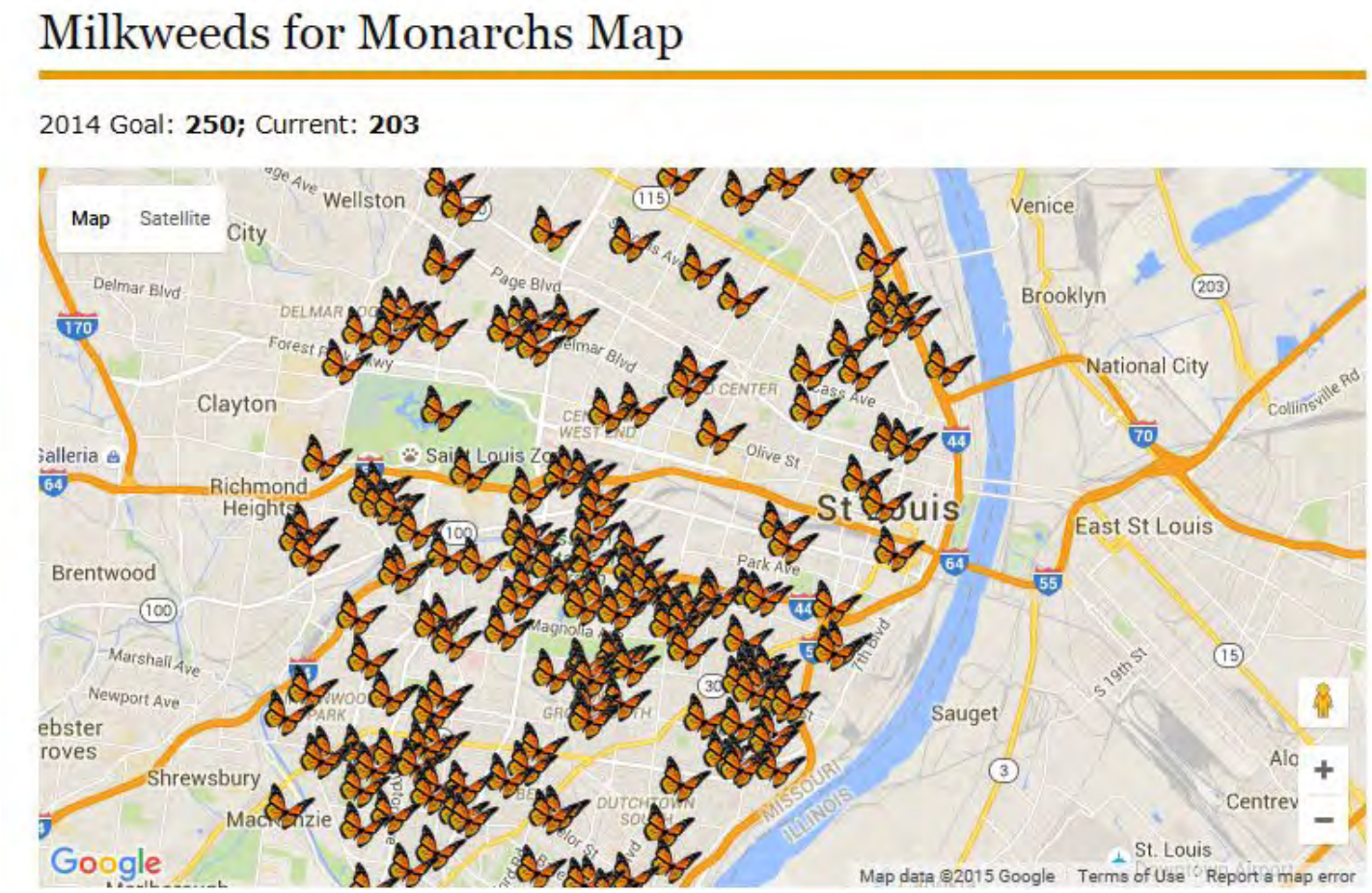

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to promote ways to connect with nature in a simple, quick and affordable way. To raise awareness of the value of urban ecology, and to produce some cost-effective and immediate tangible results, Mayor Slay launched Milkweeds for Monarchs: The St. Louis Butterfly Project on Earth Day 2014. The twin objectives of the Milkweeds for Monarchs project were to help monarchs and benefit people.

The City commenced the effort by installing 50 monarch gardens at fire houses, police stations, parks, and other City facilities, and challenged the community to plant an additional 200 gardens, to commemorate the City's 250th birthday. To aid City residents and organizations in the effort, the Mayor's Office worked with community plant and butterfly experts to develop a number of tools and resources to assist in the creation and maintenance of monarch gardens. These include the STL Monarch Mix of recommended plants to serve as a reference in establishing a monarch garden, step-by-step instructions for how to create a monarch garden, and an online system where residents and community groups can register their garden, which will then be displayed on a digitized map of butterfly symbols showing progress made toward the initial goal of 250 monarch gardens.

Why monarchs? The monarch is both iconic and unique in several ways. Easily recognizable, it is the only butterfly known to migrate; each year, several generations of monarchs make a 3000 mile round trip journey between Canada, the United States and Mexico. Traveling up to 50 miles per day, monarchs need places to rest and recharge during their journey. More than any-

thing else, monarchs need milkweed plants. Without milkweed, there is no place for a female monarch butterfly to lay her eggs, and nothing for monarch caterpillars to eat when they emerge from their eggs. However, the vast stretches of milkweed plants upon which the monarch depends -- and that once flourished along their migration pathway -- have largely disappeared after years of development and misuse of chemicals. The result has been an unprecedented monarch population decline of more than 90%.

Image Credits: City of St. Louis

The key to the monarch's survival is planting more milkweed, and even a small monarch garden of one square meter can have dramatic results. Monarchs are pollinators, themselves, and the habitat that helps monarchs thrive also attracts and sustains other important pollinators, such as bees and birds. In the City of St. Louis, anyone who has registered an eligible monarch garden is entitled to a free small garden sign with the Milkweeds for Monarchs logo, and fourteen monarch interpretive panels have been installed in public spaces, providing yet another way to share information and raise awareness.

Due to the overwhelmingly positive response to the initial Milkweeds for Monarchs efforts, the Mayor's Office collaborated to reach further into the community and schools. In June 2015, the City received $80,000 from two groups associated with the U.S. Fish & Wildlife Service. In partnership with the St. Louis Zoo, Missouri Botanical Garden and Brightside St. Louis, the City is using these funds to work with Neighborhood Improvement Specialists to cultivate urban monarch conservation ambassadors, create new monarch gardens in public spaces and city schools, and develop monarch training and curriculum materials. To further outreach efforts, both the Zoo and Botanical Garden are featuring educational displays about monarchs in frequently-visited public spaces.

In order to better understand and help quantify the impact that Milkweeds for Monarchs has on both people and monarchs, a research team is collecting social and biological data. Researchers from the Missouri Botanical Garden, the St. Louis Zoo and University of Missouri-St. Louis are in the process of evaluating 30 monarch gardens and 7 urban prairie patches in the City. The research will consist of three parts: evaluating monarch garden vegetation, associated pollinators and social acceptance of the people who experience the monarch habitat areas. The research efforts will be used to inform future phases of the program, and offer insight to urban monarch conservation programs across the country.

Mayor Slay has enjoyed great personal success attracting numerous monarchs to his home garden, as well as one at City Hall. A champion of urban monarch conservation, Mayor Slay brought Milkweeds for Monarchs to the attention of the U.S. Conference of Mayors. And in September 2015, Mayor Slay and Colin O'Mara, president of the National Wildlife Federation (NWF), launched a new Mayors' Monarch Pledge. The NWF developed 25 recommended items known to help monarch butterflies, and by taking the

pledge a mayor commits to take at least 3 actions from the list. St. Louis is doing what it can to serve as a national model in urban monarch conservation, and continues to share resources, best practices and tools to help those across the country wanting to learn about or start similar programs.

In addition to expanding from a localized effort to a national one, Milkweeds for Monarchs is also expanding from a focus on individual gardens to landscape scale urban monarch conservation. The City just received a grant from the National Fish & Wildlife Foundation to create a St. Louis Riverfront Butterfly Byway along the City's 19 miles of Mississippi Riverfront, a series of monarch habitat made up of native prairie plants that should also attract numerous other pollinators. A new STL Butterfly Brigade of community volunteers will assist with the creation of the habitat, and also earn to be conservation stewards.

The Mississippi watershed is the fourth largest in the world, and the confluence of the Missouri and Mississippi Rivers -- just north of St. Louis -- saw Lewis and Clark launch their Corps of Discovery in 1804. Since then, the Mighty Mississippi has taken many turns, but remains a vast ecological force and powerful economic corridor. Straddling the iconic Gateway Arch, sections of the St. Louis Riverfront still resemble their historic conditions: high bluffs in the south and the Chain of Rocks section closed to commercial traffic in the north. Most of the flood-zone areas that hug the banks witness intense river commerce and industrial activity, even as the Mississippi Flyway above it serves as an essential bird migration route. It is here where the City will embark on a new journey of discovery, one designed to connect people with their natural heritage, and to support butterflies along a riverfront pollinator pathway.

Although the formal research conclusions have yet to come in, it is clear that urban monarch conservation is a win for butterflies and people, alike. It can be as simple as planting one square meter containing a team of 9 plants. In this Baseball Town, monarch habitat is yet another field of dreams. And if you build it, they will come. Monarchs, that is.