

Partnering with urban residents and businesses for wild bee habitat conservation



Saint Louis University--Center for Sustainability & Department of Biology
23rd Ward Sustainability Project



Project Site: <http://www.SustainabilityScienceLab.org/Bees.html>

Saint Louis University, with support from Missouri Department of Conservation, is conducting research in your neighborhood.

Did you know?

- 1 in every 3 bites of food we eat is pollinated by a bee.
- Bees are declining globally due to a combination of factors.
- However, in the midst of a pollinator health crisis, **scientists are finding surprisingly high numbers of bee species in cities that are absent in nearby rural lands.** Here in Missouri, there are 450 species of native bees in addition to the domesticated European Honeybee we all know and love. Our team of faculty and students have been sampling 15 sites within St. Louis for the past three years. We have found that St. Louis has ~154 species of native and wild bees.
- **St. Louis City is providing habitat for 1/3 of the state's bees!** These other bees are just as important to every home garden, farm, flowering plant, and fruit tree in Ward 23 and beyond.
- The key contributor to pollinator health is floral resources (flower nectar and pollen). **To improve urban bee species health and diversity is easy: plant more flowers!**
- Because most bees are tiny and require little habitat, **this is an environmental problem where one person can make a difference.**

What we're studying: Can communities plant our way out of a pollinator health crisis.

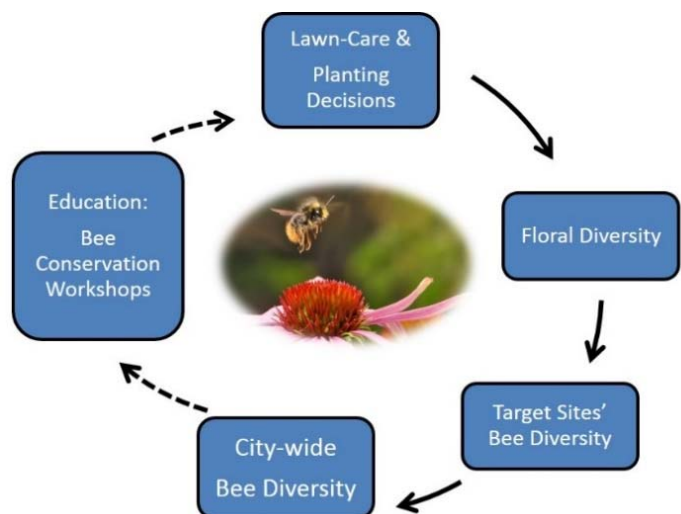
What we're going to do: Encourage residents in 2 St. Louis neighborhoods to increase the number and variety of flowers in their yards, public places, and commercial properties to help urban bees.

How we will know it's working: We will sample bees weekly at the sites (Figs. 1 & 2) to monitor if there is an increase of bee species (the diversity indicator of health) due to increased bee habitat.

Figure 1. Project hypothesis. Solid lines show known driving factors and dashed lines show information the project team will provide.

With Information about **City-Wide Bee Diversity**, we will host **Educational Bee Conservation Workshops** to inform your **Lawn-care & Planting Decisions**.

Lawn-care & Planting Decisions increase **Floral Diversity** which increases **Bee Diversity of Target Sites** which increases **City-wide Diversity**.



April 2016

Why Ward 23: It was selected as 1 of 2 project sites because it has the lowest numbers of unique bee species of any of our sites in the city. This means your neighborhood can have the greatest increase in species due to planting more flowering plants.

How: Science Engagement: Using data from our long-term study, attend 1 of our science-education workshops this summer. The workshop will discuss our research, conservation in general, and ways to increase habitat for bees that use the target sampling sites (Fig. 2). We have seeds, resources, yard signs, and access to experts to encourage planting for bees.

Ways to Help:

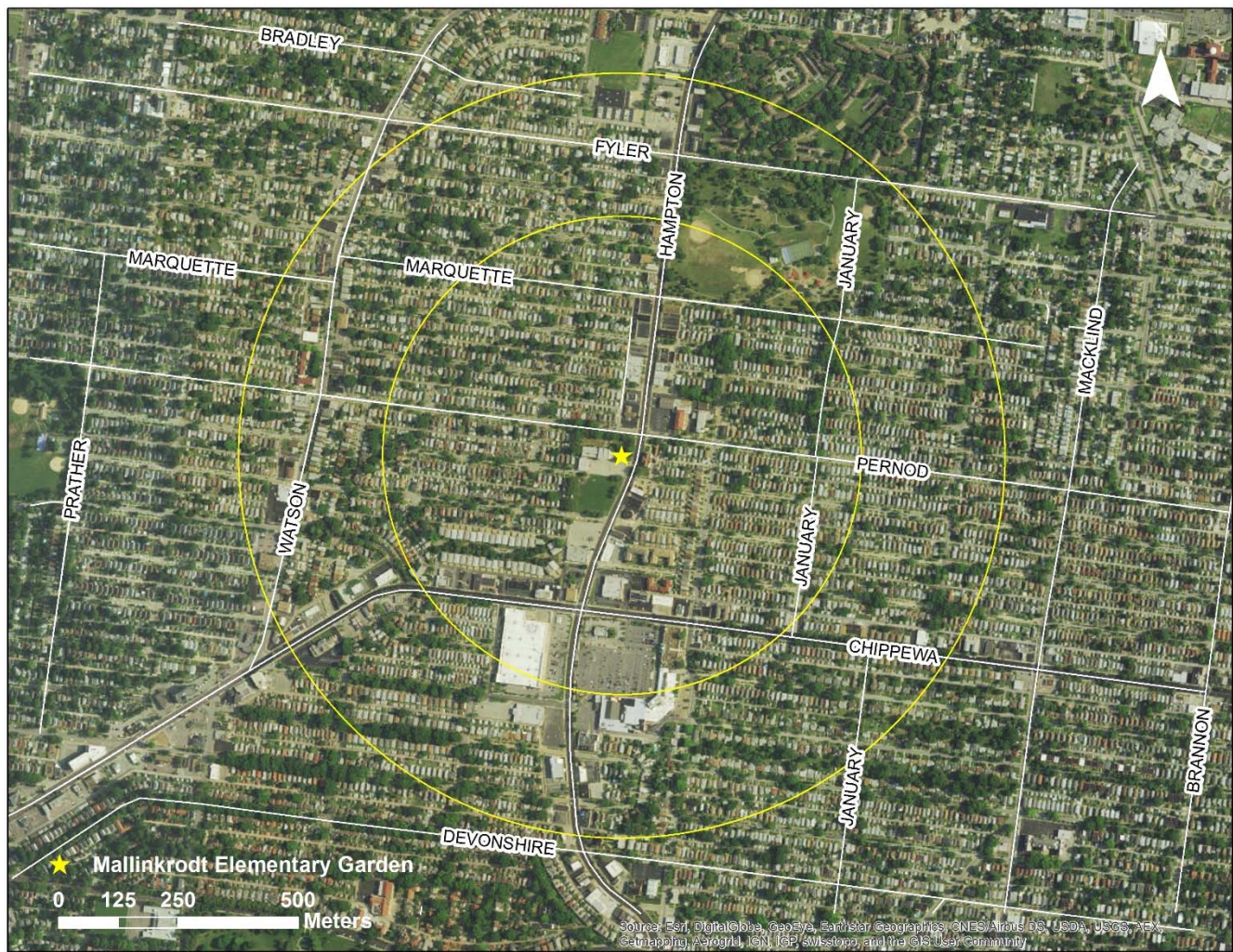
1. Sign up on our mailing list to be informed about workshop dates and project news, visit:

<http://www.SustainabilityScienceLab.org/Bees.html>

2. Recruit your neighbors and businesses

3. Send us pictures of pollinator-friendly properties; before and after pictures your yard; bee condos

Figure 2. Target community Ward 23 with city-wide lowest number of bee species in the Southern region of St. Louis city showing 500m and 800m buffers depicted in yellow.



Damon M. Hall, PhD, Saint Louis University, Center for Sustainability, email me at: dmhall@slu.edu. Let me know if you prefer to speak via phone, email me your number, and I'll call.

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