



Waleska Valle Is Prime Collector: SIUE STEM Center/Department of Environmental Sciences Partner with Municipalities For Greenhouse Gas Inventories

by Megan Wieser
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EDWARDSVILLE – The Southern Illinois University Edwardsville Center for STEM Research, Education and Outreach is contributing to sustainable projects in area cities by partnering to produce greenhouse gas inventories that offer valuable insights on the carbon dioxide (CO₂) created by city facilities.

The Department of Environmental Sciences and STEM Center partnered with the City of Granite City in 2020. Citing favorable reviews from staff and appointed officials, the City of Collinsville is now partnering with the STEM Center on a similar sustainability project.

“Community partnerships are at the core of the STEM Center’s activities,” said STEM Center Director Sharon Locke, PhD, professor in the Department of Environmental Sciences. “We are always looking for new avenues to connect SIUE STEM students with projects that help local cities and their residents. Students aren’t always able to see

how their classroom learning translates to the real world, and community-based projects that use science provide a different perspective and are exciting for students.”

SIUE graduate student Waleska Valle is the primary data collector, working as a sustainability intern with the City of Collinsville. Valle holds a bachelor’s in natural sciences education from the University of Sao Paulo in Brazil. She is slated to graduate from SIUE in summer 2021 with a master’s in environmental sciences with a focus on environmental education.

Valle began working remotely with the city in spring 2021, but with the loosening of Illinois’ COVID-19 restrictions, she’s now gaining in-person experience at the Collinsville City Hall that further benefits her professional development and enhances her collaboration with city leaders.

“The City of Collinsville subscribes to performance-based management to ensure residents and businesses are receiving the best possible services from taxpayer dollars,” explained Collinsville Deputy City Manager Derek Jackson. “All departments are responsible for tracking key performance indicators (KPIs) on a monthly basis and establishing annual targets. The Greenhouse Gas Inventory will serve as a city-wide KPI by providing a snapshot of how much CO2 is being created from city facilities.”

According to Jackson, baseline data from the inventory will help the city plan for and quantify sustainable projects, such as retrofitting a building with solar arrays, investing in a green municipal fleet comprised of electric vehicles, and encouraging new developments to be energy efficient.

This work complements the city’s long-range plans as detailed in its Sustainability Plan, which was adopted in 2020. The plan serves as the city’s primary policy tool for advancing sustainable practices within the city operationally and as a community.

“As Deputy City Manager,” Jackson said, “one of my roles is to be the staff liaison to the Cool Cities Committee. That committee is an advisory group of residents who assist the city by providing ideas and making recommendations in order to make the city’s operations more energy efficient. In addition, the committee coordinates within the community to encourage residents and businesses to consider sustainable alternatives that benefit the environment.”

Along with working on the Greenhouse Gas Inventory, Valle has been involved in additional sustainability planning, including the possibility of installing more solar panels in the city.

“The hands-on work experience I am receiving as a sustainability intern cannot be obtained in a classroom setting, making this a valuable opportunity,” she shared. “I am gaining professional work experience in a structured environment in which I can communicate with other employees. I have also been learning about the government’s critical role in sustainability.”

With enthusiasm for this important project, Jackson underscored the city’s great success with SIUE internship programs.

The Southern Illinois University Edwardsville Center for STEM Research, Education and Outreach comprises an independent group of researchers and educators, innovating ways to engage students and the public in science, technology, engineering and math (STEM). Within the SIUE Graduate School, the Center brings together research faculty, graduate students and practitioners to conduct education research. The Center contributes educational expertise to SIUE undergraduate classes and provides professional development for K-12 teachers. The Center boasts a significant library of equipment and resources, which are available for loan at no cost to campus and regional instructors. For more information, visit <https://www.siue.edu/stem/> or contact STEM Center Director Sharon Locke at (618) 650-3065 or stemcenter@siue.edu.