Helping trees thrive

HCC, Smith College begin urban forest study

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Armed with clipboards and measuring tape, data sheets and pencils, students Barbara Ann Santiago, Hailey Prive, Courtney Matroni and Veronica Kozak began collecting data on trees at the intersection of Hampden and Walnut streets.

They were among 28 students from Holyoke Community College and Smith College investigating the health outcomes of trees in 94 locations around Holyoke. Their initial measurements and observations will form the first pieces of information for a long-term urban forestry research project.

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Holyoke Community College students measure diameter at breast height, or DBH, of a tree at the intersection of Hampden and Walnut Streets in Holyoke Friday afternoon. (HOANG 'LEON' NGUYEN / THE REPUBLICAN)

Holyoke Community College students Veronica Kozak and Barbara Ann Santiago measure width and length of a tree at the intersection of Lyman and Walnut Streets in Holyoke on Friday. (HOANG 'LEON' NGUYEN / THE REPUBLICAN)

Trees

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The study — part of a collaboration between Smith, HCC, and the Holyoke Department of Conservation and Sustainability — will help organizers to better understand tree health and help them make informed decisions around selecting tree species and deciding where to plant them, said Jess Gersony, professor of biology at Smith College.

For about a year, Gersony and Sage Franetovich, professor of biology at Holyoke Community College, have been having conversations on how to support the work of Yoni Glogower, director of the Holyoke Office of Conservation and Sustainability, and the city's effort to increase its number of trees through its Urban Forest Equity project.

The trees that are the subject of the study were planted around the city of Holyoke with $120,000 in grant funding from the Greening the Gateway Cities Program, said Glogower.

Last year, the city received grant funding to plan for the creation and restoration of tree pits — locations where trees are planted — before the Department of Public Works planted new trees.

The funding focused on creating new tree pits in areas where there was scarce canopy cover and lots of impervious surfaces.

Partnering with HCC and Smith College for this long-term study will better inform the discussion around urban forestry, prioritize community engagement and foster student collaboration in a meaningful way, Glogower said.

Since last year, Gersony's and Franetovich's students have done research labs diving deep into topics such as tree traits and volunteered to participate in an urban tree inventory for the city.

Above, Holyoke Community College students study the long-term urban forest at the intersection of Hampden and Walnut Streets in Holyoke yesterday. At left, HCC student Hailey Prive measures the diameter of a tree at the intersection of Lyman and Walnut Streets in Holyoke.
(HOANG 'LEON' NGUYEN / THE REPUBLICAN)

Before collecting the data, yesterday's group of HCC students had to prepare with labs and lectures. In addition, students read the vision and mission of the city's urban forest equity plan, Matroni said.

Students said they were curious to find out what tree species were planted, what animal species were invasive, learning how to identify local plants and how trees were developing in the urban ecosystem one year after they were planted, they said.

Students measured the trees' diameter at breast height (4.5 feet above the ground), the length and width of the pits. While HCC students believed the trees were planted in good faith, looking at the initial data yesterday, they were not sure the most sustainable approach was taken when considering the placement of tree pits relative to the tree's health.

The idea to plant trees in urban areas is great, but the execution may have to be reconsidered, Kozak said.

According to Santiago, data collected revealed some tree species were smaller than others.

The spots where the trees are planted also known as pits, appeared small, leading Santiago to believe the trees may not grow to full maturity.

"The trees are confined in small places, and they are also abutting streets, so it is not as easy to establish roots," Santiago said. "We can see how some of the trees grow straight up instead of growing out and branching out."

Understanding tree health is just not important for the mission of sustaining more canopy cover but it is also important to understand the conditions that help trees thrive to full maturity, Santiago said.

Additionally, students said collecting data on trees that have died is useful to the urban forestry study because dead trees can become ecosystems and habitats for other species and plants.

This is going to be a 10- to 15-year-long study, which could lead to a scholarly paper open to the community, Gersony told The Republican.