

## Avon-on-the-Lake-Garden-Club

The Avon-on-the-Lake Garden Club has been awarded a grant from Smithsonian/Harvard to install and monitor ground ozone in an "Ozone Garden" at the Avon Lake Public Library. Students from the Environmental Classes at the High School are monitoring the effects to help the National Center for Atmospheric Research to monitor air quality. This is the only ozone garden on the shores of Lake Erie and the only one in Ohio. It is a member of the International Ozone Garden Network. NASA is involved with interpreting the data regarding air quality and its effects on plants.

Although ozone in the stratosphere is beneficial because it shields the Earth from harmful levels of ultraviolet radiation, ozone created near the ground from various natural and human sources is harmful, according to NASA. Ozone gardens can help monitor ground-level ozone levels using specific types of plants that respond to high concentrations of the gas.

The species used in the project include coneflower, milkweed & bush beans. Planted in side-by-side raised beds, it was clear to see the more sensitive plants had not grown as well as their counterparts. In fact, Jennifer Fenderbosch (club member and one who spearheaded this project) said the ordinary seeds grew into plants that "flourished" while the more ozone-sensitive seed-produced plants showed signs like spotting on their leaves.

Students observe and record updates to stippling on the plants, then send that data to NCAR. A satellite planned to be launched by NASA next year will be equipped with a "Tropospheric Emissions: Monitoring of Pollution" instrument that will conduct tests related to pollution, and data gathered at the Avon Lake garden will be compared with measurements from the instrument.

The project was aided by a \$2,000 grant from Harvard and the Smithsonian Institution, and completed in collaboration among the Avon-On-the-Lake Garden Club, multiple city departments including the Digital Media and Public Works Departments, and the high school's environmental classes.

The garden dedication was held on the Library grounds on Thursday, October 14, 2021

An Informational Kiosk installed in the Children's Department of the library is there to help you understand the Ozone garden and you too can try it out and feel like an actual Air Quality Scientist.