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There is a growing field of 'citizen scientists', non-scientists engaged in specific issues who collect or analyze data to contribute to scientific research or advocate for environmental or public health improvements. Specific aims of this study included increase citizen engagement in accessing, collecting, and communicating air quality data, thus providing tools to better inform communities on air quality issues and increased data collection in communities that can offer additional spatial and temporal data on pollution levels beyond existing New York City Community Air Survey (NYCCAS) program and regulatory methods in the New York City. It was explored the feasibility of using stationary low-cost monitoring networks for spatial and temporal estimation of ambient fine particulate concentrations (PM2.5) in an environmental justice community in New York City – El Puente, in Brooklyn a borough which is characterized by a high rate of asthma and cardio-respiratory issues due to the presence of high levels of particulate matter in the atmosphere. The study area is located close to Brooklyn-Queens Expressway and Williamsburg Bridge. The data collection started in March 2019 and lasted until November 2019. Based on the R-squared value a strong agreement was observed between FEM and AirBeam2 low-cost monitors. As a part of citizen science, the act of monitoring pollution by citizens themselves facilitated learning and increasing their awareness of environmental issues by changing the public attitude towards science and the environment. Through this work, citizens had the opportunity to have access to informational tools that helped them understand the distribution of health outcomes as a result of air pollution, identify areas with highest PM2.5 concentration and avoid harmful exposures to their bodies. Detailed data analysis with fine-scale monitoring helped create a rich dataset useful for addressing public health uncertainties.