

CITY OF KINGSTON

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Steven T. Noble
Mayor

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Kingston Air Quality Initiative Reports Initial Findings

KINGSTON, NY – Mayor Steven T. Noble, in partnership with Center for the Study of Land, Air, and Water at Bard College, is pleased to announce the initial findings of the Kingston Air Quality Initiative (KAQI) after its first year of research and data collection.

KAQI began in January 2020 as a partnership between Bard’s Community Science Lab and the City of Kingston Conservation Advisory Council’s Air Quality Subcommittee to conduct a first-ever Kingston-centered air quality study. Since then, Kingston residents and Bard College students, staff, and faculty have conducted air quality monitoring in both indoor and outdoor environments.

KAQI’s monitoring efforts this year focused on a regional assessment of air pollution from fine particulate matter (PM_{2.5}), as measured from the roof of the Andy Murphy Neighborhood Center on Broadway in Kingston. PM_{2.5} is made up of microscopic particles that are the products of burning fuel, and is released into the air through exhausts from oil burners, gas burners, automobiles, cooking, grilling, and both indoor and outdoor wood burning. PM_{2.5} particles are so tiny, they stay suspended in the air for long periods of time, allowing them to travel long distances before depositing. When these particles are inhaled, they can enter the bloodstream through the lungs, creating or exacerbating health issues. Recent evidence shows that even very small increases in exposure to PM_{2.5} can lead to higher death rates in people who have contracted COVID-19.

After a full year of monitoring, KAQI found that, while levels of PM_{2.5} measured at the Andy Murphy Neighborhood Center do vary, levels rarely reached dangerous thresholds as regulated by the EPA. Occasional spikes in daily averages do occur, and potential sources include burning fuel for heating during cold winter months. Only one date, in February 2020, surpassed the EPA’s 24-hour public health threshold (35 $\mu\text{g}/\text{m}^3$). While tracking PM_{2.5}, the KAQI monitor was also able to track Kingston-wide events like fireworks on the Fourth of July, the air-cleansing action of rain, and the real-time decreases in air quality associated with temperature inversions in the Hudson Valley. You can see these findings and more detail as illustrated by graphs and visuals at the city website: <https://kingston-ny.gov/airquality>.

The recorded pollution levels measured from the Andy Murphy Neighborhood Center’s roof were low, however, this is not necessarily the case for air quality experienced at street level, or in different neighborhoods or homes across Kingston. To get a better understanding of neighborhood and individual-level exposures to PM_{2.5}, the KAQI’s next step will be to establish more air quality stations and to monitor inside and outside homes.

“The initial findings of local air quality here in Kingston have been eye-opening,” said Mayor Noble. “The particulates that the KAQI is monitoring are extremely harmful and we are relieved to see that our community is not experiencing a high rate of these particulates in our air. These monitoring efforts are one piece of the City of Kingston’s ongoing mission to assure the quality of our air, and the protection of open spaces.”

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“KAQI is an important model for ways that academic institutions can contribute concretely to the communities who surround and support them,” said Eli Dueker, Director of Bard’s Center for the Study of Land, Air, and Water. “We are excited to engage in the next stage of this project, which is to ensure that all Kingstonians, regardless of what neighborhood they live in, play in, or work in, have access to the same air quality we’ve measured on the roof of the Andy Murphy Building. This is not just key to protecting the health of all Kingston residents, but also to doing our part in protecting the precious resource of clean air for all people and communities downwind from us. It is strange, but air is the fluid we physically interact with most as humans, but somehow seem to think the least about – the quality of our air is fundamentally tied to our health and sense of well-being.”

“This Kingston Air Quality Initiative monitoring project is such an important step that Kingston is taking toward assuring that its residents will breathe clean air into the future. This project responds to the need for both regional and neighborhood monitoring so that all residents’ air quality is taken into account. That the initiative focuses on PM 2.5 is especially important,” said Judith Enck, Former EPA Regional Administrator.

Ulster County Commissioner of the Department of Health and Mental Health Dr. Carol Smith said, “I applaud the critical work of the Conservation Advisory Council Wood Burning/Air Quality Sub-Committee and Bard College to strategically examine the air quality in the City of Kingston and help bring about awareness that leads to policy, systems, and environmental health improvements for residents.”

Lynn Johnson, member of the City of Kingston Conservation Advisory Council’s Air Quality Subcommittee said, “The work of the Conservation Advisory Council Air Quality Subcommittee is to ensure that all Kingston residents have access to clean air. This is especially important as Kingston is experiencing rapid development. We want to help people know that there may be actions they can take in their own personal lives that can have positive effects on our air quality here. To keep pollution levels down, for example, moving away from burning wood can be a huge step. Being mindful of not idling your vehicle is another way to positively affect our air quality. All together, we can make Kingston a healthier place for all residents--in all neighborhoods.”

For more information or ways to get involved, please contact: CAC@kingston-ny.gov or visit <https://kingston-ny.gov/airquality>.

Additional resources:

<https://www.lung.org/clean-air/outdoors/what-makes-air-unhealthy/particle-pollution#whois>

<https://www.nytimes.com/2020/04/07/climate/air-pollution-coronavirus-covid.html>

<https://www.frontiersin.org/articles/10.3389/fpubh.2020.580057/full>