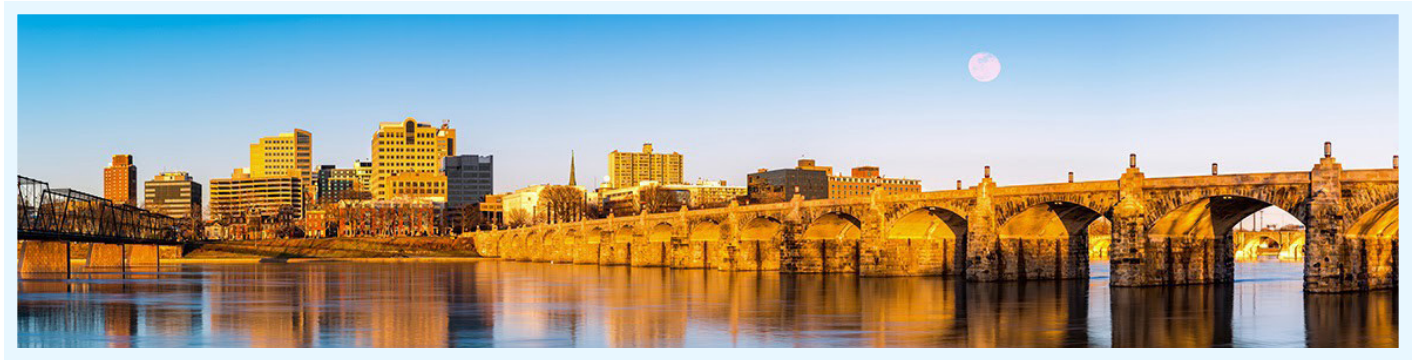# Biobot Community Success Story:
The City of Harrisburg, Pennsylvania

Analytics That Inform and Empower

Before the COVID-19 pandemic hit Pennsylvania, the state capital normally swelled with commuters during the day. Once COVID-19 hit and remote work took over, the local economy was devastated due to the loss of its usual customer base.

Mayor Eric Papenfuse knew that he had to respond to the dual health and economic crises in a comprehensive and informed way. In addition to instituting assistance and relief programs, he formed a partnership between the city and Biobot Analytics to analyze wastewater for indicators of COVID-19.

This was especially helpful at the start of the pandemic when testing was only just ramping up, data showing the severity of the spread of COVID-19 were limited, and officials were still working through how exactly to interpret it.

"How can we measure the local COVID-19 spread when there are those who don't have symptoms, aren't seeking help, or haven't been tested? We needed a way to know the prevalence of the virus in our community to determine the level of restrictions necessary for public safety, " said Mayor Papenfuse. "All of that we were able to successfully do with Biobot Analytics."

Every Friday, Mayor Papenfuse holds a weekly Facebook Live where he updates the community on the status of COVID-19 in Harrisburg. At the start of each livestream, he kicks things off with the latest Biobot Analytics data.

"One of the things we knew we needed to do early on was communicate in new ways to the public — get the information out. Presenting the scientific data has been a tremendous way of helping people understand where we are in terms of the virus in our community. It allowed us to tell a better informed narrative in an easy-to-understand format," said Mayor Papenfuse.

"I eagerly await for the data to come each week. I open the report immediately and feel either great stress or breathe a sigh of relief."

MAYOR ERIC PAPENFUSE,
CITY OF HARRISBURG

Back to School with Biobot Analytics

Harrisburg officials use Biobot Analytics' data to help determine the level of spread of COVID-19, which helps them make decisions about loosening and tightening restrictions on activities in their community. One of the areas that benefited most from the data was the city's school district.

At the start of the pandemic, Harrisburg schools had to go entirely online in a city where internet access is not guaranteed, and where not all students have the tools they need to learn. Given these challenges, a return to in-class learning is desirable, but only when conditions make it safe to do so. By monitoring virus concentrations in Biobot Analytics' data over time, Harrisburg School District leaders are able to evaluate whether, and when, to return to a hybrid schedule. As officials see virus concentrations continue to decline, a return to hybrid and in-class learning become more likely. Similarly, if virus concentrations unexpectedly increase, remote learning may be needed to help ensure the safety of students and of the community.

The informative reports, accompanying data interpretation and customer support that Harrisburg receives from Biobot Analytics have not just helped city officials like Mayor Papenfuse to understand what is going on within the community — the data also helps decision makers understand how Harrisburg's COVID-19 data compares to others in the region and at state and national levels.

Creative Community Solutions

In Pennsylvania, public health information is typically collected at the county level. Biobot Analytics data, which can be collected at the city level, has been more granular geographically than other information sources available previously. This additional granularity has helped inform Mayor Papenfuse's decisions about how to respond to COVID-19 in Harrisburg.

> "We're the hub of a regional wastewater system, which serves Harrisburg and the surrounding municipalities. **Working with Biobot seemed like a great way to measure data that would be very specifically reflective of our entire community.**"
>
> **MAYOR ERIC PAPENFUSE, CITY OF HARRISBURG**

In the latest decline in COVID-19 numbers that Harrisburg is experiencing, the mayor and other city officials are feeling encouraged. The Biobot Analytics data has validated decisions made by Harrisburg officials and is informing decisions going forward.

For example, when they saw spikes in the wastewater data at the end of 2020, the data affirmed that prior calls for limiting family gatherings were warranted.

The data has also created opportunities to implement creative solutions that help restore a sense of community in Harrisburg. Typically, the city is home to frequent festivals and community events, so Mayor Papenfuse and city staff started to plan drive-through parades and socially distanced community events. Biobot Analytics' data helped inform the decision to host these community experiences in a socially-distanced way, and the data collected after the events are being used to ensure that these modified events are effective in helping reduce the spread of COVID-19.

As the economy starts to open up more, Biobot Analytics' metrics are giving Harrisburg officials the confidence that the community can get closer to normal without exacerbating the ongoing health crisis.

"I would recommend Biobot Analytics for any municipality that has a wastewater system," said Mayor Papenfuse.