

Pennsylvania House Republican Policy Committee

Hearing to Discuss York County's Water Quality Monitoring Program

October 9, 2025

Written Testimony of York County Planning Commission Director Wade Gobrecht

Good morning.

Thank you, Chairman Rowe and committee members for the invitation to testify today regarding York County's innovative Water Quality Monitoring Program.

Prior to 2020, Counties in Pennsylvania received the Phase 3 WIP Snapshot that showed the estimated loads for Sediment, Nitrogen and Phosphorus by County. These numbers were based off the CAST model that was used to estimate loads for each County contributing to the Chesapeake Bay Watershed. Each of the Counties were then responsible for reducing the pollutant loads to a target number by the year 2025. Based on local knowledge, we thought these numbers did not accurately represent what was happening in York County waterways. The County, along with the Planning Commission and Conservation District, decided to work with USGS and make an investment in a real-time water quality monitoring system. In 2020 we started collecting the real—time data.

When we started the Water Quality Monitoring Program, our goal was to develop a system that gave us actual, verifiable data to inform our

efforts to help reduce the level of pollutants in York County waterways. We worked with USGS to retrofit 3 existing monitoring stations and establish 3 new monitoring stations, capturing water going into the Susquehanna River from 6 major watersheds that cover about 80% of York County. Most of the watersheds are contained within York County, but I would like to note that an additional 268 square miles of the Conewago watershed comes from Adams County, and is also contributing to the one monitoring station.

Each of the 6 Water Quality Monitoring Stations that have been established in the County's waterways takes measurements at 15-minute intervals. In other words, each station collects 96 data points every day, 365 days/year.

We now have four full years of validated data showing hourly, daily, and weekly reporting of key pollutants that measure the health of county waterways.

Capturing more data points, along with more accurate data, allows everyone to get a better handle on the actual stream conditions which ultimately allows us to better manage our watersheds.

Here are a few examples of what we are seeing with the 4 years of data that have been collected.

In 2019, the DEP, based on the CAST model, reported that York County waterways had a current load of 957 million pounds of sediment,

while York County's real-time data through the USGS show a four-year average of approximately 106 million pounds of sediment – meaning the modeled data reported sediment levels over 900 percent greater than the actual data through the monitoring stations.

The differences in the nitrogen data were also significant, with the computer-generated data showing nearly 12 million pounds of nitrogen in York County waterways while the real-time data showed a four-year average of just 7.2 million pounds – or 60 percent of the levels originally assigned to York County.

Phosphorus levels also were less under the water quality monitoring done by the county and USGS, with the four-year average being (370k) 370,064 pounds of phosphorus compared with the modeled data showing (447k) 446,995 pounds – a roughly 17 percent difference.

Another benefit of the Monitoring Stations is that it allows us to analyze data by watershed, not just at the County level. For example, after reviewing the data, we can tell that the Fishing Creek watershed at Goldsboro contributed 32% more pounds of sediment per square mile than the other watersheds. Also, the Muddy Creek watershed has the highest loads of Nitrogen, but the lowest loads of Phosphorus per square mile, compared to the other watersheds in the County.

Why is this data collection important?

- For understanding the timing and magnitude of downstream transport of sediment, nitrogen and phosphorus out of the monitored watersheds
- Understanding the long-term trends in sediments and nutrients
- For evaluating effects of best management practices (BMP) and how effectively they reduce each of the named main pollutants.

The real-time water quality monitoring data can be viewed by visiting www.YorkCountyWQM.org. This will take you to a dashboard that was developed by the USGS, in collaboration with York County, and allows anyone to access and easily understand the trends, while allowing more technical users the ability to take a deeper dive into the data.

It's important to note that we are only at the halfway point of this work. We are in Year 5 of a 10-year program, and we are actively working on strategies to improve the water quality in York County.

A few things we hope to do with this information:

- Get a more accurate picture of what is happening in our waterways
- Use our additional synoptic monitoring station to work up through a watershed to pinpoint the most impaired tributaries and be more strategic about mitigation efforts.

- Be a pilot program to show the benefits of this technology and how it can better target resources and create more beneficial projects
- Work with state and federal agencies to prove how this technology can be expanded and replicated throughout the region to provide more accurate data.

Thank you