# Hydraulic Modeling from Asset Management Program ~

Your hydraulic model is only as good as the data you put into it. Higher accuracy data has become cheaper to obtain as GPS technology has progressed over the last few years. The Town of Danville hired Banning Engineering to field locate their entire sanitary sewer system in 2018 and their water system in late 2018/early 2019. I had the unique opportunity of utilizing a high accuracy GPS head the entire summer of 2018 locating and collecting inverts for nearly 1,300 manholes, while one of my counterparts collected the water system.

In 2019, Banning Engineering performed a planning study for the Town of Danville. Included in this planning study was a hydraulic model for both the water and sanitary sewer systems. With the survey grade accuracy of the information collected in the asset management program, we were able to model both existing systems at a high confidence level. In conjunction with I&I and pressure monitoring studies we were able to model the problematic areas of both systems.

Not only does a hydraulic model enable us to better see what is going on now, we can see how future developments will impact the system. We can take typical build outs for a parcel size and add the respective flow into the model to determine what needs to be upgraded. This could mean upsizing a 12-inch line to an 18-inch line or upgrading/replacing a lift station. An accurate hydraulic model is a great tool to bring to the table with a perspective developer.
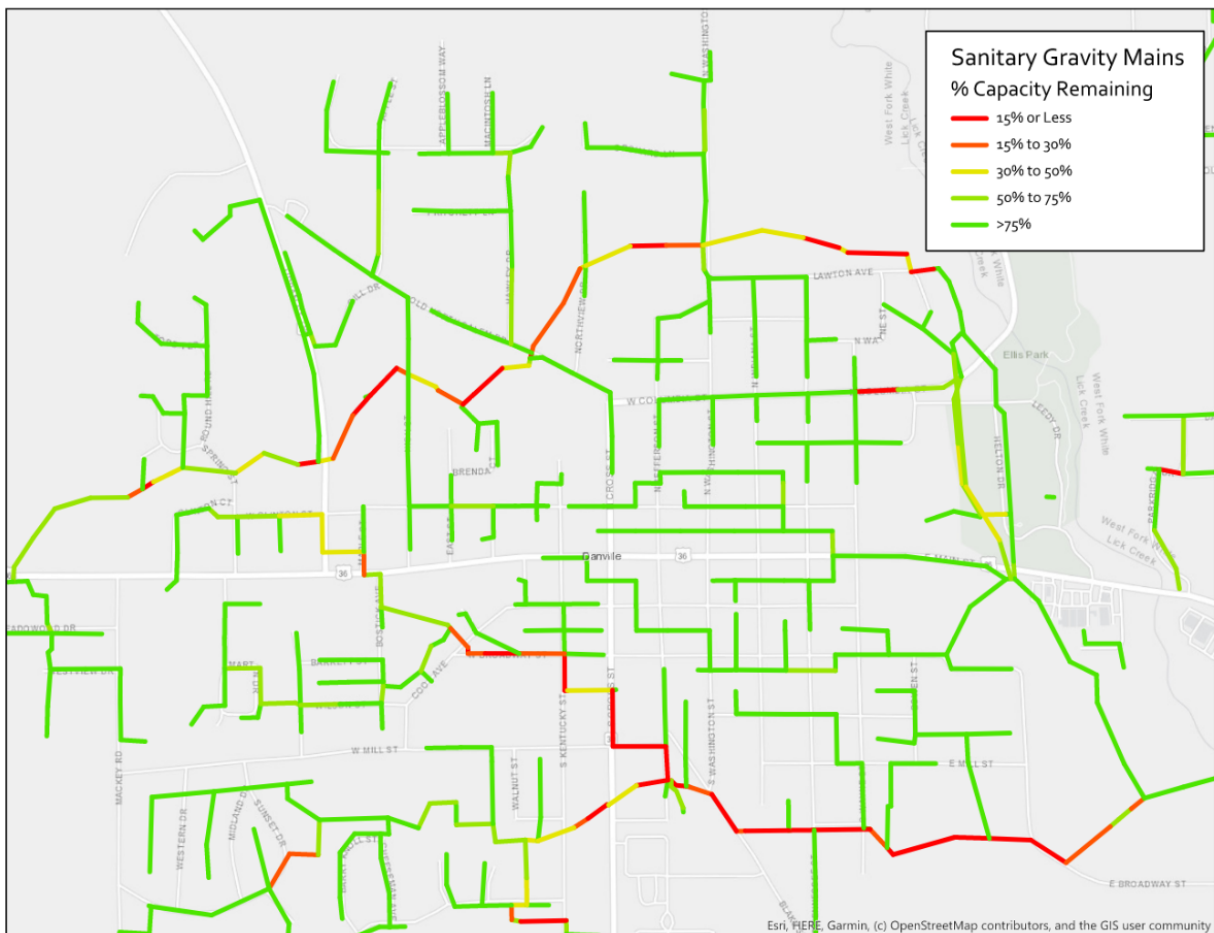
As an engineer it is a very rewarding experience developing the tools that other people can use to make their job a little easier. Seeing how excited the Collection System Manager was with the model results was definitely a rewarding moment. If you already have an asset management program, we can help develop a hydraulic model to expand your utility toolbox. If you don't have an asset management program, we can help get you started with that too. Feel free to contact me at jselig@banning-eng.com.

~ Josh Selig, PE