

Upfront investment in sewer flow monitoring defers \$1.5M CAPEX! Webinar Q & A

Q: Are the sewer network monitoring points now permanent or are you still just using data loggers?

A: The monitors were temporary and have not been installed as permanent. Ideally some permanent monitors (or improvement of SCADA) would be of benefit at key locations in these networks.

Q: For the townships concerned, what was the typical telemetry deployment rate in terms of permanent monitoring sites per thousand population? Did you use the existing long-term monitoring sites, or did the project include adding permanent sites to get sufficient network coverage?

A: For this project, we only deployed temporary flow monitors and rain gauges. There are some existing SCADA data at key pump stations. However, the quality, timestep and quantity was not suitable for model validation and hence we went down the path of investing in a temporary flow monitoring program.

So, we only calibrated the model to temporary flow monitors, deployed to capture between 600 and 800 properties per monitor.

Q: Have you run your 1 in 5 year ARI performance storm modelling incorporating the latest Australian Rainfall runoff 2016 data?

A: Yes, we used the latest ARR(2019) storm events, which are now reported in AEP rather than ARI, with the 18.1%AEP storm event modelled being the new '1 in 5' industry standard.

We also ran the model with the old ARR(1987) data as a comparison to compare model results.

Q: Were there any changes to the Bairnesdale master planning based on the climate change analysis?

A: No, however several onsite investigations are required prior to EGW confirming the preferred option, and therefore, there is further opportunity to consider the impact on sizing, once this is selected.

Q: Do you any details on the flow monitoring (meters) you installed?

A: Mott MacDonald completed the data collection, using ADS Triton+ flow monitors with a Combo sensor, which are HVQ flow monitors.

Q: Was the reason for the discrepancy between the older SCADA data and the flow monitoring survey identified?

A: The issue with the SCADA data, was related to quality (inconsistent recordings), timestep (large timesteps, and so instantaneous changes were not captured) and quantity (there were periods off data drop outs). The SCADA was also only located a few pump stations, and didn't always capture flow, just run times and wet well depths. There are also issues with how the wet well depths are converted into a volume, as the wet wells are not all uniform shape. Lastly, the spatial distribution of SCADA points across the network did not provide full network coverage.

So, in summary the data wasn't deemed to not be suitable for model calibration. EGW are also looking to improve these recordings, to make them more useful in future.