

STORMWATER POLLUTANT MONITORING – HOW TO DO IT AND HOW TO INTERPRET IT

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ABSTRACT

Rainfall is one of the most variable and unpredictable events on the planet. Likewise, stormwater pollution is highly variable. The pollutants entrained in stormwater vary from site to site, storm to storm and even throughout a storm event.

The RMA is an effects-based legislation. The stormwater discharge permit holder is often required to monitor the quality of their discharge to demonstrate that effects are mitigated. However, because of the variable nature of stormwater pollution, how you monitor can largely influence the results achieved.

Consent conditions are often written with requirements to monitor. However, no guidance on how to monitor is included in these conditions, which often give reference to limits and targets that may not be inappropriate for the location or contaminant of concern.

It is also important to realise that stormwater monitoring is expensive. A lot of time and money may be spent in gaining meaningless data.

This paper will:

- Summarise national and international stormwater monitoring guidance for stormwater discharges;
- Discuss how to establish an appropriate monitoring plan for a site, receiving environment and identification of contaminants of concern;
- Cover how to interpret the data and include recommendations as to the next steps that should be taken when data suggests that there may be a problem; and
- Consider the cost of monitoring and suggestions as to reducing costs while still providing meaningful data.

KEYWORDS

Industrial Stormwater, Monitoring, Sampling, Contaminant Characterisation, ANZECC, Case Study, Pollution

PRESENTER PROFILE

Troy Brockbank (Te Rarawa, Ngāti Hine, Ngāpuhi) is a civil engineer and the Design Manager with Stormwater360 New Zealand. He has over 10 years professional experience in the stormwater industry across engineering consultancies, civil contractors & suppliers. He has developed specialist skills in investigation, design, manufacture, construction, and project management of stormwater management devices for public and private developments.

He has developed a real passion and ability for water sensitive design, in particular solutions to protect and restore the quality of waterways and the environment.

He considers himself an intermediary, having the advantage of seeing aspects from both an engineering and a Te Ao Māori world view. He is passionate about the widespread adoption of a holistic culturally enhanced water sensitive design approach and will continue working towards raising awareness as a leader in this field both nationally and internationally.