A retrospective perspective of effective Stormwater Harvesting – looking back to move forward

Mr Rod Wiese[1]

[1]*Storm Consulting, Richmond, Australia*

The concept of harvesting and storing urban stormwater runoff for the purposes of offsetting potable water demand has been implemented for some years now. It is no longer a new concept, although many councils are yet to implement such a system and it is certainly not in mainstream design by most engineering consultants. These systems require a significant amount of investment to implement with the expected return being providing a sustainable source of water.

There is an increasing amount of systems which are failing and not providing the expected return on investment. Storm Consulting has been engaged to review many stormwater harvesting systems post construction. The owners/operators instigate these assessments for various reasons from "we just aren't getting enough water" or "it is giving us a lot of trouble" to "we built it a while ago but haven't turned it on yet" or ultimately "it just does not work properly".

We draw from this experience as well as designing and constructing dozens of other systems to identify the typical issues that are hindering effective operation.

Harvesting systems in the Melbourne metro area and Geelong were reviewed in detail and various common issues have emerged which hinder effective operation. These systems will be presented as well as some solutions that we have recommended or implemented, including changes in hydraulic configuration, treatments, specific components or controls.

The presentation will highlight common issues in planning, design, construction and maintenance of stormwater harvesting systems. It will also be beneficial for those who are looking to implement new stormwater harvesting systems as critical components are often removed in the early stages of a stormwater harvesting project under the guise of value management which can have significant impacts on the future performance of the system.