



## Stormwater Harvesting Evolution – these systems are not set and forget.

Mr Omid Sayar<sup>1</sup>, Mr David Manson<sup>2</sup>

<sup>1</sup>*Optimal Stormwater, Chatswood, Australia*, <sup>2</sup>*North Sydney Council, North Sydney, Australia*

### Abstract Overview:

North Sydney Council has a target to reduce potable water consumption by 50% from its usage in 2001 to its usage in 2020. In accordance with this, a significant regional scheme was designed and constructed in 2007, to feed 6 Council parks as well as Cammeray Golf Course. A decade on, Council was noting an increase in problems and a decrease in water productivity, so they engaged Optimal Stormwater to conduct a comprehensive asset management and optimization project to improve the performance, control, water quality and supply volume of the largest stormwater harvesting system within their local government area.

The evolution in our industry is happening fastest in the field of Stormwater Harvesting. In many cases, schemes have been built, but without adequate operational knowledge, information and support, many are failing to meet expectations. North Sydney Council recognized the issue and have diligently and systematically worked through these to achieve massive water gains, for a fraction of the original investment. They have now embarked on a process of optimization and better control, to further enhance the already remarkable results.

### Objectives:

This paper and presentation will educate designers, Councils, and operators in how to better understand and operate their stormwater harvesting schemes. It is a practical piece of information with real examples of the process, works required, and outcomes achieved. It will also provide costing information on the upgrades and optimization undertaken, to further assist managers of similar schemes.

### Method:

This paper details the process. It covers the background to the project and its regional significance. It provides information on the multiple areas/reasons that a scheme may not live up to expectations, with real project specific examples. It also provides a blueprint for Stormwater Harvesting Scheme auditing, and the subsequent actions that were required on this project.

### Results:

This paper and presentation covers the main steps/stages in this project, to produce a result where water quality is now meeting guideline requirements, and the productivity of the system is 500% higher.

### Conclusion:

Once a stormwater harvesting scheme is designed and constructed..... then the “fun part” starts. This paper and presentation will assist readers on their journey (project evolution) by identifying the pitfalls and problems they

can expect, and how one Sydney Council is finally getting the outcomes they've always wanted, and can now look at scheme expansion and even more sustainable water reuse into the future.