

Improving your Gross Pollutant Traps through Rectifications

- getting the biggest bang for your buck

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Abstract

Stormwater quality management over the last 20 years has sometimes been a case of install, set and forget. Stormwater quality treatment devices should not only be maintained but it's worth going back and looking at how they are performing and whether they could be improved. As our experience grows, and technology develops, many devices can be very cost effectively enhanced.

This paper will be using examples from Sutherland Shire Council, Hornsby Shire Council, Mosman Council, Wyong Shire Council, Woollahra Council, Marrickville Council, Canada Bay Council, Bankstown Council and Pittwater Council. This paper looks at examples where stormwater quality managers have decided to step in and improve existing gross pollution traps with rectifications that maximised their pollution capture performance with minimal capital costs resulting in multiple benefits to the economy, society and the environment.

The objectives of each project discussed in this paper were to improve existing gross pollution traps that were either non-performing, ineffective in stormwater quality outcomes or inefficient in their primary treatment objectives. A further outcome desired by all stakeholders was to make maintenance simpler, safer and if possible..... cheaper. In many cases, with some prudent/cheap investments, poorly chosen or poorly performing devices can be significantly enhanced.

By examining why gross pollutant trap and other primary treatments weren't working to their full potential, a variety of reasons emerged. This paper focuses on the technical and practical elements that all of the industry can learn from and apply to their own devices. By combining elements from other primary treatment devices, sound hydraulic principles and solutions that are working well, older and lesser performing solutions have the ability to be made dramatically more effective. A healthy dose of practicality is presented by the guys in the field that build, fix and enhance these devices.

Poor quality custom trash racks have been upgraded to high quality pollution control trash racks that are maintainable and accessible. Many proprietary devices have been also been modified to improve their performance, where they have been used inappropriately or their selection was based on inappropriate parameters. But all is not lost and most can be cost effectively improved.

We present a checklist of issues and items that should be considered when seeking to enhance the outcomes of your existing infrastructure and present some specific examples of upgrades to well-known devices.

There are important lessons for all stormwater quality managers in sizing, siting, designing, installing, operating and maintaining primary treatment infrastructure. Through undertaking a detailed analysis of your stormwater quality device/s and choosing to rectify gross pollutant traps, you can improve their performance, effectiveness and efficiency. As a consequence, better environmental outcomes can be

achieved and the lessons learned can be passed back to the planners, DA staff and others involved in stormwater design and approval process. This paper is designed to both educate and inspire the owners and maintenance managers to look at their existing infrastructure and improve it.











Optimal Stormwater provided the rectification design which involved enhancing the Humeceptor into a baffled screening system, which would then protect the pump and be much much easier to clean.

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