

Forward

Introduction

Human land-based activities generate contaminants. In fresh and saline receiving waters these contaminants can and do cause problems for ecological and human health. Stormwater runoff is a major transport mechanism of land-derived contaminants into aquatic receiving environments. Overseas and New Zealand specific information indicates that serious and widespread adverse effects can result from inputs of stormwater-borne contaminants into receiving waters. In addition, increased quantities of stormwater may impact on downstream flood levels and stream channel physical structure.

Stormwater management can help reduce these impacts. Stormwater management involves careful application of site design principles, construction practices, and maintenance operations to prevent sediment and other contaminants from entering surface water, groundwater, or our coastal environments.

Objective of the manual

The objective of this manual is to provide a commonly accepted design approach for stormwater management practices that will provide both water quantity and water quality benefits, thus benefiting the wider environmental issues we face. Individual development sites may at times present unique issues and the use of standardised design approaches may not be entirely appropriate but most sites will find that the approaches detailed in the manual will help meet Resource Management Act objectives.

Development of the manual

The original Technical Publication #10, “Stormwater Treatment Devices Design Guideline Manual” (TP 10) had been used since October 1992 in response to issues related to stormwater runoff quality. It has provided design guidance for a decade and that decade has seen a number of changes in programme philosophy and evolution in approach and design. In addition, with the advent of Technical Publication #108, “Guidelines for Stormwater Runoff Modelling in the Auckland Region” (TP 108), a revision to more align the manual with the hydrological approach was considered advantageous.

Key revisions

The design approach is more transparent from the context of design input (catchment area, permeability, slope, land use, etc.) generating practice sizing than was the original TP 10. The format and organisation of the manual attempts to make it more “user friendly”.

New manual components relate to outfall protection, landscaping and the approval process for innovative practices. The innovative practices chapter is seen as very important in light of new proprietary products that seem to increase in availability every day. Many of these products have value when correctly applied but it is important to have a rigorous testing regime to ensure that stated performance has been verified.

Technical material has been updated as our knowledge of impacts and methods of control has improved. We have updated the manual to include new information and standards that, we believe, are more effective. Design engineers, planners, landscape architects, resource managers, and government agencies who are involved with the design, regulation and maintenance of stormwater drainage will hopefully find the manual useful.

Tangata Whenua Statement

The Auckland Regional Council (ARC) has consulted with Tangata Whenua on the development of this Guidelines Manual but the opportunity for specific input was, to some degree, limited. This does not in any way diminish the positive contribution that Tangata Whenua can make in the implementation of this document.

Various iwi and hapu have developed or are developing policies and planning documents which contain provisions relating to water management issues. It is important to consider these policies and plans not just for their statutory importance but also for the value they add to a wider cultural understanding of environmental management issues.

Contact information

Questions and comments are welcomed verbally, or in writing, to anyone on the ARC stormwater/sediment team. Please feel free to contact the team at the following address.

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The environmental problems that an urban society creates are not going to “just go away”. It has taken 150 years for the problems we have created to manifest to their current level. We have to work together to arrest the rate of decline and ensure that the world we leave our children is not worse than the one we have inherited from our parents.

Please give a careful attention to the manual, understand the context for much of the document, and help us today to make the Auckland Region a better place tomorrow.