

# STORMWATER PLANNING AND REGULATION: AN OVERVIEW

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## 1. INTRODUCTION

A central element of the State Government's 3-year, \$60 million Urban Stormwater Program has been the requirement for local councils and other stormwater managers to prepare stormwater management plans for urban areas. Whilst several councils and authorities had, prior to this initiative, undertaken some form of stormwater planning, this was the first time that urban stormwater planning had occurred on a broad scale within a broad consistent framework across NSW.

### 1.1 The Section 12 Direction

The requirement for local councils to prepare stormwater management plans for urban areas was made under a legal Direction issued by the Environment Protection Authority (EPA) under Section 12 of the *Protection of the Environment Administration Act*, 1991. This Direction listed specific requirements relating to the plan preparation process (ie. community consultation, timeframe) and plan content (description of the environment, nomination of stormwater management objectives etc.).

Importantly, the Section 12 Direction required most plans within the Greater Metropolitan Region to be prepared on a catchment basis, in a cooperative process involving each of the significant urban stormwater managers within each catchment.

The decision to issue the Section 12 Direction, coupled with the provision of funds through the Stormwater Trust Grants Scheme, is indicative of both the Government's recognition of urban stormwater as a significant environmental issue, and the need for a joint approach to its management. To facilitate this process the Government endorsed the EPA's issue of legal notices to the Roads and Traffic Authority and the Sydney and Hunter Water Corporations to participate in the preparation and implementation of stormwater management plans.

A staged approach has been required in the preparation of stormwater management plans across NSW. Plans for catchments within the Greater Metropolitan Region were prepared within 15-18 months, whereas the larger regional and smaller rural councils were provided two and three years respectively to complete their plans. This staged approach recognised that most regional and rural councils do not necessarily possess the resources or expertise of many of their metropolitan counterparts.

## 2. IMPLEMENTATION OF STORMWATER MANAGEMENT PLANS

Currently local councils will be at various stages in finalising or implementing their stormwater management plans. The EPA considers the role of local councils in regulating the impacts of new development on the water environment as crucial. This is why the requirement for stormwater management plans to nominate clear stormwater objectives for new development was pursued with considerable intent. It is now important, as stormwater plans are completed, for these objectives to be carried forward into councils' planning instruments and development control processes, in order to improve stormwater outcomes resulting from urban development and redevelopment.

## 3. AN EVALUATION OF THE STORMWATER MANAGEMENT PLANNING PROCESS

### 2.1 Introduction

In March 2000 the Second Report of the Waterways Advisory Panel recognised the success of the Urban Stormwater Program. They recommended to Government that the Program be extended for a five-year period and that funding for the Program is enhanced from the current level of \$20 million per year to \$30 million per year. In response to this recommendation, the Government requested the Stormwater Trust to undertake an evaluation of the Urban Stormwater Program, effectively linking any decision about program extension to the findings of that evaluation.

The evaluation has sought to identify the achievements and shortcomings of each of the main three components of the Urban Stormwater Program (ie, the Stormwater Trust Grants Scheme, the Urban Stormwater Education Program and the Stormwater Management Planning process).

The remainder of this paper reports on the main findings of the evaluation of the stormwater management planning process. This evaluation was undertaken independently of the Stormwater Trust by Rebekah Brown and Roberta Ryan.

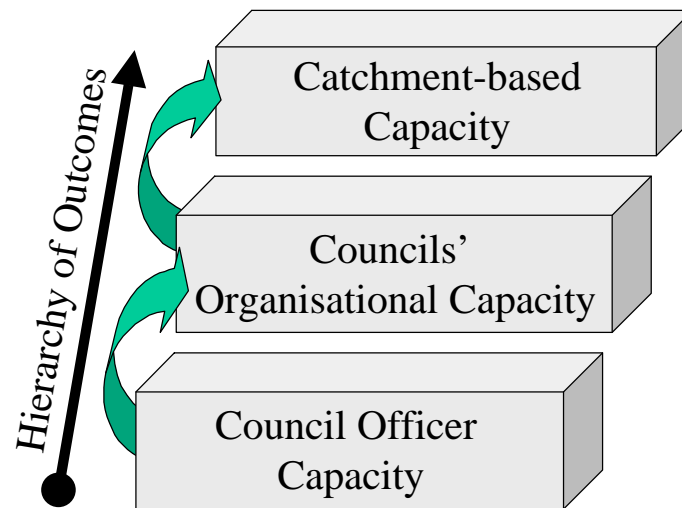
This independent evaluation was based on a series of interviews and questionnaires undertaken with a broad range of officers from metropolitan and regional councils, as well as State agency staff, consultants and community representatives that participated in the stormwater planning process. The respondents were assured anonymity whereby no individual would be identifiable in the reporting of the data.

## 2.2 Expected Outcomes of the Planning Process

The evaluators categorised the outcomes expected from the planning process into three capacity-building themes:

- building the capacity of council officers to manage stormwater effectively;
- building the organisational capacity of councils for effective urban stormwater management, in terms of expertise, ownership and implementation; and
- building catchment-based capacity and relationships among stormwater managers and stakeholders within the catchment for effective coordination, ownership and implementation of stormwater management.

**Figure 1. Hierarchy of expected program outcomes**



The hierarchy of expected program outcomes provides a useful framework for assessing the achievements and shortcomings of the stormwater planning process.

### 2.3 Building the Capacity of Council Officers to Manage Stormwater Effectively

This outcome relates to the development and improvement of council officers' knowledge of stormwater management, and their skills, commitment and ability in dealing with stormwater issues. This issue includes these officers' understanding of and expertise in 'at source' and preventative management strategies.

#### 2.3.1 Key Successes

The development of capacity for urban stormwater management among metropolitan councils was the most successfully achieved expected outcome. The enthusiasm and motivation demonstrated by officers who participated in the evaluation was a strong indicator of (and reason for) the success of the program. Two-thirds of officers interviewed strongly agreed their skills had improved as a result of the planning

process. A majority of metropolitan council officers, and about half the regional council officers strongly agreed that the Section 12 Direction was helpful to their work. Officers demonstrated a concern and keenness for the planning process, and for plan implementation to proceed for their council and catchment.

### 2.3.2 Key Issues and Shortcomings

Council officers expressed a clear need for information about the effectiveness of non-structural stormwater management techniques. Although many councils propose to employ these techniques, many officers placed little value on the potential effectiveness of these approaches, and frequently ‘guessed’ how to design and budget such strategies.

The engagement of the community in the stormwater planning process was broadly reported to be unsuccessful. Council staff with community-based skills, such as community services officers, were not involved in the planning process. Despite this disappointing outcome, the majority of officers interviewed reported their belief that community consultation and on-going engagement is an essential element of the planning process.

Many officers reported that there was still much to learn about ‘the science of urban stormwater quality management’, and about the principal causes and impacts of poor stormwater quality.

## 2.4 Building the Capacity of Council Organisations to Effectively Manage and Implement Urban Stormwater Strategies

The outcome relates to improving the organisational capabilities of councils in relation to stormwater management. This includes encouraging councils to review their ‘in-house’ activities and employ ‘at-source’ and preventative management strategies. This concern includes encouraging councils to use a ‘whole-of-council’ approach that raises the profile of stormwater and integrates the management of stormwater across council departments. An increased commitment to stormwater management, through the allocation of increased resources for the implementation of stormwater management plans, is also an important aspect of this category.

### 2.4.1 Key Successes

A majority of metropolitan council officers, and about half of the regional council officers, agreed that the profile of stormwater quality issues had improved within their councils because of the planning process. The increased awareness of urban stormwater issues within councils was identified as the second most significant overall achievement of the Urban Stormwater Program. A majority of metropolitan councils, and about half of the regional councils, reported that the stormwater management plans had been formally incorporated into council management plans.

Almost all of the council officers surveyed indicated that source control and education activities had been prioritised as management actions in their stormwater management plans. Many reported that the focus of Stage 2 and 3 Stormwater Trust grants influenced this change.

Approximately one-third of metropolitan council officers reported that councils had increased expenditure on stormwater management as a result of the planning process. About one-quarter of metropolitan council officers expressed an expectation that new positions would be created within their councils, with responsibilities for stormwater management.

#### 2.4.2 Key Issues and Shortcomings

The preparation of the stormwater management plans, like the current stormwater management activities of many councils, was dominated by the engineering and environmental science disciplines within local councils. The evaluation found that enhancement of source control and ‘co-ordination’ processes requires a shift to a more trans-disciplinary and ‘whole-of-council’ approach to stormwater management. The organisational ‘silo’ structure of many local councils was found not to be sympathetic to an integrated ‘whole-of-council’ approach to stormwater management. Incentives need to be provided to involve other disciplines and council departments in future planning processes.

The evaluation also found that organisational obstacles exist to the effective transfer of council officers’ (enhanced) stormwater management capacity into the remainder of council organisations. It was recommended that the design of future programs seek to enable more effective integration of urban stormwater management roles and responsibilities within both the vertical and horizontal structures of local government.

The resourcing available for the implementation of stormwater management plans is clearly a significant organisational issue. While many councils reported initiating the implementation of their plans, this was limited for some councils to projects funded by the Stormwater Trust or the improvement of areas of existing council activities. Many council officers reported significant uncertainty surrounding plan implementation. Many officers identified that incorporation of stormwater objectives or actions into council’s management plan is, in itself, insufficient unless carried forward into council’s business planning and budgetary process. The reasons most frequently given for this are a lack of dedicated sources of funding and the lack of senior executive and elected representative support for the implementation process.

### 2.5 Building Relationships Among all Stormwater Managers and Stakeholders Within the Catchment for Effective Co-ordination and Implementation of Urban Stormwater Management

This objective relates to the improvement of relationships and the development of effective partnerships among stormwater managers and other catchment stakeholders. Joint project development and spending between stormwater managers on a catchment basis is a key element of this category.

#### 2.5.1 Key Successes

The preparation of catchment-based stormwater management plans was identified by Metropolitan council officers as a significant achievement of the program. Forty new catchment steering groups were established, resulting in extensive new working

relationships between council officers. Indeed, metropolitan councils identified the development of catchment-based relationships as the most significant overall achievement of the Urban Stormwater Program.

Approximately two-thirds of metropolitan council officers reported that their councils were currently implementing, or propose to implement, joint projects with other councils, State agencies or community groups. These joint projects are mainly education projects or other source control initiatives.

### 2.5.2 Key Issues and Shortcomings

The evaluation noted the fact that, within the metropolitan region, the catchment-based capacity for stormwater management has been directly built through the operation of the catchment steering committees convened to prepare the stormwater management plans. It was found that, as the metropolitan councils' stormwater plans have been completed, there is now a limited need for the catchment steering committees to continue and many are no longer operating. This tendency towards disintegration of the catchment-based approach is clearly a matter of concern.

The second shortcoming in catchment-based capacity, as reported by council officers, was the lack of success of the planning process to engage the community. The evaluation finds that community ownership of the planning process was not achieved, and that the planning process may well therefore not reflect community values.

### 2.6 Program Design Issues

The focus of the program on urban stormwater quality was reported by many officers as too narrow. Many council officers expressed a view that the planning process needed to be better integrated with considerations of both stormwater quantity, stormwater runoff from non-urban areas and other environmental and local government planning processes.

#### 4. WHERE TO FROM HERE?

The independent evaluation of the stormwater management planning process provides a broad and detailed basis for ensuring that any future round of stormwater planning learns from the lessons of Phase 1 of the Urban Stormwater Program.

The implementation processes of the metropolitan stormwater management plans are now coming up for review. The challenges of the ongoing planning and management of stormwater at local government level require separate investigation. Some of the issues raised in this evaluation will be tested further during this phase. The paper *Planning and Organisational Issues in Stormwater Management for Local Government*, by Roberta Ryan and Rebekah Brown (2001) details some of these.

#### REFERENCES

Brown, R. and Ryan, R. (2000) *Evaluation of the Stormwater Planning Process*. NSW Environment Protection Authority, Sydney.

Ryan R and Brown R, (2001) *Planning and Organisational Issues in Stormwater Management for Local Government* Available in this volume