



## Stormwater Extension Officer Program



# Hunter & Central Coast Stormwater Needs Analysis and Regional Report

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This document was prepared by Simon Gibbs, Stormwater Extension Officer for the following sixteen councils of the Hunter and Central Coast region: Cessnock, Dungog, Gloucester, Gosford, Greater Taree, Great Lakes, Lake Macquarie, Maitland, Merriwa, Murrurundi, Muswellbrook, Newcastle, Port Stephens, Singleton and Wyong.

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## **Executive Summary**

The Stormwater Extension Officer (SEO) Program is a major new initiative of the second phase of the NSW Government's Urban Stormwater Program. The Program has been established by the Stormwater Trust, in partnership with Local Government, to assist in building the capacity to improve urban stormwater management in the Hunter and Central Coast region. There are eight equivalent positions in other areas of the state.

The primary objective of the program is to assist local councils in their management of stormwater and related issues. The need for greater guidance, support and coordination of local councils' was a clear finding of an evaluation of the first phase of the Urban Stormwater Program, completed in 2000.

### **Needs analysis**

To assist the program's focus on addressing the requirements of local councils, the Stormwater Extension Officer conducted an issues and needs analysis process. The needs analysis is based in the outcomes of a literature review of Council and regional reports and plans, and from interviews and workshops with 83 elected and staff representatives from the sixteen councils of the Hunter and Central Coast region. This report presents an overview of the needs analysis for the Hunter and Central Coast and the basis of a work program for the SEO.

The needs analysis was undertaken to achieve the following objectives:

- Understand stormwater management processes in local councils:
- Determine the opportunities for, and barriers to, effective stormwater management by councils of the region.
- Identify and prioritise the resources, strategies and services to deliver through the Stormwater Extension Officer project.
- Establish a working relationship between the SEO and council staff.
- Facilitate open debate on council's stormwater management between all council stakeholders.
- Collect information to evaluate the effectiveness of the SEO project.

### **Key findings**

Key stormwater management issues facing Councils were investigated through identification of the obstacles to, and reinforcing processes for, good stormwater management. This was achieved through interviews with councillors, managers and staff of all councils in the program region.

Obstacles to effective stormwater management identified by more than half of the councils surveyed were:

- Competition for staff and budget resources with other management issues, and costs of ongoing infrastructure maintenance and depreciation scheduling.
- Low level of general community awareness of the impacts of stormwater pollution, its management and relationship to their own behaviour and well-being.

- Limited access to internal and external funding sources (sustainable core funding, levies, grants), which constrains effective stormwater management and raises concerns about stormwater management beyond current grants funding.
- Poorly coordination of stormwater management between different sections of councils, and little integration of stormwater management objectives into councils planning and budgetary management processes.
- Developing and retaining staff with the necessary skills and competencies.
- Poor coordination with state government agencies, and lack of clear guidance, process, leadership and coordination from state departments.
- Lack of awareness, concern and commitment to urban stormwater management by councillors, management and staff.

The reinforcing processes and key drivers of effective stormwater management for local councils, identified by more than half of councils surveyed, were:

- Effective community engagement by councils: using education, media, planning, policy and industry programs to raise the profile of stormwater, and linking individual actions and behaviours to what the community values.
- Developing staff skills, competence and confidence at all levels, from operations to management and elected representation.
- Effective processes and use of external networks for sharing of information, skills, knowledge and resources between councils and other organisations.
- Effective coordination between councils, across catchments and the region, guiding cross organisational strategies and processes.
- Council awareness of stormwater management issues and responsibilities, and a commitment to action. Includes councillors, management, staff and the presence of champions.
- Accessing new funds to implement stormwater management actions from both internal and external sources.
- Effective links between stormwater management and broader development and environmental actions such as flooding controls, local developments, tourism, environmental restoration, and management of public open space, rivers and estuaries.

## SEO Work Program

The Stormwater Extension Officer program has initiated a number of projects based on the work program designed by the SEO, project managers and steering committees, and guided by the information provided council stormwater managers through the needs analysis. These five focus areas are:

- **Facilitating communications, networking and support:** improving partnerships between councils and council staff through regional networking; addressing technical issues faced by stormwater managers.
- **Capacity and skill building:** facilitating skill building programs for Council staff, managers & councillors.
- **Marketing & resourcing stormwater:** raising awareness of stormwater management issues with senior levels of local Councils; supporting council champions; assisting secure sustainable internal and external funds for stormwater management.

- **Building stormwater management and planning capacity:** assisting councils with Stormwater Management Plan implementation and review, and supporting development of planning and management instruments for improved stormwater management.

Note that this version of the Regional Report does not include the Stormwater Extension workplan, for the sake of brevity. Please contact LHCCREMS for the workplan and final project report.

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# 1. Introduction

This report provides an overview of urban stormwater management in the Hunter and Central Coast region of NSW. It is based on a needs analysis of local stormwater issues and management, and aims to profile the stormwater themes and trends in the councils of the Hunter and Central Coast in terms of issues, challenges, priorities and management.

Much of the information was provided through workshops with 83 elected and staff representatives from the sixteen councils in the region: Cessnock, Dungog, Gloucester, Gosford, Greater Taree, Great Lakes, Lake Macquarie, Maitland, Merriwa, Murrurundi, Muswellbrook, Newcastle, Port Stephens, Singleton and Wyong.

## 1.1 Program context in the region

Good stormwater management is important to:

- improve water quality in streams and groundwater
- manage flood risk in urban areas
- make more efficient use of water resources
- minimise erosion of waterways, drains, stream-banks and beaches
- manage the cost of providing and maintaining water infrastructure
- protect and restore aquatic and riparian ecosystems and habitats
- protect the scenic, landscape and recreational values of waterways.

Council stormwater management programs and staff aim to manage this range of objectives.

## Why is stormwater topical in the Hunter and Central Coast?

- Stormwater affects water quality and can have profound impacts on the environment and public health, e.g. Wallis Lake oyster Hepatitis scare.
- Stormwater affects amenity, recreation and lifestyle, especially in the waters that receive stormwater. There are many iconic and important waterways in the Hunter and Central Coast regions, including Port Stephens, Wallis Lake, Myall Lakes, Lake Macquarie, Tuggerah Lakes, Brisbane Water and the coastal estuaries.
- Stormwater management is extremely expensive, especially traditional ‘hard’ engineering approaches, due to high capital costs of drainage infrastructure, ongoing maintenance expenses and depreciation allowances.
- Stormwater-related issues have a high community profile. In 2002 Hunter Valley Research Foundation surveys, fresh water quality was listed as the single most important environmental issue in the Hunter region today. Litter ranked second, ocean and beach pollution third and lake and estuary pollution fifth. However, much of the community does not connect their own individual behaviours with impacts on their local environment, nor do they link stormwater quality to clean waterways.
- Water quality is identified as a key environmental management issue in the four Catchment Management Blueprints (2002) that cover the region, the

Pathways to a Sustainable Hunter initiative (1999) and the Lower Hunter & Central Coast Regional Environmental Management Strategy (1995).

## ***1.2 Program purpose and objectives***

The Stormwater Extension Officer (SEO) Program has been established by the Stormwater Trust, in partnership with Local Government, to assist in urban stormwater management. There are nine positions around the state, and the results of each regional needs analysis have been compared against results from other areas to compare trends in stormwater management.

The primary objective of the Stormwater Extension Officer (SEO) Program is to guide, assist and coordinate local councils in their management of stormwater.

The need for greater guidance, support and coordination of local councils' management of stormwater was a clear finding of an evaluation of the first phase of the Urban Stormwater Program, completed in 2000.

Phase 2 of the Urban Stormwater Program focuses on improving the capacity of stormwater managers to implement better management practices. The Stormwater Extension Officer Program is a key component of the Urban Stormwater Program.

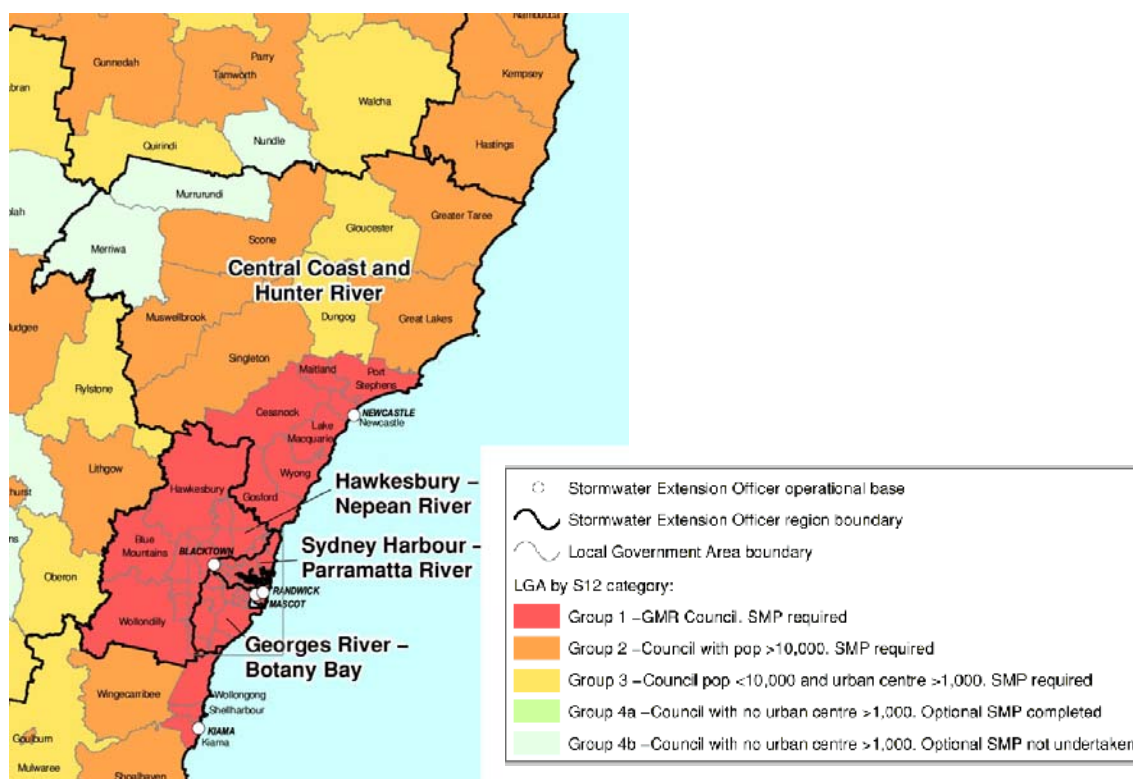
This report presents the findings of the needs analysis and project design stages of the SEO work program for the Hunter and Central Coast.

## 2. Regional Overview

The Hunter and Central Coast regions lie in and about the northern reaches of the Greater Metropolitan Region. The region covers 36,588 square kilometres and is home to over 900,000 people. There are sixteen councils in the region: Cessnock, Dungog, Gloucester, Gosford, Greater Taree, Great Lakes, Lake Macquarie, Maitland, Merriwa, Murrurundi, Muswellbrook, Newcastle, Port Stephens, Singleton and Wyong.

Water assets of the region feature the Hunter, Manning, Karuah and Hawkesbury-Nepean Rivers and a series of coastal lakes and lagoons, including Lake Macquarie, Wallis Lakes, Tuggerah Lakes, Brisbane Water and Port Stephens.

**Figure 1: Hunter and Central Coast SEO Region**  
Local Government Areas and Section 12 Categories



Note that councils are mapped by their requirement to fulfil the guidelines regarding the preparation of Stormwater Management Plans, under the 1998 Direction under Section 12 of the Protection of the Environment Administration Act, 1991.

Table 1 summarises a range of demographic and Council information that is referenced during this report.

**Table 1: Hunter & Central Coast Council Profiles**

| Council                           | DLG group No. | Estimated Residential Population as at 30 June 00 | Area (sq km)  | Population Density (pop/area) at 30 June 00 | Population growth 1995-00 (%) | Estimated Population (2006) HVRF | Greater Metro Region? | REMS | Total Staff (full time equiv) June 01 | DA's approved 2000/01 |
|-----------------------------------|---------------|---|---------------|---|-------------------------------|----------------------------------|-----------------------|------|---------------------------------------|-----------------------|
| Cessnock City Council             | 4             | 46,475  | 1966          | 23.64                                       | -0.02                         | 50,800                           | Y                     | LHCC | 248                                   | 1157                  |
| Dungog Shire Council              | 10            | 7966  | 2251          | 3.54  | -0.62                         | 9,800                            |                       | UNH  | 63.5                                  | 240                   |
| Gloucester Shire Council          | 9             | 4881  | 2952          | 1.65  | -0.04                         | 5,100                            |                       | UNH  | 76                                    | 123                   |
| Gosford City Council              | 7             | 160,167   | 940           | 170.43                                      | 1.83                          | 154,600                          | Y                     | LHCC | 952                                   | 3814                  |
| Great Lakes Council               | 4             | 31,173  | 3376          | 9.23  | 2.08                          | 39,700                           |                       | UNH  | 240                                   | 1067                  |
| Greater Taree City Council        | 4             | 44,084  | 3730          | 11.82                                       | -0.08                         | 47,108*                          |                       | -    | 217                                   | 909                   |
| Lake Macquarie City Council       | 5             | 184,346   | 644           | 286.47                                      | 0.76                          | 191,400                          | Y                     | LHCC | 740                                   | 3102                  |
| Maitland City Council             | 4             | 54,535  | 392           | 139.23                                      | 1.01                          | 56,500                           | Y                     | LHCC | 244.5                                 | 1356                  |
| Merriwa Shire Council             | 9             | 2216  | 3500          | 0.63  | -2.2                          | 2,500                            |                       | UNH  | 64                                    | 30                    |
| Murrurundi Shire Council          | 9             | 2144  | 2481          | 0.86  | -2.5                          | 2,500                            |                       | UNH  | 41                                    | 42                    |
| Muswellbrook Shire Council        | 11            | 15,130  | 3405          | 4.44  | -1.16                         | 16,600                           |                       | UNH  | 121                                   | 224                   |
| Newcastle City Council            | 5             | 140,955   | 183           | 771.93                                      | 0.38                          | 141,400                          | Y                     | LHCC | 912.5                                 | 2298                  |
| Port Stephens Council             | 4             | 56,979  | 858           | 66.43                                       | 2.08                          | 66,000                           | Y                     | LHCC | 406                                   | 1721                  |
| Scone Shire Council               | 10            | 9,584   | 4041          | 2.37  | -1.32                         | 10,200                           |                       | UNH  | 95                                    | 167                   |
| Singleton Shire Council           | 4             | 20,479  | 4895          | 4.18  | 0.11                          | 23,300                           |                       | UNH  | 153                                   | 875                   |
| Wyong Shire Council               | 7             | 132,417   | 745           | 177.8                                       | 2.77                          | 133,900                          | Y                     | LHCC | 851                                   | 3189                  |
| <b>Total, 2000/01</b>             |               | <b>913,531</b>                                    | <b>36,359</b> | <b>25.1</b>                                 |                               | <b>951,300</b>                   | <b>7</b>              |      | <b>5424.5</b>                         | <b>20,314</b>         |
| <b>Comparative Total, 1999/00</b> |               | 904,432   | 36,588        | 24.7  |                               |                                  |                       |      | 5463.8                                | 26,952                |

**Data sourced from the following publications:**

NSW Department of Local Government, *Comparative Information on NSW Local Government Councils 2000/2001 and 1999/00*.

Hunter Valley Research Foundation, 'At a Glance'

\* Greater Taree LGA population estimate is for 2001 from Greater Taree City Council's *State of the Environment report, 1999-2000*.

DLG Group numbers are explained in Appendix 4.

20,314 development applications were approved in 2000-01, compared with 26,952 in 1999-00. This is consistent with the state-wide 22.5% decrease in the number of DAs determined.

REMS groups: LHCC is Lower Hunter & Central Coast REMS (7 councils), UNH is Upper & Northern Hunter REMS (8 councils).

### **3. Needs Analysis Methodology**

To assist the Stormwater Extension Officer focus on addressing the optimum requirements of the sixteen councils in the region, a basic needs analysis of issues, challenges and priorities for improving stormwater management was conducted between March and July 2002.

#### ***3.1 Purpose and objectives of the needs analysis***

The needs analysis was undertaken to achieve the following objectives:

1. Understand stormwater management of local councils:
  - a. What **processes and procedures** are used to manage stormwater?
  - b. What is the level and extent of stormwater **knowledge and skills**?
  - c. What are the **attitudes** to stormwater management?
  - d. How is stormwater management **integrated**?
2. Determine the opportunities for, and barriers to, effective stormwater management by councils of the region.
3. Identify and prioritise the resources, strategies and services to deliver through the Stormwater Extension Officer project.
4. Establish a working relationship between the SEO and council staff.
5. Facilitate open debate on council's stormwater management between all council stakeholders.
6. Collect information to evaluate the effectiveness of the SEO project.

The needs analysis is not a comprehensive or definitive survey of stormwater management in councils. It is intended to be a snap-shot to develop priorities for the Stormwater Extension Officer program based on the identified needs of local government in the region.

#### ***3.1 Methodology***

The needs analysis was undertaken in three parts: a background information review, semi-structured interview and/or workshops at each council in the catchment, and an assessment of the information.

#### **Information collation and review**

Initially, information was collated from a literature and web review of Council and regional documents, including council Stormwater Management Plans, Council Management, Corporate and Annual reports, State of the Environment reports, Social Plans, and other relevant reports, policy and planning documents.

#### **Semi structured interviews and workshops**

Stormwater management impacts on many areas of council operations, so several sections of Council were requested to participate in the needs analysis. The analysis targeted both staff directly involved in everyday stormwater management functions, and senior management.

A representative cross-section of Council staff with stormwater management responsibilities were surveyed. A total of 83 elected and staff representatives from the sixteen councils of the Hunter and Central Coast region participated in semi-structured interviews and workshops with the Stormwater Extension Officer. Workshops usually included an elected representative, the designated stormwater contact, and managers/directors involved in works, operations, environment and planning. The assistance of the designated stormwater contacts and champions was valuable in arranging these meetings.

Note that the preference for open workshops differed from the individual interview approach utilised by SEOs in several other regions, and will have had some effect on the veracity of comparing results between regions. Individual comments were more difficult to separate out in workshop notes than individual interviews, and participants may have been less open and honest. Still, the deeper insight afforded by a group discussion, and the profile brought by a multi-disciplinary workshop more than compensated. Many positive comments were received from councils about the workshop format used: it stimulated an open multi-disciplinary stormwater discussion within council, often for the first time since the development of the SMP.

### **Focus questions for interviews and workshops**

1. What are the key issues relating to stormwater for Council?
2. What are council's current stormwater management activities and processes:
  - a. What stormwater activities does council undertake?
  - b. Which units/sections of Council are involved in stormwater management?
  - c. How are these activities coordinated/integrated?
  - d. In what areas does council need to improve staff's knowledge and skills in stormwater management?
3. Can you identify opportunities & barriers to improving council's stormwater management?
4. How can the Stormwater Extension Officer Program assist you?

### **Information assessment**

All information collected was sent to General Managers and appropriate officers of Councils of the region, for their confirmation of accuracy of reporting.

The information collected was then assessed through a force field analysis. Responses to the workshop questions were themed as obstacles to, or reinforcing processes for, effective stormwater management in council.

The themes were created by clustering the responses from a representative sample (50 of 441 interviews) of all interviews conducted throughout NSW. Each interview was coded according to the frequency in which each theme occurred and collated as a percentage of councils who raised each theme in the region and for the state overall. They are presented as two graphs comparing the response for the Hunter and Central Coast region to the State (Figures 2 and 3).

Note that no information has been individualised, thus ensuring **confidentiality** whilst allowing regional trends to be compared against the rest of the state.

## 4. Needs Analysis Results

From the needs analysis, a range of key stormwater management issues were identified. These issues have been themed as discussed in the Methodology. This information has been integrated with equivalent findings from other regions to produce a state-wide analysis of stormwater management, and to develop the work program for the SEO program in the region (see Section 6).

An important outcome of the needs analysis was the quantification of key obstacles and drivers affecting stormwater management in the region. In the graphs below, this information is compared to other SEO regions. The themes are further detailed at the end of this section.

Note that individual Council data is not provided for confidentiality reasons. Individual Councils can access their data on request from the SEO. External agencies would require written permission from the relevant Councils for access to individual Council data.

### 4.1 Key findings

**Obstacles or barriers to effective stormwater management** identified by more than half of the councils surveyed were:

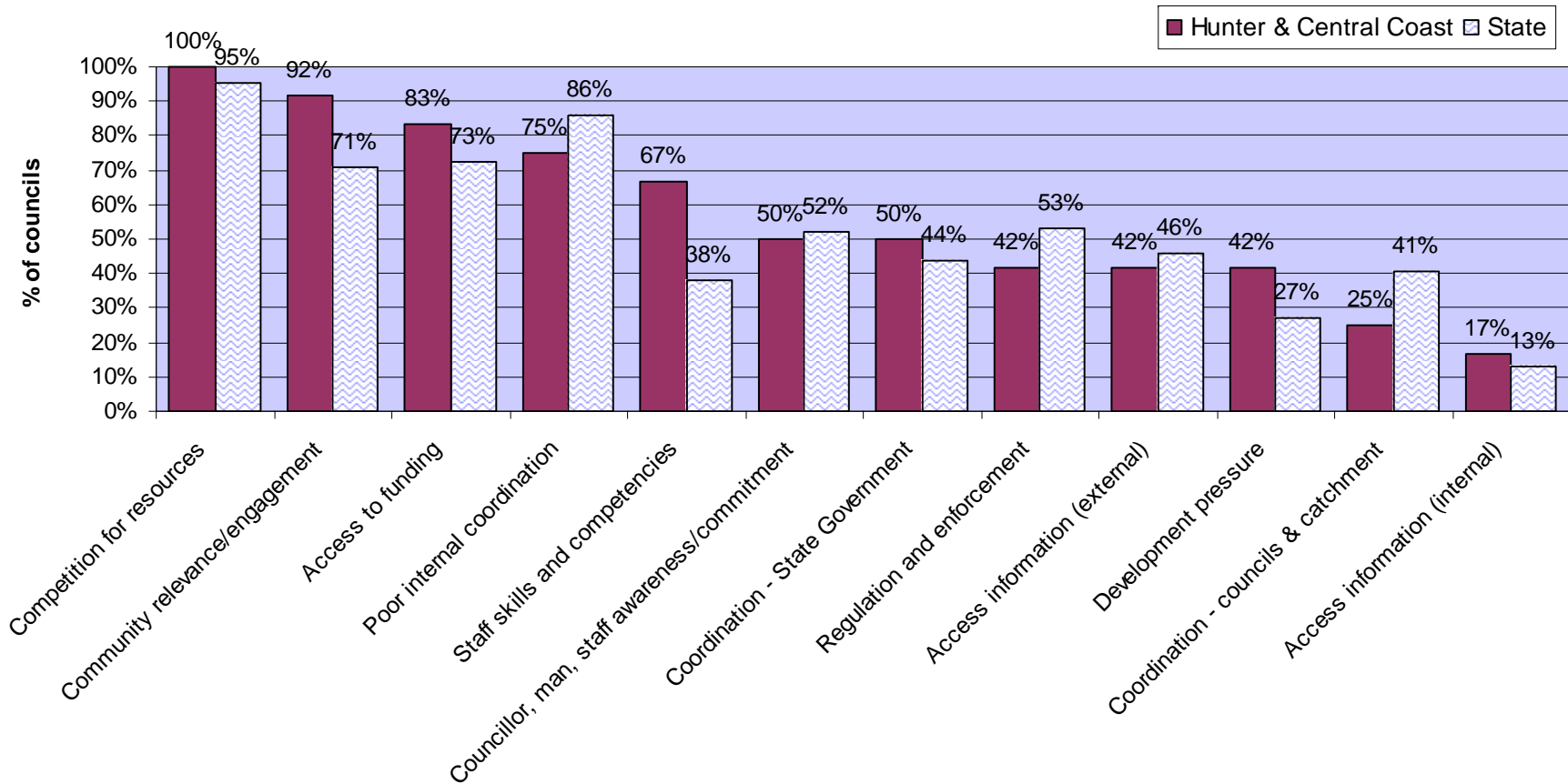
- Competition for staff and budget resources with other management issues, and costs of ongoing infrastructure maintenance and depreciation scheduling.
- Low level of general community awareness of the impacts of stormwater pollution, its management and relationship to their own behaviour and well-being.
- Limited access to internal and external funding sources (sustainable core funding, levies, grants) constrains effective stormwater management and concerns about stormwater management beyond current grants funding.
- Poorly coordination of stormwater management between different sections of councils, and little integration stormwater management actions into councils planning and budgetary cycles.
- Developing and retaining staff with the necessary skills and competencies.
- Poor coordination with state government agencies, and lack of clear guidance, process, leadership and coordination from state departments (Appendices 4 and 5).
- Lack of awareness, concern and commitment to urban stormwater management by councillors, management and staff.

The **key drivers for effective stormwater management** for local councils, identified by more than half of councils surveyed, were:

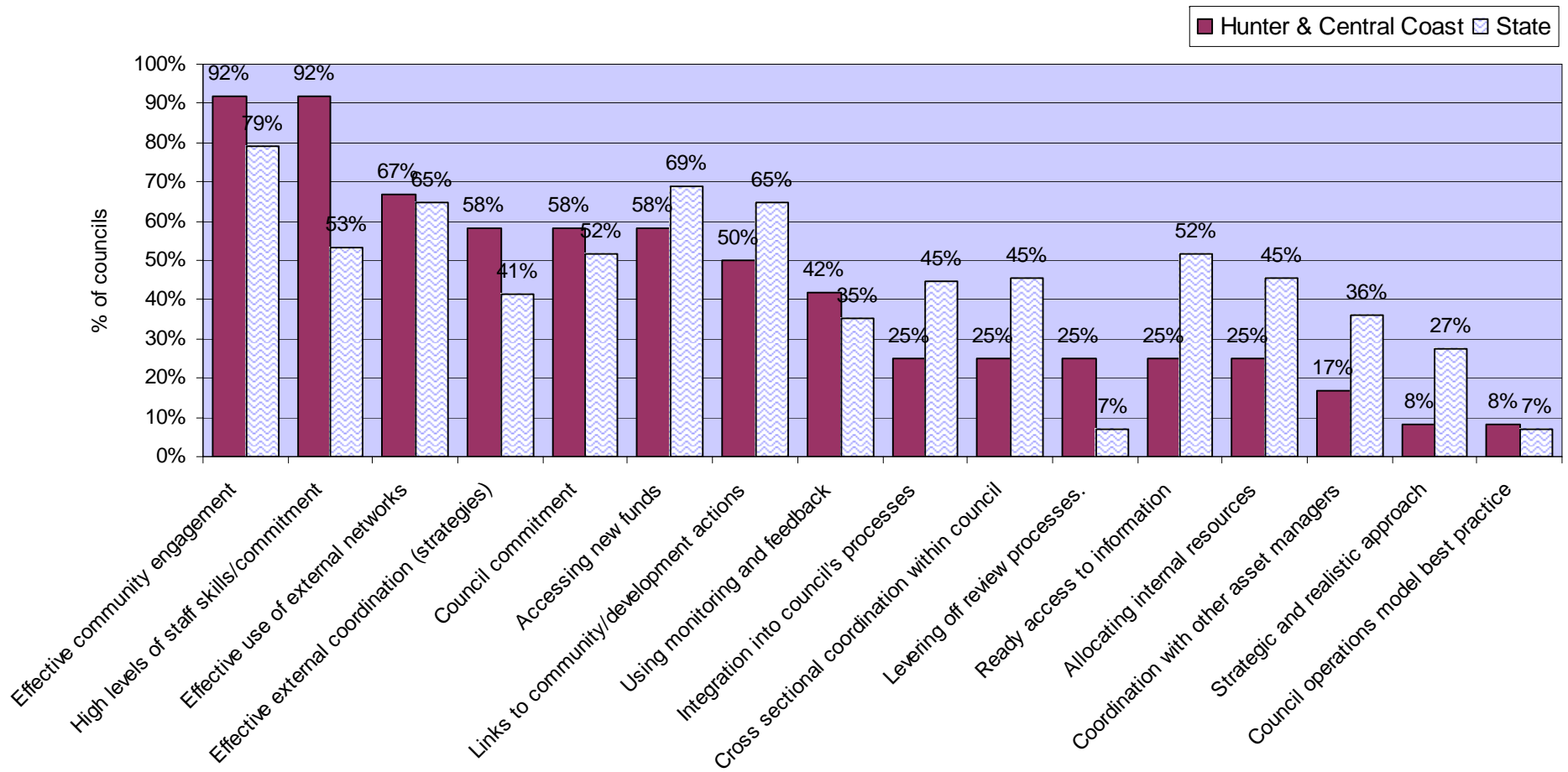
- Effective community engagement by councils: using education, media, policy and industry programs to raise the profile of stormwater, and linking individual actions and behaviours to what the community values.
- Developing staff skills, competence and confidence at all levels, from operations to management.
- Effective processes and use of external networks for sharing of information, skills, knowledge and resources between councils and other organisations.
- Effective coordination between councils, across catchments and the region, guiding cross organisational strategies and processes.
- Council awareness of stormwater management issues and responsibilities with commitment to take action. Includes councillors, management, staff and the presence of champions.
- Accessing new funds to implement stormwater management from grants, levies, developer contributions, sponsorship and other sources.
- Effective links between stormwater management and broader development and environmental actions such as flooding controls, local developments, tourism, environmental restoration, and management of public open space, rivers and estuaries.

These results are further discussed in Section 5. Focus projects for the Stormwater Extension Officer Program to address obstacles, and build on reinforcing processes, are developed through the work program in Section 6.

**Figure 2: Obstacles to effective stormwater management within councils**



**Figure 3: Processes which reinforce effective stormwater management within councils**



**Table 2: Obstacles to effective stormwater management within councils**

Responses to needs analysis identified weaknesses of, and threats to, stormwater management by local councils. These identified processes have been aggregated into themes and are detailed below, and ranked in order of frequency of response across the region. Note that in the Hunter & Central Coast, some processes were more or less frequently identified when compared to the state (Figure 2).

| Obstacle   | Issue in % of regional councils | % across state | Description   |
|--|---------------------------------|----------------|---|
| <b>1. Competition for resources</b>                                | 100%                            | 95%            | <b>Competition for resources.</b><br><b>-Infrastructure legacy:</b> Priority for stormwater management is water quantity and maintaining stormwater infrastructure which is degrading and requires significant resources.<br>- <b>On-going</b> maintenance costs of stormwater management.<br>- Priority of other <b>environmental issues</b> (water use, water allocation, salinity, sewerage treatment, flooding).  |
| <b>2. Community relevance and engagement</b>                       | 92%                             | 71%            | <b>Community relevance and engagement.</b> Low level of general community awareness of impact of stormwater (pollution), its management and relationship to their own behaviour and well-being. Lack of need and urgency resulting in lack of pressure from the community to act and to get organisations to act. No one is angry about stormwater management.  |
| <b>3. Access to funding</b>  | 83%                             | 73%            | <b>Access to funding constrains implementing stormwater management due to</b> (in order of frequency):<br>- <b>Short-term</b> nature of funding arrangements (sustained funding is needed not 1-3 years like grants, levies and there are no more SW grants planned)<br>- <b>Effort in terms of finding the internal resources to prepare applications and meet reporting and compliance requirements</b><br>- <b>Limits on revenue raising placed by rate capping.</b><br>- <b>Scope of grants</b> in terms of what can be applied for.<br>- Poor (lack transparency) criteria for stormwater/environmental levies<br>- "Core" Resources (staff and funds) allocated to stormwater management low.<br>- Cannot sustain current stormwater quality strategies <b>beyond</b> current grants funding<br>- Lack of integration between the various grant programs. |
| <b>4. Poorly coordinated stormwater management within councils</b> | 75%                             | 86%            | <b>Coordinated stormwater management within councils.</b><br>- Poor <b>involvement of sections</b> in council important to stormwater management - planning, health, operations, engineering, strategy etc.<br>- <b>Narrow focus</b> of what stormwater management is and what actions are needed.<br>- Little (or no) integration of stormwater management actions into councils <b>planning</b> (Management Plan, State of Environment Report, Social Plan, Annual Report) and budgetary cycles.<br>- No <b>structure/process/leadership</b> for all the relevant sections of council to review, plan and implement integrated stormwater actions related to council's and the catchments strategic priorities.<br>- No <b>implementation</b> of policies and procedures developed  |
| <b>5. Staff skills and competencies</b>                            | 67%                             | 38%            | <b>Developing and retaining staff with the necessary skills and competencies</b>  |

|   |     |     |   |
|---|-----|-----|---|
| <b>6. Coordination with State Government Departments</b>            | 50% | 52% | <b>Coordination with relevant state government agencies.</b><br>- <b>Fragmented</b> approach with lack of guidance, clear process, leadership and coordination with integrating various state initiated planning, environmental, catchment approaches such as planning schemes, Catchment Management Blue Prints, Estuary Management Plans, Flood Management Plans, Integrated Urban Water Cycle Management.<br>- Need for improved <b>guidance and support</b> in the design, resourcing and implementation of SMPs and the associated stormwater strategies. The support needed is broader than just the Trust, although the Trust could be the vehicle to pursue it.<br>- <b>EPA</b> perceived to be poorly integrated with whole of catchment approach and focussed on regulation rather than assistance. |
| <b>7. Councillor, management and staff awareness and commitment</b> | 50% | 44% | <b>Lack of awareness, concern and commitment to urban stormwater management by councillors, management and staff.</b> For these three obstacles we assume stormwater should be an issue. That it doesn't appear to be an issue for any of them is somewhat of a cause for concern, assuming it should be an issue. Hence the need for data and monitoring.  |
| <b>8. Regulation and enforcement (Policies)</b>                     | 42% | 53% | <b>Regulation and enforcement.</b> Polluting practices by commercial businesses, building industry, council depots, service stations etc. There is need for greater <b>enforcement</b> of regulation on industry by council. Industry awareness, enhanced industry skills and competencies, and development and consistent <b>enforcement</b> of regulations are all required.  |
| <b>9. Access information and knowledge (external)</b>               | 42% | 46% | <b>Access information and knowledge (external).</b> Lack of information on the choice and performance of various stormwater management strategies and the need for urban stormwater management. No monitoring and feedback in the management of stormwater. Additionally councils for challenges in being able to and knowing how to source external data and adapt it to local conditions. In many area there is no data available.  |
| <b>10. Development pressure</b>                                     | 42% | 27% | <b>Development pressure</b> in terms of rate of growth, planning and approving developments and providing infrastructure/services. Also pressure to keep development costs and regulation of business down in order to retain investment in the area.   |
| <b>11. Coordination with other councils and catchment bodies</b>    | 25% | 41% | <b>Coordination - councils and catchment.</b> Fragmented coordination between councils within catchments. Issues related to alignment of council and catchment boundaries sharing and allocating responsibilities for upstream flows, sources etc and downstream impacts.   |
| <b>12. Access information and knowledge (internal)</b>              | 17% | 13% | <b>Access information and knowledge (internal).</b> There is a lack of technical information (costs, models, standards) and data (asset related, water quality) for council conditions. There is no priority placed on developing the data for council conditions by council and using them in the review of stormwater strategies. It is not so much lack of information, as stormwater is not a sufficiently high priority to allocate the time to finding the information and assessing its reliability and relevance.   |

**Table 3: Processes which reinforce effective stormwater management within councils**

Responses to needs analysis identified strengths of, and opportunities for, good stormwater management by local councils. These identified processes have been aggregated into themes and are detailed below, and ranked in order of frequency of response across the region. Note that in the Hunter & Central Coast, some processes were more or less frequently identified when compared to the state (Figure 3).

| Reinforcing process                                    | Issue in % of regional councils | % across state | Description  |
|--|---------------------------------|----------------|--|
| <b>1. Effective community engagement</b>               | 92%                             | 79%            | <b>Effective community engagement by council:</b> through linking impact of their council's, community's, industry's and others behaviours to what they value and stormwater. Includes education, schools, water monitoring, volunteer groups, cleaner industry programs.  |
| <b>2. High levels of staff skills and commitment</b>   | 92%                             | 53%            | <b>High levels of staff skills and commitment.</b><br>- <b>Developing staff</b> skills, competence and confidence at all levels (from operations to management) through <b>training</b> , review and improvement and documentation of policies and procedures through active involvement of staff.<br>- Recruiting and retaining staff across all the skills and knowledge required for stormwater management. |
| <b>3. Effective use of external networks</b>           | 67%                             | 65%            | <b>Effective use of external networks for information, skills, knowledge:</b> Sharing of information, skills, knowledge, approaches, resources between councils, agencies and other resources along with the resources and process to facilitate these exchanges   |
| <b>4. Effective external coordination (strategies)</b> | 58%                             | 41%            | <b>Effective external coordination (strategies):</b> Catchment, regional (and other multiple issue) approaches to develop cross organisational strategies/coordination linking them together. Planning schemes, SMPs, CMB etc  |
| <b>5. Council commitment</b>                           | 58%                             | 52%            | <b>Council commitment:</b> awareness stormwater management issues and responsibilities with commitment to take action. Includes councillors, management, staff and the presence of <b>champion(s)</b> .  |
| <b>6. Accessing new funds</b>                          | 58%                             | 69%            | <b>Accessing new funds</b> to implement stormwater management from grants, levies, developer contributions, sponsorship etc  |
| <b>7. Links to development/community actions</b>       | 50%                             | 65%            | <b>Effective links to broader development/improvement actions:</b> Stormwater management linked to broader actions such as (in order of frequency) environmental restoration/Landcare, residential/commercial developments, tourism, landscaping, recreation/public open space, street beautification.   |
| <b>8. Using monitoring and feedback</b>                | 42%                             | 35%            | <b>Establishing and using monitoring and feedback.</b> Stormwater management is monitored to sustain and focus councils stormwater strategies (by both councils, community and agencies). This includes monitoring the environmental impact, organisational performance to review, report (both internal and externally) and improve each strategies.  |
| <b>9. Integration into council's processes</b>         | 25%                             | 45%            | <b>Integration into council's processes:</b> Stormwater management integrated with operations/processes - management plans, LEPs, SOE, annual reports, capital works etc.  |

|  |     |     |  |
|--|-----|-----|--|
| <b>10. Cross-sectional coordination within council</b> | 25% | 45% | <b>Cross-sectional coordination within council:</b> Establishing a cross sectional approach to the development, implementation and revision of stormwater management strategies. Through facilitation, coordination, communication between sections, cross sectional committees, working groups, joint submissions/projects etc. |
| <b>11. Levering off review processes</b>               | 25% | 7%  | <b>Levering off review processes.</b> Addressing stormwater management in the periodic <b>review</b> of council structures, policies and procedures.   |
| <b>12. Ready access to information</b>                 | 25% | 52% | <b>Ready access to information/knowledge</b> on the performance and cost of stormwater strategies, particularly credible external sources such as the EPA, CRCCH etc. Catchment environmental monitoring data on pollutant types, loads, run-off, benefit-cost, life cycle cost, health etc.                                     |
| <b>13. Allocating internal resources</b>               | 25% | 45% | <b>Allocating internal resources</b> (staff, funds) - Stormwater management is acknowledged and resources are allocated/known across councils sections as well as leveraged against external funds and initiatives/joint projects.   |
| <b>14. Coordination with other asset managers</b>      | 17% | 36% | <b>Effective external coordination (asset managers) -</b> Coordination of responsibilities and actions between councils and other large asset managers such as RTA, Hunter Water, DLWC.  |
| <b>15. Adopting a strategic and realistic approach</b> | 8%  | 27% | <b>Adopting a strategic and realistic approach -</b> Based on demonstrating achievable and realistic outcomes, trialling approaches with a view to adapting, being flexible, taking opportunities and acceptable risks to sustain and/or increase stormwater management over time. Realistic approach to what can be achieved.   |
| <b>16. Council operations model best practice</b>      | 8%  | 7%  | <b>Council operations model best practice.</b> In addition to seeking to improve the stormwater management of industry, community etc, councils own operations reflect best practice in engineering, depot, parks and gardens, road works, regulatory enforcement etc.   |

## 4.2 Funding for Stormwater Management

Funding-related issues were an important topic of discussion during the Needs Analysis. Information on funding issues from the literature review and Needs Analysis is summarised below:

**Table 4: Funding streams of councils in the region**

| Council        | Total Operating Expense \$ (2000/01) DLG | Grants Revenue to Total Revenue % 2000/01 | Growth in Total Revenue % 1999/00 to 2000/01 | Average rate per residential assessment \$ 2000/01 | Household Rate Rise, % 01/02 to 02/03 | Rates special variation? |
|----------------|--|---|--|--|---------------------------------------|--------------------------|
| Cessnock       | 36,340,000                               | 18.87                                     | 4.4  | 514.58   | 3.3                                   |                          |
| Dungog         | 7,750,000                                | 28.69                                     | 11.9   | 367.73   | 3.3                                   |                          |
| Gloucester     | 8,190,000                                | 28.82                                     | 14.3   | 404.18   | 3.3                                   |                          |
| Gosford        | 121,940,000                              | 14.03                                     | -6.3   | 510.83   | 7.26                                  | Y                        |
| Great Lakes    | 31,300,000                               | 18.26                                     | 8.2  | 488.83   | 3.3                                   | Y                        |
| Greater Taree  | 30,640,000                               | 21.98                                     | 22.6   | 419.72   | 3.3                                   |                          |
| Lake Macquarie | 90,480,000                               | 17.57                                     | 1.0  | 570.03   | 3.28                                  | Y                        |
| Maitland       | 27,870,000                               | 14.23                                     | -5.0   | 550.62   | 3.3                                   |                          |
| Merriwa        | 7,150,000                                | 18.21                                     | 21.3   | 247.57   | 3.3                                   |                          |
| Murrurundi     | 5,350,000                                | 49.64                                     | 8.6  | 179.86   | 3.3                                   |                          |
| Muswellbrook   | 15,420,000                               | 18.16                                     | 9.2  | 426.78   | 3.3                                   |                          |
| Newcastle      | 117,760,000                              | 12.28                                     | 3.7  | 588.16   | 4.97                                  | Y                        |
| Port Stephens  | 52,100,000                               | 13.36                                     | 5.5  | 611.06   | 3.3                                   |                          |
| Scone          | 11,590,000                               | 32.07                                     | 6.9  | 462.25   | 3.3                                   |                          |
| Singleton      | 22,290,000                               | 16.29                                     | 3.9  | 380.03   | 8.35                                  | Y                        |
| Wyong          | 108,460,000                              | 11.54                                     | -6.1   | 564.49   | 3.3                                   |                          |
| Total          | 694,630,000                              | State ave 16.8                            | State ave 3.5                                | State ave 550                                      |                                       | 5                        |

Data sourced from DLG 2000/01 Annual Council statistics.

Household Rate Rise (01/02 to 02/03) data sourced from 'Fitting the Cap' (Newcastle Herald, 27.7.02) and personal communication with council staff.

### Special rate variations of regional councils

- Singleton and Gosford have special variations to fund infrastructure projects: Singleton have a capital works program (including a major stormwater drainage component). Gosford are funding a range of projects, focussing on renovating public buildings and areas.
- Newcastle have had an environmental levy approved in 2002. The levy will raise \$1 million per annum to fund 16 environmental project areas, including stormwater management.
- Lake Macquarie have the \$16.90 annual lake levy (to 2005) to fund remedial projects around the lake.
- Port Stephens applied for rate increase in 2002 (to fund asset rehabilitation and environmental projects) without success. PSC have had two special variations in recent years (one included a funds allocation to drainage works).
- Merriwa applied for a special rate increase in 2001 without success.

- Great Lakes are implementing projects funded through a three-year levy (which collects \$500,000 annually, of which more than \$100,000 per year is allocated to water quality management).

### 4.3 Stormwater-focused external grants

The councils of the Hunter and Central Coast region have been successful at accessing a range of external grants funding. Funds sourced through the two grants schemes most closely associated with stormwater management activities are detailed in Table 5.

**Table 5: Stormwater Trust grants**

| Stage                                  | Count of projects | Sum of Amount Requested | Sum of Amount Granted | Percentage successful vs. total applications | Percent \$ Granted vs. total \$ requested |
|--|-------------------|-------------------------|-----------------------|--|---|
| Stage 1 successful                     | 5                 | \$691,883               | \$566,783             |  |   |
| Stage 2 unsuccessful                   | 9                 | \$2,144,793             | \$0                   |  |   |
| Stage 2 successful                     | 11                | \$1,355,529             | \$1,355,529           | 55%  | 39%                                       |
| Stage 3 unsuccessful                   | 5                 | \$934,165               | \$150,000             |  |   |
| Stage 3 successful                     | 12                | \$1,990,267             | \$1,886,406           | 71%  | 65%                                       |
| Stage 4 unsuccessful                   | 12                | \$1,804,314             | \$397,100             |  |   |
| Stage 4 successful                     | 9                 | \$1,871,775             | \$2,003,239           | 43%  | 54%                                       |
| Total unsuccessful (excluding Stage 1) | 26                | \$4,883,272             | \$547,100             |  |   |
| Total successful (excluding Stage 1)   | 32                | \$5,217,571             | \$5,245,174           | 55%  | 52%                                       |
| <b>Total successful</b>                | <b>37</b>         | <b>\$5,909,454</b>      | <b>\$5,811,957</b>    |  |   |
| <b>State total</b>                     | <b>327</b>        | <b>\$89,711,853</b>     | <b>\$78,795,325</b>   |  |   |

Specifics Stormwater Trust Stage 4 grants being implemented in the Hunter and Central Coast region are detailed in Appendix 1.

**Table 6: Coasts and Clean Seas grants**

| Grant scheme component              | Grants allocated to region                              |
|-------------------------------------|---|
| Local Component, 2001/02            | \$168,040   |
| Local Component, 2000/01            | \$133,000   |
| Local Component, 1999/00            | \$410,000   |
| Local Component, 1997/98 & 1998/99  | \$694,240 (including \$250 000 for LHCCREMS initiative) |
| Commonwealth Component, 1998-2001   | \$930,000   |
| <b>Coasts and Clean Seas Total:</b> | <b>\$2,335,280</b>                                      |

### Lake Macquarie Premiers Taskforce

The Office of the Lake Macquarie & Catchment Co-ordinator has received contributions of \$19,698,000 from the state government (through the Lake Macquarie Premiers Taskforce), Lake Macquarie City Council, Wyong Shire Council, and other departments and industries. These funds are to address issues affecting the health of Lake Macquarie, review the Lake Macquarie Estuary Management Plan, recommend

a priority action plan and identify arrangements for implementation. The priority action plan involves a range of activities by State Government, Lake Macquarie City Council and Wyong Shire Council.

#### 4.4 Urban Stormwater Management Planning

In April 1998, the Environment Protection Authority issued a notice under Section 12 of the Protection of the Environment Administration Act 1991 to all councils in NSW to develop an Urban Stormwater Management Plan (SMP). In response, fourteen of the sixteen councils in the region commenced planning, assisted by EPA Stormwater Management Plan guidelines, and Stormwater Trust grant funds. Two councils (Merriwa and Murrurundi Shire Councils) have no Section 12 requirement to develop an SMP, due to the small size of their urban areas.

From late 2001 to early 2002 the EPA conducted an audit of SMP implementation with Group 1 councils (those belonging to the Greater Metropolitan Region). Seven councils in the Hunter and Central Coast region were audited. Results have been made available to participating councils in late 2002.

Group 2 councils (LGAs with a population of greater than 10,000) have been informed (by letter in December 2002) of the SMP revision process, and encouraged to review SMPs by the June 2003. They have also been directed to report on the progress of the implementation strategies detailed on their SMPs by February 2003).

**Table 7: Status of Stormwater Management Plans in the region**

| Council        | s12 group | SMP developed | SMP approved by EPA | SMP adopted by council | Council implementing SMP | EPA audit completed | Scheduled SMP review   |
|----------------|-----------|---------------|---------------------|------------------------|--------------------------|---------------------|--|
| Cessnock       | 1         | Y             | Y                   | Y                      | Y                        | Y                   | FY 03/04   |
| Dungog         | 3         | Y             | Y                   | Y                      | Y                        |                     | 2004   |
| Gloucester     | 3         | Y             | Y                   | Y                      | Y                        |                     | early 2004   |
| Gosford        | 1         | Y             | Y                   | Y                      | Y                        | Y                   | Jun 03   |
| Great Lakes    | 2         | Y*            | Y*                  | Y                      | Y                        |                     | Q2-Q3 03   |
| Greater Taree  | 2         | Y             | Y                   | Y                      | Y                        |                     | Q3-Q4 03   |
| Lake Macquarie | 1         | Y             | Y                   | Y                      | Y                        | Y                   | commenced. Activity audit completed. Project officer contract finished |
| Maitland       | 1         | Y             | Y                   | N                      | Y                        | Y                   | rewriting Q2 03  |
| Merriwa        | 4b        | N             | --                  | --                     | --                       | --                  | --   |
| Murrurundi     | 4b        | N             | --                  | --                     | --                       | --                  | --   |
| Muswellbrook   | 2         | Y             | Y                   | Y                      | Y                        | Y                   | mid 2004   |
| Newcastle      | 1         | Y             | Y                   | Y                      | Y                        | Y                   | Q2 03. Activity audit completed, UWC policy designed.                  |
| Port Stephens  | 1         | Y             | Y                   | Y                      | Y                        | Y                   | Completed. Project officer drove. Draft put to council Jan 03          |
| Scone          | 2         | Y             | N                   | N                      | Y                        |                     | Final version by June 03   |
| Singleton      | 2         | Y             | N                   | N                      | Y                        | Y                   | Final version by June 03   |
| Wyong          | 1         | Y             | Y                   | Y                      | Y                        | Y                   | Commenced with audit   |

Note that Great Lakes has a series of stormwater management planning documents, all of which are currently being implemented. None are currently being reviewed.

## **Review of Stormwater Management Plans**

- As directed by the EPA, there is a need to review SMPs after the first three years of implementation (as detailed in most plans).
- The core activity is to revise implementation strategy: the prioritised action set, including costings, timeframes and responsibility. In Group 1 councils, the work done to satisfy requirements of the Stormwater Trust audit of late 2001 to early 2002 is a good base to work from. The EPA made this information available to participating councils in late 2002. Key driver in Group 2 councils is the upcoming audit and review process to be conducted by Stormwater Trust. The EPA has sent out letters in December 2002.
- Need to focus on internal organisational issues that council can address.
- Emphasis should not be on revisiting biophysical or social data, although updated data (e.g. from monitoring programs, community surveys) should be integrated. Note that Port Stephens have conducted further stakeholder consultation, and are expanding scope of SMP to include smaller urban areas, and rural water quality issues.
- Make explicit links, and tie SMP implementation strategy, to Council Management Plan, Works Plan, State of the Environment report.
- Make explicit links to other catchment planning frameworks such CMB blueprints and estuary management plans.
- Note actions that require external funding and separate them in implementation table from those that will be funded internally. Highlight actions that may attract external funding, e.g. through NHT. Make CMB aware of these actions, so they can be integrated into Catchment Blueprints.
- Need to determine end-of-process milestones: when the process is done, e.g. re-adoption by council, revised document sent to EPA.

## 5. Discussion of Results

### 5.1 Regional aspects

The Stormwater Extension Officer program operates across sixteen councils of the Hunter and Central Coast region and is hosted by the Regional Organisation of Councils (ROC) and the Regional Environmental Management Strategy (LHCCREMS). As such, the position is well-positioned to encourage regional approaches and partnerships for effective stormwater management, both between councils and with other catchment-focussed organisations.

#### Key benefits of a regional approach:

1. Stormwater management (and water quality and conservation management generally) can be more effectively addressed at the regional scale
2. A regional approach allows for the design and implementation of consistent policy and practises
3. Operating on a collective basis allows for a strategic approach, and greater efficiencies in time and financial investment
4. Regional groupings have a more powerful voice: the message can better be heard.
5. A regional approach allows for more effective interaction with other
6. Catchment frameworks and organisations.
7. Councils that group together are better positioned to access external funding for larger projects.

#### Needs analysis: Obstacles influenced by regional issues

Poor coordination with relevant state agencies was identified by 50% of councils. Coordination with other councils and catchment bodies was identified as an obstacle by 25% of councils. Note that this is significantly lower than the state average of 41%, and may reflect the presence of effective regional networks and partnerships, including the REMS groups, HROC, Hunter Catchment Management Trust; and through the operation of water supply authorities across council boundaries (especially Mid Coast Water and Gosford-Wyong Catchment Water Authority, where staff and elected representatives from multiple councils operate together).

#### Needs Analysis: Reinforcing processes benefiting to regional approaches

67% of councils cited effective use of external networks for sharing of information, skills, knowledge, approaches, resources between councils, agencies and other resources as an effective reinforcing process for good stormwater management. Coordination with other asset managers in the region was identified by 17% of respondents.

Initiatives that Needs Analysis participants flagged as suitable to a regionally consistent approach include:

- extending the LHCCREMS capacity building work

- mass media campaigns, especially when linked to local education programs;
- presentations to regional forums and organisations;
- facilitating relationships between councils and state agencies (and catchment-scale organisations and planning frameworks);
- regional model policy, that can be adopted to ensure uniform policy requirements in councils across the region. The LHCCREMS Erosion & Sediment Control Policy, and Water Smart Model Planning Provisions are suitable models.
- regional applications for grants.

**Table 8: Selected responses from needs analysis**

| Issue Area              | Obstacles to effective stormwater management within councils  | Processes which reinforce effective stormwater management within councils  |
|-------------------------|---|--|
| <b>Regional aspects</b> | <ul style="list-style-type: none"> <li>• No consistent regional or catchment approach to stormwater management</li> <li>• Few mechanisms implemented to encourage regional initiatives</li> <li>• Distant relationship with state agencies: not enough interaction or regional guidance, e.g. with EPA (see Appendix 3).</li> <li>• Regional issues are at a scale that are difficult for councils to deal with (outside our jurisdiction, can't be seen to be doing the work of other councils)</li> </ul> | <ul style="list-style-type: none"> <li>• Councils work with each other on a catchment basis to manage water issues (stormwater, estuary management, water supply)</li> <li>• Effective regional water management strategies</li> <li>• Effective mass media campaigns</li> <li>• Council works effectively with state agencies.</li> <li>• Many organisations operate across council boundaries (e.g. water supply authorities, RTA, DLWC, HCMT): opportunity for coordination, consistency and focus (see Appendix 2).</li> </ul> |

### Specific regional and sub-regional issues

Coastal councils in the Hunter and Central Coast region form a distinct group. They are generally significantly larger in terms of population and overall budgets, and often have high profile receiving waters and beaches that are actively promoted as tourist attractions. These councils have specialist stormwater staff positions, though many are grant-funded, and are active in environmental education.

The middle sized inland councils form the second grouping. They generally do not have specialist staff, and stormwater is managed mostly by one section of council (engineering or environmental services). Stormwater is generally not perceived as a major issue (water quality issues, if they have a profile in council or community, tend to be dominated by agriculture or mining impacts). The resources allocated to stormwater management are focused around conveyance, and the prominence of environmental education varies but in no council are there specialist staff.

The smallest councils form a third group. They either do not have an SMP, or few resources with which to implement their plans. There are usually no dedicated resources for stormwater management, although generalist staff do manage a range of water issues, allowing integrated management.

The SEO notes that there are significantly more opportunities to promote stormwater as an issue when there are large or high profile receiving waters present in the LGA to

focus community and council. The SEO Program can effectively lever off related issues to successfully promote commitment to sustainable stormwater management.

Seven councils in the region (Cessnock, Gosford, Lake Macquarie, Maitland, Newcastle, Port Stephens and Wyong) participated in the LHCCREMS initiative (2001–2002) to build the technical and organisational capacity of local government to manage stormwater, and adopt Water sensitive Urban Design approaches to future planning in the region.

The needs analysis, and other research, indicated that these Councils (all largely coastal and estuarine with sizeable populations) need capacity building and support services from the SEO program which are significantly different to those of the other councils of the region. In general, these Councils have commenced the consideration of including model WSUD provisions in planning tools, and have negotiated with developers to trial implementation of WSUD measures in a range of sub-divisions and developments. The need now is to mainstream WSUD principles and to effect a coordinated approach to their incorporation into all Council DCPs . Aside from generic issues such as funding, the needs of staff tend to relate to the whole Urban Water Cycle Management approach, and to be of a more technical nature (implementation of new measures), or relate to risk and financial management, or community development.

The experiences of the LHCCREMS councils, and the capacity building, policy and technical resources accumulated, provide the SEO program with a substantial range of resources from which to lever off and implement a work program for the other Councils of the region.

## **Communications, networking and support**

**Obstacles:** 3. Access to funding; 5. Staff skills and competencies; 6. Coordination with State Government Departments; 9. Access information and knowledge (external); 11. Coordination with other councils and catchment bodies; 12. Access information and knowledge (internal)

**Reinforcing processes:** 3. Effective use of external networks; 4. Effective external coordination (strategies); 5. Council commitment; 6. Accessing new funds; 7. Links to development/community actions; 10. Cross sectional coordination within council; 12. Ready access to information; 14. Coordination with other asset managers; 16. Council operations model best practice

**Access information and knowledge (external)** 42% compared to 46% across the state. Lack of information on the choice and performance of various stormwater management strategies and the need for urban stormwater management. No monitoring and feedback in the management of stormwater. Additionally councils for challenges in being able to and knowing how to source external data and adapt it to local conditions. In many area there is no data available.

**Access information and knowledge (internal).** 17% compared to 13% state average. There is a lack of technical information (costs, models, standards) and data (asset related, water quality) for council conditions. There is no priority placed on developing the data for council conditions by council and using them in the review of

stormwater strategies. It is not so much lack of information, as stormwater is not a sufficiently high priority to allocate the time to finding the information and assessing its reliability and relevance.

## **5.2 Capacity and skill building**

**Obstacles:** 1. Competition for resources; 5. Staff skills and competencies; 7. Councillor, management and staff awareness and commitment; 9. Access information and knowledge (external); 12. Access information and knowledge (internal)

**Reinforcing processes:** 2. High levels of staff skills and commitment; 5. Council commitment; 9. Integration into council's processes; 10. Cross sectional coordination within council; 12. Ready access to information; 15. Adopting a strategic and realistic approach; 16. Council operations model best practice

The needs analysis revealed a range of responses relating to the capacity and skills of council staff to manage stormwater. Building technical and management excellence of council staff (from all levels of councils) and of elected representatives, reinforces commitment and increases in-house skills to effectively manage stormwater.

High levels of staff skills and commitment was cited by 92% of respondents as a reinforcing process for effective stormwater management (compared with a state average of 53%). 67% of Councils identified lack of staff skills and competencies as an obstacle that would affect stormwater management capacity, compared to a state average of 38%. Councils in the region have benefited from effective capacity building programs such as the LHCCREMS WSUD Capacity Building Program, and as such appreciate the importance of awareness, commitment and technical proficiency to effectively manage stormwater.

Staff, management and councillors from councils in the region have participated in a wide range of training and capacity building programs coordinated by the EPA Urban Stormwater Education Program, LHCCREMS, HROC, DLWC and other organisations. Respondents to the needs analysis cited Urban Water Cycle Management and erosion & sediment control as two important areas where further (and wider ranging) training is required.

The Stormwater Extension Officer should implement and support programs to build the individual capacity of council staff and elected representatives. Programs should develop staff skills, competence and confidence at all levels (from operations to management) through training, review and improvement and documentation of policies and procedures through active involvement of staff. These should focus on building capacity for best practice of current stormwater management processes, and promoting and up-skilling staff to implement innovative management processes such as Urban Water Cycle Management.

## **5.3 Marketing & resourcing for stormwater management**

**Obstacles:** 1. Competition for resources; 2. Community relevance and engagement; 3. Access to funding; 4. Poorly coordinated stormwater management within councils; 7. Councillor, management and staff awareness and commitment

**Reinforcing processes:** 1. Effective community engagement; 5. Council commitment; 6. Accessing new funds; 7. Links to development/community actions; 9. Integration into council's processes; 10. Cross sectional coordination within council; 13. Allocating internal resources; 14. Coordination with other asset managers

As reported during the needs analysis, profile and resourcing issues have a huge influence on stormwater management by councils in the region. All councils in the region nominated competition for staff and budget resources with other management issues, and costs of ongoing infrastructure maintenance and depreciation scheduling, as a key impediment to effective stormwater management (95% of councils in the state nominated this).

One of the other important obstacles is limited access to internal and external funding sources (sustainable core funding, levies, grants), which constrains effective stormwater management and raises concerns about stormwater management beyond current grants funding. 83% of councils stated they faced this obstacle, compared with a state average of 73%. Funding access issues included:

- short-term nature of funding arrangements- sustained funding is needed not 1-3 years like grants, levies and there are no more SW grants planned;
- effort required (in terms of internal resources to prepare applications and meet reporting and compliance requirement) is too high;
- limits on revenue raising placed by rate capping;
- scope of grants in terms of what can be applied for;
- poor (lack transparency) criteria for stormwater/environmental levies;
- core resources (staff and funds) allocated to stormwater management low;
- cannot sustain current stormwater quality strategies beyond current grants funding;
- lack of integration between the various grant programs and bodies.

All councils allocate funds to drainage and stormwater management, in the form of staff commitment and infrastructure construction, operation, maintenance and depreciation. Infrastructure assets are extensive, are aging and are costly to maintain and replace.

Several councils of the region allocate internal funding to stormwater quality management, but the levels vary greatly throughout the region and are significantly influenced by the catchment issues, profile of stormwater in the community, political will of elected members, senior management focus, staff commitment and access to external grants (which often require internal cost sharing). A large proportion of stormwater quality management funds are provided by external grants, and in maintenance budgets (which pay for ongoing maintenance of stormwater assets built with internal, grant or developer funds).

Councils receive a significant proportion of funds from external grants (varying from 11.5 to 49.4% of total revenue, see Table 4). A number of councils have received external grants for urban stormwater projects from a range of funding bodies, primarily from the NSW Stormwater Trust (see Section 4.3). Over \$5.8 million has been made available through 37 projects over the four stages of grants. Other grants funding opportunities have been accessed by councils in the region, including: Natural Heritage Trust, Coast and Clean Seas, Lake Macquarie Premiers Taskforce, Hunter

Water Corporation (through its Stormwater Environment Improvement Plan) and the Environmental Trust.

Several councils have implemented environmental or special rates variations, which are used to fund a range of stormwater management activities (Section 4.4). Special rates generally lead to an increase in stormwater funding, profile of stormwater management and capacity to manage stormwater.

Rate capping and cost shifting to local government continue to limit improvements in council's environmental management and enforcement responsibilities. These functions can also be compromised by the desire to encourage economic development in the LGA (see Obstacles in Section 4), and to obtain commercial benefit from development certification functions.

Stormwater management costs are often not specifically linked to Council's corporate or management plan, and so funding for management (especially of stormwater quality control initiatives) is opportunistic not strategic, relying on external grants and developer contributions. This 'drip feed' culture is out of context with sustainable funding for effective stormwater management.

### **Dedicated stormwater staff**

Councils with people who are primarily employed to focus on stormwater-related issues operate on a far higher level of activity than those without (especially with regards community education). SEO interaction with these councils is very different to councils where the contacts are generalists (have other duties). These councils have very different demands than councils without stormwater specialists, and supporting these councils requires a different approach, including more direct technical and planning support, and access to generic education and planning resources.

### **Temporary Project Officers**

Several councils expressed concerns with the employment of temporary staff to undertake stormwater projects (for education programs, oversight of grant projects, Stormwater Management Plan development and review):

- organisation memory issues: loss of expertise and local experience when the project officer contract ends.
- position sits outside the core power structure in council, so they (and often times, their work) has little influence within traditional council structure.
- their work is often not incorporated into overall council policy and practice.
- concerns about what will happen after the Stormwater Trust concludes: loss of project-funded positions may lead to a loss of momentum for SMP and stormwater management in council.

### **Resourcing for smaller councils**

For small councils, the key barrier to effective stormwater management is lack of resources (funds, but most especially staff numbers and time). The key solution is to identify and encourage measures which are achievable, and which will not increase

the workload of the existing management. Initiatives which streamline management practices, and cooperative, regional approaches should be pursued.

Also, there is a need to tailor (contextualise) solutions and initiatives to what is appropriate for these smaller organisations, and what will give them the most benefit for their limited resources. For example:

- structural solutions may not be appropriate given their large ongoing maintenance costs.
- they may not need elaborate monitoring when all they require is basic issue identification and information, and hotspot inspection.

#### **5.4 Stormwater management and planning capacity**

**Obstacles:** 1. Competition for resources; 3. Access to funding; 4. Poorly coordinated stormwater management within councils; 7. Councillor, management and staff awareness and commitment; 8. Regulation and enforcement (Policies); 12. Access information and knowledge (internal)

**Reinforcing processes:** 4. Effective external coordination (strategies); 6. Accessing new funds; 7. Links to development/community actions; 8. Using monitoring and feedback; 9. Integration into council's processes; 10. Cross sectional coordination within council; 11. Levering off review processes; 12. Ready access to information; 13. Allocating internal resources; 15. Adopting a strategic and realistic approach.

#### **Urban Stormwater Management Planning**

As detailed in Section 4, fourteen of the sixteen councils in the region developed Stormwater Management Plans in response to the 1998 Section 12 directive under the Protection of the Environment Administration Act 1991.

The guidelines for SMP development suggested a scheduled review to be conducted after three years of implementation. In most SMPs this review is occurring during 2002–2003. The table below describes the status of SMP implementation and review.

One of the major roles of the Stormwater Extension Officer is to encourage and facilitate the SMP review process, as the Stormwater Management Plan is seen as a key driver of effective stormwater management in councils. The needs analysis at a state level indicated that the revision of SMPs would provide impetus to maintain the profile of stormwater management in councils and allow the Stormwater Management Plans to become better integrated into the management processes of council.

#### **Specific issues with Stormwater Management Plans**

- Some councils perhaps saw the development of SMPs primarily as a statutory requirement, and/or vehicle to access related grants; and thus are little used on an everyday basis, and not integrated into active council planning and management documents, e.g. council management plan. In general though, there has been genuine attempt to implement the action plans detailed in the SMP, in all councils in the region where council has adopted the plan and accessed resources.

- SMPs are primarily driven by either technical services or environmental sections of council. Cross departmental committees (task forces or management teams) oversee SMP implementation in several larger councils.
- Many concerns with SMPs focus around the limited focus only on water quality, with little consideration of associated water management issues: source control approaches, water quantity issues (flooding and drainage), floodplain and estuary management (some SMPs have now been integrated into Estuary Management Plans); water supply and wastewater issues.
- The SMP generally only covers management of urban stormwater, and ignores smaller urban communities, peri-urban and rural areas of LGAs, which may have important stormwater influences (e.g. stormwater retention, floodplain management, urban run-on, water reuse and disposal issues).
- The narrow focus of the SMP (in terms of issues and areas of LGAs covered) makes integration with other council plans and policies (and wider catchment-scale planning frameworks) more difficult. Likewise, focussing on quality issues can make it difficult for staff, who manage other aspects of water, to fully integrate into their workplans/schedules the actions proposed in the SMP.
- Council officers expressed their concerns with the ‘wishlist’ nature of many SMPs. Most are ultimate plans and some parts are not realistic given current resourcing constraints, especially those of smaller councils with fewer resources (especially those with no important receival waters within the LGA). During SMP revision, there is a need to differentiate between what can be done given existing resourcing levels, and what relies on large external resourcing (Dungog uses a simple but effective separation of these).
- Another key part of the SMP revision is to reinforce links with other council plans, management and budgetary instruments, and external planning frameworks such as CMB blueprints.

## **5.5 Conclusions**

- The opportunity exists to better place daily stormwater management in councils in the context of the broader water use and quality context. Good stormwater management must bring together all facets of water management for a holistic and more cost effective approach to the issue. The SEO program must encourage this approach.
- Competition for resources drives the management of most issues in councils. In smaller councils: resourcing constraints both in funds and staff limits the effectiveness of stormwater management. In larger councils creating a stronger profile (public/environmental/economic benefits) and context for stormwater management to senior levels of management through marketing, and to the community through education, will assist the drive to invest in more effective stormwater management. Marketing the importance of stormwater management to decision makers is part of the change process which the SEO will play a role in.
- Stormwater management must be fundamentally linked to Council’s corporate and budgetary management plans for funding to be strategic and sustainable. Access to external funds (through grants and developer contributions) will stimulate stormwater management, but sustaining effective stormwater management requires internal funding structures.

## Appendices

### Appendix 1: Stormwater Trust Stage 4 Grants awarded in the region

[Stormwater Trust Grants Scheme - Stage 4](#), has offered (state-wide) 75 individual grants between \$35,500 and \$961,100, totalling \$15 million.

| Lead Organisation                             | Project Title   | Description  | Grant up to  | Grant No |
|---|---|--|--------------|----------|
| <b>Gloucester Shire Council</b>               | Reducing the Impact of Urban Stormwater on the Gloucester Billabong   | Gloucester Council will reduce the impact of urban stormwater on the Gloucester Billabong and the Manning River through the installation of a pollution trap, education, and regulation.   | \$73,936.00  | SR/G4089 |
| <b>Gosford City Council</b>                   | Central Coast Beaches and Waterways Stormwater Clean-up Project   | Gosford Council will install a series of pollution traps at Avoca and Ettalong Beaches and Gosford CBD coupled with an education campaign targeting summer visitors to these areas, to minimise the negative impact of stormwater pollution                    | \$331,000.00 | SR/G4102 |
| <b>Gosford City Council</b>                   | Focussed Improvements in Stormwater Management from Gosford's Industrial Estates                                    | Gosford Council will undertake a series of environmental audits targeting the automotive industries to lead to focussed improvements in stormwater management from Gosford's Industrial Estates.   | \$75,000.00  | SR/G4103 |
| <b>Greater Taree City Council</b>             | Urban Stormwater Pollution, Apprehension and Education, Phase 2 of Greater Taree City Council's USP Implementation. | Taree Council will install two pollution traps and undertake a schools and community education program to undertake their project Urban Stormwater Pollution, Apprehension and Education, to minimise the impact of stormwater pollution on the Manning River. | \$227,650.00 | SR/G4101 |
| <b>Hunter Region Organisation of Councils</b> | Sustainable Stormwater Management Capacity Building Program. A Package for Councils and Catchment Managers.         | The Hunter Region Organisation of Councils will lead seven local councils in developing a sustainable stormwater management capacity building program. This package will have significant benefits for councils and stormwater managers in NSW.                | \$229,000.00 | SR/G4086 |
| <b>Lake Macquarie City Council</b>            | Sustainable Stormwater Management for Salts Bay - "Save the Rainforest from the Rain"                               | Lake Macquarie Council will undertake a series of measures including rainwater tanks, infiltration trenches, grassed swales to minimise polluted runoff entering Lake Macquarie. The project will also work with the community to maintain pollution traps.    | \$256,753.00 | SR/G4136 |
| <b>Newcastle City Council</b>                 | Kotara Roof to Creek Project - an Urban Water Cycle Management Demonstration Project                                | Newcastle Council will work with local residents to install water sensitive design features such as rain water tanks and swales to minimise the amount of stormwater generated within the catchment. The project will include significant monitoring.          | \$155,500.00 | SR/G4154 |
| <b>Newcastle City Council</b>                 | Black Duck Catchment - Living Sustainably with Urban Creeks   | This project will focus on sediment control, remnant vegetation values and community education in the Black Duck Creek Catchment, to develop a program of Living Sustainably with Urban Creeks.  | \$302,300.00 | SR/G4155 |
| <b>Newcastle City Council</b>                 | Warabrook Estate Wetlands - Building Sustainable Business & Community Catchment Connections                         | Newcastle Council will install a series of pit entry baskets, sand filters, gravel beds and grassed swales to protect the Warabrook Estate Wetlands from urban stormwater. The project will build sustainable business and community catchment connections.    | \$368,100.00 | SR/G4157 |
| <b>Wyong Shire Council</b>                    | McColl Park Wetland   | Wyong Council will construct a wetland system, develop a community education program and integrate council's stormwater program to minimise the impact of stormwater pollution on the Tuggerah Lakes catchment.  | \$213,000.00 | SR/G4027 |

## **Appendix 2: Other organisations and planning frameworks in the region**

### **planningNSW**

The Hunter is one of the regions in which the planFIRST program is being developed by planningNSW. The Central Coast is a focus area for the Living Cities strategy, with dedicated state agency support.

### **Water Supply Authorities:**

- Hunter Water Corporation
- Gosford Wyong Water Catchment Authority
- Mid Coast Water

### **Draft CMB Blueprints:**

- Lower Hawkesbury-Nepean
- Central Coast
- Hunter
- Lower North Coast

### **Healthy Rivers Commission reports:**

- Williams River (1996)
- Hawkesbury Nepean (August 1998)
- Coastal Lakes (draft, August 2001): Wallis, Smiths, Myall, Macquarie, Tuggerah, Wamberal, Terrigal, Avoca
- Hunter (August 2002)
- North Coast Rivers (issues paper, April 2002): Camden Haven, Manning, Karuah.

### **Other regional organisations:**

- Hunter Catchment Management Trust (operates across ten LGAs in the Hunter region: Merriwa, Murrurundi, Scone, Muswellbrook, Singleton, Dungog, Maitland, Cessnock, Port Stephens, Newcastle).
- Active and coordinated environmental movements exist in most areas, especially along the coast. In the inland areas, these environmental groups are often part of the Landcare movement. The Hunter Catchment Management Trust works with a large number of groups, as does the Central Coast Community Environment Network (CCCEN).

### **Appendix 3: DLG classifications used in this document**

The Australian Classification of Local Governments (ACLG) classifies councils into 22 categories according to their socioeconomic characteristics and their capacity to deliver a range of services to the community.

Much of the data for Table 1 was sourced from the Department of Local Government publication: *Comparative Information on NSW Local Government Councils 2000/2001*. In this publication, NSW councils are instead classified 11 groups or categories instead of 22. This is because several of the ACLG categories contained either no NSW councils or only one or two councils. This made it difficult to compare the performance of different councils in a meaningful way.

|   |  |  | <b>DLG group No.</b>                         |
|---|--|--|--|
| <b>URBAN</b><br>Population > 20,000<br><br>or<br><br>Population density >30 persons per km <sup>2</sup><br><br>or<br><br>90% of LGA population is urban | <b>Capital City</b>  |  | 1  |
|   | <b>Metropolitan Developed</b><br>Part of an urban centre<br>> 1,000,000 and population density > 600 persons per km <sup>2</sup> | Small: up to 30,000<br>Medium: 30,001–70,000   | 2  |
|   |  | Large: 70,001–120,000<br>Very Large: > 120,000   | 3  |
|   |  | <b>Regional Town/City</b><br>Part of an urban centre with population < 1,000,000 and predominantly urban in nature | Small: up to 30,000<br>Medium: 30,001–70,000 |
|   | Large: 70,001–120,000<br>Very Large: > 120,000   |  | 5  |
|   | <b>Fringe</b><br>A developing LGA on the margin of a developed or regional urban centre  | Small: up to 30,000<br>Medium: 30,001–70,000   | 6  |
|   |  | Large: 70,001–120,000<br>Very Large: > 120,000   | 7  |
| <b>RURAL</b>  | <b>Agricultural</b>  | Small: up to 2,000   | 8  |
|   |  | Medium: 2,001–5,000  | 9  |
|   |  | Large: 5,001–10,000  | 10   |
|   |  | Very Large: 10,001–20,000  | 11   |
|   | <b>Remote</b><br>Situated in a remote locality   | Medium: 1,001–3,000<br>Large: 3,001–20,000   | 9<br>10                                      |