

Draft submission to the Senate Committee on Environment and Communications inquiry into stormwater resources in Australia

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Opening

Local Government NSW (LGNSW) is the peak body for councils in NSW, representing all 152 NSW general-purpose councils, the special-purpose county councils and the NSW Aboriginal Land Council. In essence, LGNSW is the 'sword and shield' of the NSW Local Government sector.

LGNSW is a credible, professional organisation that represents the views of councils to NSW and Australian Governments; provides industrial relations and specialist services to councils; and promotes NSW councils to the community. LGNSW facilitates the development of an effective community-based system of Local Government in NSW.

LGNSW welcomes the opportunity to make a submission to the Senate Committee on Environment and Communications inquiry into stormwater resources in Australia. NSW Local Government manages urban stormwater to minimise impacts on waterway health, minimise flooding and provide an alternate water source. Increasingly, the emphasis is being placed on creating water sensitive communities that have a mix of centralised and decentralised water supply and reuse systems, and urban design and infrastructure that supports human and ecosystem wellbeing.

Please note that in order to meet the consultation deadline, this submission is provided in draft form in anticipation of the LGNSW Board approval in June 2015. LGNSW will advise the Senate Committee of any amendments to the submission at that time.

Response

The role of Local Government

Local Government has a range of functions, powers and responsibilities in managing stormwater - on both private and public land. These include:

- strategic planning through land use zoning and statutory controls on all freehold land and locally managed public open space;
- development control of activities and works through development consent powers (e.g. stormwater harvesting and reuse schemes, onsite stormwater detention etc.);
- enforcement powers for development consent conditions, waste management and unauthorised land uses (e.g. land clearing, drainage, and filling);
- integrated planning, licensing and development concurrence;
- stormwater management and control; drainage works, and flood control;
- influence over stormwater management through incentive programs (planning amendments, rates, levies and developer contributions);
- management of local open space to manage stormwater resources;
- primary advocate for and coordinator of local community groups and interests.

Furthermore, in regional NSW, councils provide water supply and sewerage services to their communities. These council-owned and operated local water utilities manage stormwater to ensure adequate water quality in their supply sources as well as use stormwater as a supply source.

In relation to water supply and sewerage service provision in regional NSW, LGNSW supports institutional and regulatory arrangements that maintain Local Government responsibility for the operation and management of water supply and sewerage services and Local Government ownership of water supply and sewerage infrastructure. LGNSW believes that this is crucial to ensure an integrated and locally appropriate approach to water supply and sewerage management, including stormwater, and optimal whole-of-community outcomes for local communities.

Optimal management practices

Total catchment management and water sensitive urban design practices have many benefits to councils and the community including:

- Reducing potable water usage – more than 50% of potable water is used for low quality uses in urban areas, where stormwater reuse could offset potable use;
- Increasing certainty of supply – enabling the maintenance of parks, gardens, open space and the benefits associated with these assets during water restrictions;
- Reducing stormwater volumes, flows and runoff frequencies to more natural levels which reduces stream erosion, improves in-stream aquatic ecosystem health, and reduces the potential for minor flooding events;
- Reducing stormwater pollutant loads in waterways which improves catchment water quality and reduces potential for algal or weed growth;
- Meeting community expectations in terms of water conservation and pollution;
- Improving community resilience in a changing climate through the use of green infrastructure that improves human and ecological wellbeing.

The role of scientific advances

Scientific research to improve stormwater management outcomes should focus on the end-users needs. This could be achieved by researchers working together with relevant policy makers and end-users (such as Local Governments) to ensure that the research can be applied and facilitate early adoption of advances.

A focus on perceived public health issues, the technical feasibility and performance of technologies and the effectiveness of community engagement strategies are a priority. An interdisciplinary approach is preferred (e.g. engineers, environmental scientists, social researchers, economists, educators, urban designers and planners working cooperatively) as many of the barriers to utilising stormwater resources more effectively are social and institutional rather than technical feasibility (Brown *et al*, 2007¹).

Potential solutions also need to be examined in different geographical contexts. For example, density of development, climate and demographics may influence which stormwater management approach is more acceptable. Inner metropolitan suburbs with space constraints may adopt the use of vertical gardens, green roofs, rain gardens and mechanical water quality treatment as opposed to a regional area with agricultural run-off in a more open catchment.

Local Government's stormwater infrastructure was designed on historical averages in rainfall. NSW has experienced considerable rainfall variability in the past with periods of extremes of drought and flood. Current climate modelling has produced uncertain results for NSW in an

¹ Brown, R., Farrelly, M. and Keath, N. (2007) *Summary Report: Perceptions of Institutional Drivers and Barriers to Sustainable Urban Water Management in Australia*. Report No. 07/06, National Urban Water Governance Program, Monash University.

annual average rainfall range from a decrease (drying) of 10% to an increase (wetting) of 11% by 2030 (OEH, 2014²). Further research is needed to understand what impact climate change may have on both existing infrastructure and for planning for future scenarios.

Resilient Communities

Traditional approaches in stormwater management (i.e. the supply of clean water, removal of sewage, and large-scale drainage schemes) have made significant contribution to reducing the incidence of disease, personal injury and property damage. However, this has resulted in high flows and high levels of pollution in waterways with little or no accounting for the ecological services provided by the environment (Brown, 2008³).

Retaining and treating the stormwater within its catchment for human and ecological uses increases community resilience to the effects of climate change by:

- securing water supply;
- reducing potential flooding impacts;
- improving biodiversity outcomes; and
- moderating the microclimate which is important on days of extreme heat.

For example, Marrickville Council's Strategy for a water sensitive community aims to achieve this by:

- Harvesting and treating stormwater for use e.g. by rain gardens and wetlands ensures clean water is entering local waterways.
- Infrastructure designed for more infiltration and evaporation which improves microclimates and helps reduce the effects of local flooding, e.g. vegetated roofs and permeable paving.
- The movement, distribution, and quality of water is managed so that it is more like the natural water cycle.
- Urban waterways are rehabilitated to support local biodiversity and influence microclimate.

Another example is Orange City Council's Blackmans Swamp Stormwater Harvesting Scheme, representing the first large scale, indirect-to-potable stormwater harvesting project in NSW. The scheme is capable of providing between 1,300-2,100 ML of additional water into the Orange's raw water supply each year from the city's stormwater system, meeting up to 40 per cent of the city's total water needs.

The scheme is a new and innovative approach to augmenting water supply through capturing urban stormwater flows. It is the largest potable stormwater reuse system in Australia and has won several industry awards. The scheme is also a remarkably successful exercise in public communication and education, with the community willingly accepting reused stormwater.

Economic and policy incentives

New incentive mechanisms are needed for Local Government to implement appropriate stormwater management practices on private property. Currently, councils have access to development incentives during the Development Application process.

² NSW Office of Environment and Heritage (2014) *New South Wales Climate change snapshot*

³ Brown, R. R., 2008, Local Institutional Development and Organizational Change for Advancing Sustainable Urban Water Futures, *Environmental Management*, vol 41, issue 2.

There is also the potential for rebates and installation financing but due to regulatory and economic constraints, this is not always feasible for Local Government. Some councils, such as Parkes Shire, have undertaken tendering on behalf of their communities for the bulk purchase and installation of various technologies (in this case, solar technology) to secure a lower price than what would be available to individuals.

Some councils offer grants to private property owners to finance the adoption of a desirable practice. However, funds are usually small amounts and distribution is limited to within the Local Government Area offering the grant.

Model land use planning and building controls

NSW councils recognise the importance of controlling sediment, acid run off, and silt from construction sites through conditions on building and subdivision approvals. Also recognised are the benefits of incorporating water sensitive urban design principles into planning controls (e.g. Development Control Plans or standard conditions).

It would be useful outcome of the Inquiry to commission an independent and fully funded audit and review of land use planning and building controls being used by Local Government to manage stormwater. Dissemination of the findings would further build the capacity of the sector to address stormwater issues. For example, North Sydney and City of Sydney Councils have urban green cover policies that promote the retention of stormwater for green infrastructure and to improve water quality. Willoughby City Council has a policy of offsetting onsite stormwater detention pits with rainwater tanks on private property.

Funding models and incentives

NSW Local Government has been reliant on external grant programs to fund large scale catchment improvements. This includes large-scale stormwater and sewer harvesting schemes, riparian restoration works, gross pollutant traps and street work improvements for water infiltration. In some cases developer contributions can be used in areas where there is an increase in density of housing.

NSW Local Governments also have the option of a stormwater levy on rate payers to recover some or all of the costs of providing new or additional stormwater management service to eligible land. The income from the charge can be spent on both capital projects and recurrent expenditure such as the planning, construction and maintenance of drainage systems, stormwater treatment systems, harvesting and reuse systems and community education. However, the levy cannot contribute to the maintenance of existing stormwater infrastructure and has not removed the stormwater infrastructure backlog.

Asset management and operations

Local Government is one of the biggest sectors in NSW economy, spending approximately \$10 billion per year, managing non-financial assets (infrastructure and land) worth \$120 billion, and employing more than 50,000 staff. This includes stormwater drainage assets worth \$9.4bn⁴.

To avoid constraints in the provision of infrastructure, councils require sufficient funds to maintain and renew existing infrastructure and to construct new infrastructure. However, councils with their limited taxation power (rates on land) often do not have the capacity to raise sufficient funds on their own and are dependent on intergovernmental transfers. This is particularly the case in regional and rural areas where the rating base is small. Also, restrictions on rating revenue such as rate pegging have exacerbated funding difficulties

associated with this limited revenue base. These revenue constraints have already resulted in a large stormwater drainage infrastructure renewal backlog of \$633 million at 30 June 2012⁴ and will continue to constrain Local Government's ability to renew existing and provide new infrastructure.

Council stormwater infrastructure, like other infrastructure assets, generally needs to be maintained at a certain level or in a specific condition, in order for councils to provide the necessary and desired services to its community. There is a large variation between the estimated (2.5%) and actual (0.6%) maintenance required⁴. Lack of maintenance can only cause further deterioration of assets and therefore require earlier renewals.

Conclusions

Local Government, across Australia, plays a major role in the management of stormwater resources and providing water supply and sewerage services. Local Government also plays a role in community capacity building and awareness raising. LGNSW calls on other spheres of government to continue to work with and support councils in their pursuit of best practice water management and conservation. LGNSW is interested in the outcomes of this inquiry and hopes that it leads to more effective planning, management and funding of stormwater projects.

⁴ Department of Premier and Cabinet, Division of Local Government, Local Government Infrastructure Audit, (June 2013).