

# DEVELOPING NATIONAL GOOD MANAGEMENT PRACTICES FOR URBAN STORMWATER

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## ABSTRACT

### ***Overview of government priorities and relationship to stormwater issues***

The design and use of urban areas are affecting ecological health and flows of ecosystem services across multiple environmental domains including climate, air, land, marine and freshwater. In the freshwater domain, approaches to the design, delivery, management, and use of freshwater, land and infrastructure (three waters and transport) are having adverse effects on water ecosystems and resources, and people's relationship with them. Some of these effects are significant and long-term, including impacts on health (physical and cultural), liveability, climate resilience, economy, and the health of downstream environments.

These challenges for urban water align with several of the new government's priorities, including improving water quality, climate change resilience, providing affordable housing and development capacity, and regional development.

### ***What is Government doing to address these challenges?***

Since 2016, the Ministry for the Environment (MfE) has been working toward identifying good management practices (GMPs) in both rural and urban environments, in order to encourage certain ways of improving the health and resilience of freshwater ecologies. The Land and Water Forum defined good management practices as:

*"an evolving suite of tools or practical measures that are being put in place at a land user, sector and industry level to assist in achieving community agreed outcomes".*

The Ministry is looking to codify such a suite of tools and practical measures for improving the ecological health and amenity of urban waterways. As most negative impacts relate to stormwater discharges, these GMPs will focus primarily on encouraging good stormwater management by councils, development firms and various other stakeholders. This piece of work is closely aligned with the Three Waters Review and will integrate with that policy work.

Urban Water GMPs will necessarily respond to issues of both quantity and quality as these issues and their drivers are often inextricably linked. There is a strong expectation from the wider urban stormwater industry, including regional councils and territorial authorities that MfE will work with local authorities to help them tackle issues related to diffuse pollution so that urban water quality can be maintained or improved as required by the National Policy Statement for Freshwater Management.

The Ministry is considering different ways to promote the use of existing methods and design techniques/specifications that can help avoid and mitigate some of these negative

effects of poor stormwater management. Collectively many of these approaches are labelled 'Water Sensitive Urban Design' (WSUD). These practices primarily use natural and constructed ecosystem features to ameliorate (or avoid altogether) negative impacts of urban development. WSUD can also prevent negative impacts of hydrological variability (flooding, wastewater overflows etc.) on urban infrastructure. Finally, WSUD in different contexts may also create valuable amenity, transport and health benefits which can increase the liveability of New Zealand's urban areas. Many of these practices are not commonly utilised in New Zealand at present.

[We expect that the GMPs codified by this working group will likely promote some of these practices. The talk will provide a progress update on this project.]

### ***How is MfE developing these GMPs?***

To inform the development of these GMPs, the Ministry has convened an expert practitioner working group. The working group membership is drawn from representatives across relevant parts of the sector, including:

- iwi,
- local government sector – regional, unitary and local councils, LGNZ,
- technical/industry groups
- development sector e.g. Property Council, NZPI

The term of the working group is initially for the period of October 2017 to October 2018. The working group had its initial scoping meeting on 17 October 2017. Based on this initial discussion, the goal of this working group is to support Government in setting GMPs which will help improve the liveability of our cities and towns and the cultural and ecological health of receiving environments. This may broadly include promoting and normalising the uptake of Water Sensitive Urban Design.

The working group is split into six sub-groups. Some of these subgroups are responsible for defining the GMPs while other subgroups are working to create an implementations strategy for the new GMPs. The following describes the work being undertaken by each sub-group.

#### *Policy Framework*

This group will explore ways to improve the existing policy framework in order to improve the uptake of GMPs/Water Sensitive Urban Design in Regional Policy Statements, Regional Plans and District Plans. This may include identifying GMPs for regional and district plan making and content.

The group may produce guidance on the existing state of regulations and tools available to implement water sensitive design and policies with a particularly focus on where there is ambiguity in functions and interpretation.

The most substantial output of the policy framework sub-group is the production of a toolbox for the implementation of water sensitive policies. This will provide guidance on the broad range of options councils have, how they fit together (drawing on the above work), when different tools may be most appropriate and examples and case studies of various tools.

#### *Values for Urban Waters*

People co-exist with the environment, rather than manage it, and have an obligation to look after it. Core values for water held by many community groups – including many kaitiaki – are wai ora and mauri. What happens on land necessarily impacts the health and life-force of the water. To that end, people's use of urban land need to be aligned with community values.

We can't assume everyone shares these values. The primary aim of this sub-group is to create process-oriented GMPs that those involved in urban development can use to identify and provide for their community's values. This group can also consider pathways to increase public awareness of these values and influence/enhance people's connection with urban water. This in turn will give councils and others the social licence to take action and implement water sensitive urban design.

#### *Methods for mitigating priority pollutants*

This sub-group will focus on identifying and prioritising work on common urban pollutants. This may include developing/identifying GMPs related to source control and mitigation strategies for certain pollutants. This sub-group links strongly with the policy framework and bridges the gap between the world of research and implementation by identifying GMPs related to specific pollutants

This is in the process of collecting information on the extent and risks related to various pollutants including heavy metals (zinc and copper), sediment, heat pollution, and petrochemicals. This group will help identify where there are gaps in information and then address those gaps.

The group will then seek to define GMPs that relate to mitigating issues related to these specific pollutants. Source control was the top priority for the group, however, it was noted that setting GMPs for end of pipe solutions would also be valuable in the short term.

#### *Benefits, economic implications and incentives*

An additional challenge is how to assess and describe the costs and benefits of water sensitive design and retrofit activities, as well as the economic incentives and funding mechanisms that can be used to facilitate their uptake. This encompasses a range of themes:

- Alternative funding mechanisms for new development/restoration
- Understanding and articulation of the distribution of costs and benefits of development/restoration
- Incentives for uptake of WSUD and retrofits
- evidence of WSUD in mitigation effectiveness and cost avoidance
- Non-regulatory components of a "user/polluter pays" system for urban water
- Capacity building and peer learning about the above topics

This group will analyse and discuss options through the lens of the council, developers and community interests, with targeted discussion relevant for high-growth/low-growth areas and those with highly vulnerable/low vulnerability receiving environments. The group will consider the different 'business cases' that could support uptake of GMPs in various situations.

#### *Guidance/Outreach on GMPs to Improve Capability*

This subgroup will collate guidance on the GMPs identified by other subgroups and develop the capacity-building products or processes needed to increase the uptake of the new GMPs. In some cases, this may mean simply communicating existing guidance related to these GMPs in new ways for specific audiences.

It is possible that this group may create national guidance that borrows heavily from existing regional/city guidance, such as Auckland's design manual for WSUD.

#### *Monitoring, evaluation and compliance*

The final subgroup will develop an evaluation and monitoring framework to help guide the evaluation of GMPs in practice. The group will develop an outcome framework for this work, which can be used to evaluate the effectiveness of uptake of GMPs proposed by the other workstreams. This work will draw from existing work by regional councils and will narrow outcomes down into the most important ones for urban areas.

#### **Next Steps**

[MfE officials will provide an update on progress at the time of the conference and discuss the next steps for developing and implementing the GMPs.]

#### **KEYWORDS**

**Policy, Central Government, Water Sensitive Urban Design, Water quality, Good Management Practices, National Policy Statement for Fresh Water, Urban Development Capacity.**