

1.0 Overview

1.1 Activity description

The stormwater network protects human health and well-being, and makes the city viable, by reducing the risk of flooding. Each year the network carries about 80 million cubic metres of run-off from kerbs and channels and drains to streams and the harbour. The network is made up of more than 680km of pipes and tunnels with a total replacement cost of approximately \$640 million.



The stormwater network is managed in accordance with the stormwater asset management plan, which ensures service level requirements such as network condition and capacity, flood risk reduction, response to faults/complaints, and criteria for upgrades and renewals are met. The plan details how the Council will comply with all relevant legislation and regulatory requirements.

Key service level requirements and underlying standards include:

- Habitable dwellings should be protected from flooding during a 1 in 50-year rainfall event.
- Discharges from the stormwater system should have minimal impact on the aquatic receiving environment.

This plan covers the 10-year planning period from 2009/10 to 2017/18.

1.2 Council involvement

Reliable and sustainable flood protection is a fundamental requirement to protect the health and well-being of the community, including providing support for business development.

In urban areas, stormwater is most effectively disposed of by means of reticulated stormwater systems to the nearest watercourse. This allows the costs associated with maintaining high standards and efficient infrastructure to be spread over a wide population. The existing stormwater system has been developed and built up over many years as a public system to serve the needs of the community.

Wellington City Council manages Wellington's stormwater activity because:

- The activity directly supports the achievement of a number of community outcomes (outcomes the Wellington community believe describe the city they wish to live in). It also directly supports the achievement of Council outcome nine (safer – protecting public health and the environment, Figure 2), and supports economic growth of the community.
- The Council can provide a specified level of service in a cost-effective manner.
- The Local Government Act 2002 (section 130) requires the Council to provide water services (including stormwater services) and maintain its capacity to do so.
- The Health Act 1956, (sections 23 and 29) requires the Council to “improve, promote and protect public health” within the district as necessary.

- The community, through the community outcome process, has strongly indicated its support of Council involvement to sustainably manage the stormwater activity to protect public and environmental health, critical infrastructure and property, and to actively reduce adverse environmental impacts.

1.3 Key stormwater issues

Key stormwater issues identified by the Wellington City Council which are being addressed are:

- **Levels of service.** The level of service provided to Wellington City by the stormwater activity is consistent with current industry standards and levels of service provided by other councils in New Zealand. Analysis indicates the current level of service broadly satisfies community expectations. The Council will continue to gather data to better describe the actual level of service provided and determine resident satisfaction with a greater level of confidence.
- **Future change.** The effects of future climate change are uncertain, although warmer temperatures with some increases in peak rainfalls and rises in sea levels are expected. Population growth and urbanisation are expected to continue. The projected increase in stormwater run-off generated from these changes, decreased ability to dispose of the run-off through sea level rise and increased risk of coastal inundation requires active management, especially since planning for change and implementing identified initiatives takes time.
- **Environmental impact from stormwater flows.** Stormwater run-off from urbanised catchments is greater than from natural catchments, reflecting the higher proportion of impermeable surfaces. Increased run-off flows can scour and otherwise degrade natural watercourses, and the use of traditional piped systems reduces groundwater recharge. Contaminants such as oils, grease, metals and other contaminants washed from pavements and other areas in urban catchments and discharged into sumps are present in stormwater entering watercourses, the harbour and coastal receiving environments. While there is limited information on the impact of these contaminants on our environment, there is growing awareness in New Zealand that there is risk of environmental damage, and possibly a risk to public health. Further, the wastewater network occasionally overflows to the stormwater system in wet-weather events through a series of constructed overflows. The stormwater, contaminated with diluted wastewater, is then discharged to watercourses or the sea. The environmental and public health impacts of these discharges, and actions in place to address them, are covered within the wastewater asset management plan.
- **Risk of natural disaster.** A catastrophic natural disaster, such as a major earthquake, could limit the ability to provide reliable flood protection to the community and would hinder reinstatement of other necessary services, such as accommodation, water supply and wastewater disposal. Reinstating flood protection systems, both temporarily and permanently, would be costly and would take considerable time.
- **Continuous improvement.** The Council recognises the fundamental need to continually improve its asset management processes. Stormwater management must be provided at agreed service levels and with increasing efficiency to reduce costs, reduce resource use and minimise environmental impacts.