Stormwater

Community Outcomes

Mana Taiao / Environmental well-being - Sustainable communities that manage resources in a way that improves our environment for future generations.

Why we do it

There is a strong community expectation to be protected and safe within our homes and we need to protect infrastructure, such as roads and wastewater systems that can be damaged by excessive floodwater. To respond to this, we build. operate and maintain stormwater infrastructure.

Stormwater reticulation is provided in many urban areas to help prevent or minimise the flooding of properties and reduce or eliminate water ponding on roads that could create safety hazards. In extreme rainfall events when the pipe network is overloaded, stormwater will take overland flow paths, often along roads.

High quality stormwater infrastructure supports the economic well-being of the District and provides a healthy and safe place for our communities to live.

What we do

We manage and maintain stormwater assets made up of culverts, water channels, water collectors, pump stations, stormwater ponds, outfalls and pipe reticulation networks. Stormwater from residential properties is normally disposed of on-site via soakage, not through the stormwater system. To deliver stormwater services, we operate a network that includes 95 km of pipes, 1025 manholes, 325 outlets, 2108 inlets and 23km of open drains. The stormwater assets have a replacement value of $41.9 million.

There is a distinction between roading drainage and stormwater reticulation assets. Roading drainage assets include culverts under roads, catch-pits, roading sumps, kerb and channel and the discharge pipes from roading sumps to stormwater mains. These assets collect stormwater and convey it to either streams or stormwater reticulation assets.

Surface flooding of roads by stormwater is a common complaint and this can be due to blocked sumps or blocked downstream pipework. Our focus is to ensure that the maintenance contracts for street cleaning and stormwater reticulation are aligned in terms of preparing and responding to flooding events.

The Taranaki Regional Council (TRC) has responsibility for stormwater control outside urban areas, so we need to work closely with the TRC to ensure that appropriate solutions are found to flooding issues in our communities. Whilst Waitōtara is a village within our District and has experienced major flooding several times, the responsibility for its flood defences rests with the TRC.

Prevention of flooding to all properties in all circumstances is not feasible or affordable. The focus for the performance of our stormwater networks is therefore to minimise the occurrence of flooding of houses, excluding garages and sheds.

Looking Ahead

Our stormwater infrastructure is not developed to the same extent as our water and wastewater networks. Having received the highly accurate LiDAR (Light Detection and Ranging) data, we are now able to plan our stormwater networks development and renewals, even though some of our infrastructure is due for renewal now. However, flooding problems that are obvious in some of our urban areas will require that we proceed with upgrades and/or renewals without the required catchment data.

The increase in demand for stormwater services as a result of urban growth over the next ten years is not anticipated to be significant. However, the problems we are experiencing with too much stormwater entering the wastewater network may be mitigated in some instances by increasing the capacity of the stormwater network.

Future Projects

The main focus of project works to be undertaken during the next ten years is to renew some urban stormwater systems and identify any upgrades that are needed. These will be prioritised based on flood risk to houses, from the outputs of hydraulic models being created for each town. It is expected this will result in an increase in the capital funding requirements in future.

Key Capital Projects

Description	Year	Total ($)
South Taranaki Business Park	Years 1 to 2	$2.6 million
Matangarara landfill drainage	Years 2 to 4	$2.3 million
Stormwater pipe renewals	Years 1 to 10	$2.3 million

Significant Negative Effects

We strive to reduce the negative impacts of our operations, but we acknowledge that sometimes our activities have negative impacts. The table below shows the possible negative effects of our stormwater activity and how we intend to minimise these effects.

Activity	Well-Being	Significant Effect	Mitigation
Stormwater discharge	Mana Taiao/ Environmental Well-being	Discharge of polluted stormwater adversely affecting public health.	Compliance with resource consents. Comprehensive approach to stormwater management based on catchment management plans. Works are proposed to reduce the amount of stormwater entering the wastewater network.

Stormwater capacity	Mana Oranga/Economic Well-being Mana Tangata/Social Well-being	Inadequacy of existing stormwater assets to cope with large rainfall events causing flooding, and erosion, which could result in social and economic hardship.	Compliance with design standards to incorporate detention ponds where appropriate to prevent flooding and erosion. The Council utilises overland flow paths to increase the level of protection for houses and commercial buildings. Works are proposed to improve the level of protection in large rainfall events.

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Level of Service	Performance Measure C=customer measure T=technical measure	Target 2021/22	Target 2022/23	Target 2023/24	Target Years 4 - 10
Council provides a reliable stormwater system which prevents houses from flooding.	(C) Number of reported flooding incidents of habitable properties. *DIA Performance Measure 1a*	< 10	< 10	< 10	< 10
	(T) For each flooding event, the number of habitable floors affected per 1,000 properties rated for stormwater. *DIA Performance Measure 1b*	≤ 1.00	≤ 1.00	≤ 1.00	≤ 1.00
The stormwater system is managed sustainably.	(T) Number of abatement notices received by STDC for stormwater discharges. *DIA Performance Measure 2a*	< 2	< 2	< 2	< 2
	(T) Number of infringement notices received by STDC for stormwater discharges. *DIA Performance Measure 2b*	0	0	0	0
	(T) Number of enforcement orders received by STDC for stormwater discharges. *DIA Performance Measure 2c*	0	0	0	0

	(T) Number of successful prosecutions made against STDC for stormwater discharges. *DIA Performance Measure 2d*	0	0	0	0
Council will respond promptly to reports of flooding and customer requests.	(C) Number of complaints received about stormwater system and response to issues (per 1,000 connections). *DIA Performance Measure 4*	≤ 1	≤ 1	≤ 1	≤ 1
	(T) Median response time for service personnel to attend flooding event. *DIA Performance Measure 3*	≤ 2 hrs	≤ 2 hrs	≤ 2 hrs	≤ 2 hrs
Residents are satisfied with the Stormwater system.	(C) % of residents satisfied with the stormwater system.	≥ 80%	≥ 80%	≥ 80%	≥ 80%