

STORMWATER

STORMWATER

OVERVIEW

Council's stormwater systems are built to protect buildings and property from the effects of flooding and coastal erosion. These systems include watercourses, open channels, swales and structures that channel stormwater to a final discharge point. They include primary and secondary overland flow paths, stormwater detention and stormwater treatment.

Legislative requirements regarding the quality and quantity of stormwater released must be met by Council. Under the Resource Management Act 1991 district councils must manage land use in a way that minimises environmental effects.

We continue to manage three stormwater management areas:

URBAN GROWTH AREAS

These are the main urban areas within our District planned for future urban development and expansion. They will have significant stormwater infrastructure and the greatest potential to affect receiving environments.

SMALL SETTLEMENTS

These are small urban settlements with some stormwater infrastructure generally of low capital value when compared to the infrastructure in urban growth nodes areas

RURAL SETTLEMENTS

These areas include land zoned rural as well as rural villages that have fewer than 50 residential dwellings. These areas are provided for by the stormwater infrastructure that is supplied as part of the roading system.

The Minden area has its own potential geotechnical challenges. Specific District Plan rules are in place surrounding the management of stormwater during subdivision and development. Overland flow paths are identified in the Minden Lifestyle Zone Structure Plan and new stormwater works may be proposed as a result of development in the future.

Over the 10-year period of this Plan we propose to continue our stormwater modelling of both the urban growth areas and small settlements. Waihi Beach and Te Puke have been extensively modelled. As a result of the work to date we are better able to identify floodable areas and at-risk properties. This has enabled us to propose a programme of work over the 10 years to address flooding issues. We are aiming to protect 97% of existing urban growth nodes and small settlement properties from having a habitable floor flooding in a 1:10 year rainfall event. It is important to understand that we are not aiming to stop flooding of non-habitable floor space such as garages / sheds or gardens. Communities will have to expect some surface flooding.

We propose to spend \$19,938,000 over the 10-year period of which \$12,080,000 is dedicated to additional works at Waihi Beach. This has already begun with bank protection works completed for the downstream section of Two Mile Creek and will continue for the upstream section. This is because the Creek is an important element of the wider stormwater management approach for the northern Waihi Beach catchments. The rest of the money is proposed to be spent on projects across the District including stormwater modelling, stormwater treatment, capital upgrades and renewals. Funding for structure plan areas in relation to stormwater has been bought forward to 2018.

We are offering to waive building consent and resource consent fees as an incentive to any landowners who wants to undertake raising their habitable floor levels to cope with a 1:50 year rainfall event. It is the only feasible method available to mitigate the risk of flooding in a 1:50 year event, for some properties.

Waihi Beach and Te Puke are now covered by District Plan rules that future-proof flood mitigation by requiring new dwellings to have habitable floor levels that protect properties against flooding in a 1:50 year rainfall event.

Demand for stormwater services is managed in accordance with our Development Code and corresponding levels of service. Levels of service are set to meet legislative requirements and are related to the containment of water within the system under varying flood conditions and the quantity and quality of water released into the environment. To address this, our capital works programme for 2018-28 focuses on essential upgrades and maintenance to ensure compliance with the current levels of service.

URBAN		RURAL
Urban growth areas	Small settlements	Rural settlements
Katikati	Kauri Point	Little Waihi
Omokoroa	Maketu	Plummers Point
Te Puke	Minden	Pongakawa
Waihi Beach (including Island View/Pios Beach, Athenree)	Ongare Point	Rogers Road
	Paengaroa	Te Kahika
	Pukehina Beach	Tuapiro
	Tanners Point	All other rural areas
	Te Puna	

Under our Development Code and the resource consent process for subdivision, developers are required to make adequate provision for the collection and disposal of stormwater run-off from hard surfaces created through the development process. This may result in vesting of new stormwater infrastructure in Council, where appropriate.

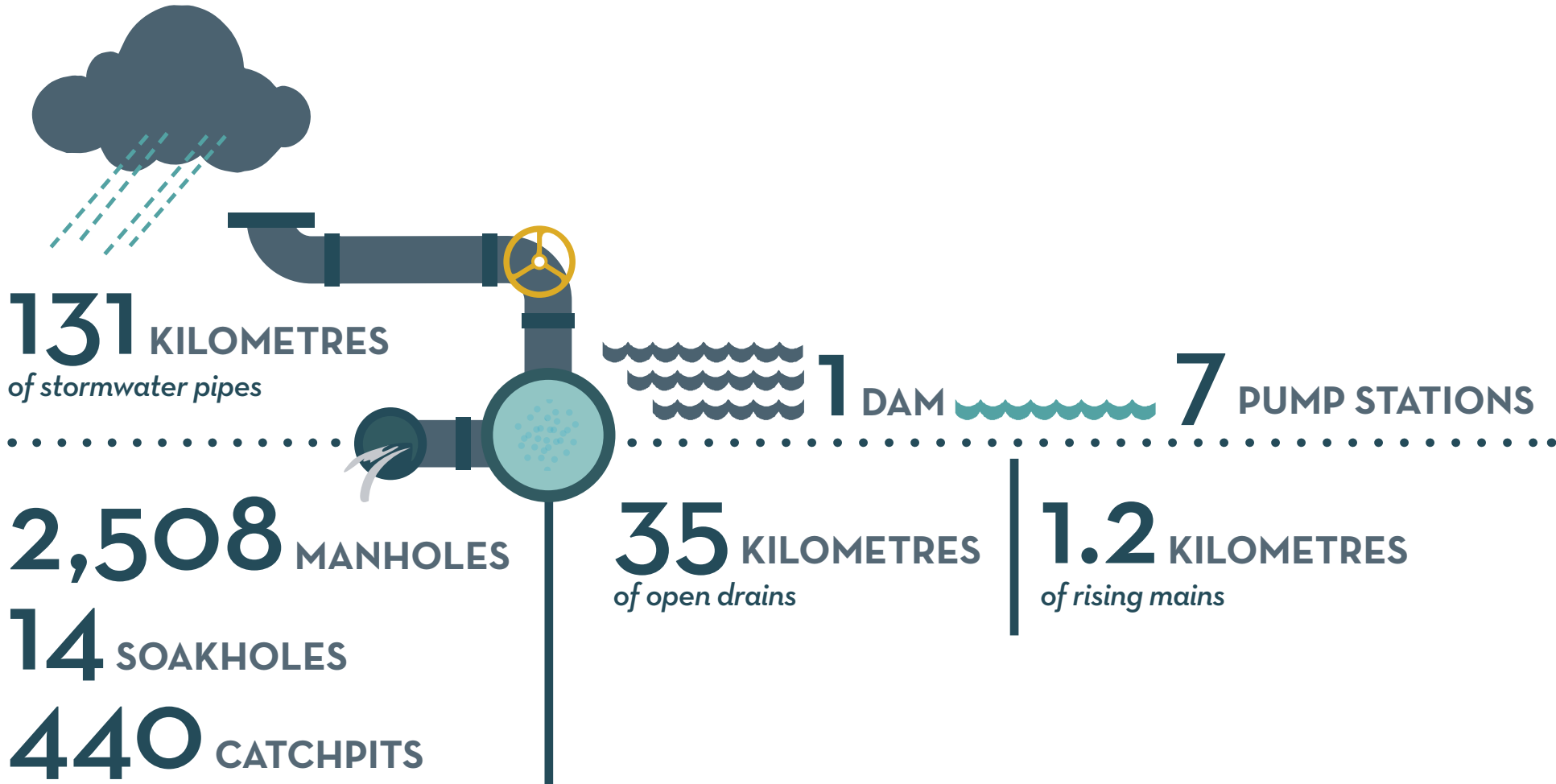
As the need for stormwater management increases with the intensification of development and increasing frequency and intensity of rainfall events caused by climate change, so changes to the design of stormwater infrastructure are required in accordance with our level of service for stormwater.

Only those urban growth areas and small settlements that receive direct benefits from the stormwater network have paid a stormwater rate. Council has recognised that the provision of stormwater reticulation has a public good benefit in terms of the community and environmental benefits. As a result 10% of stormwater funding is provided by the General Rate levied on all rateable properties.

DID YOU KNOW...

- Stormwater is managed through 'stormwater networks' which are made up of pipes and open channels linked together to drain stormwater to streams, rivers and the ocean. In Waihi Beach we also have pumps to help the water drain away in low lying areas.
- The total value of the stormwater system throughout the entire Western Bay of Plenty District (not including roading related stormwater assets) in 2017 was \$110 million (reticulation and plant).
- Stormwater systems are in place, throughout all areas of our District, ranging in size from small pipes leading to small roadside swales (in rural areas), to networks of large pipes and culverts (in urban areas).

WHAT WE PROVIDE



WHY WE PROVIDE IT

OUR COMMUNITY OUTCOME

Stormwater networks are designed and managed to meet community and environmental needs.

OUR GOALS

To develop a catchment based flood risk management framework that recognises and allows for the nature and behaviour of surface water systems to improve community resilience from potential flooding by ensure that:

- There is localised reduction of risk in existing floodable areas
- There is no increase in flood risk to existing development from new development or land use change
- Urban development is avoided in flood-prone areas unless mitigation measures can be provided that do not affect the capacity / effective functioning of existing downstream stormwater systems
- Communities are engaged and informed about various approaches to stormwater management and their views are sought and taken into account
- Compliance and monitoring activities are carried out.

HOW WE WILL ACHIEVE OUR COMMUNITY OUTCOME

GOAL	OUR APPROACH	OUR ROLE
<p>To develop a catchment based flood risk management framework that recognises and allows for the nature and behaviour of surface water systems to improve community resilience from potential flooding; by ensuring that:</p> <p>There is a localised reduction of the risk of flooding events in existing floodable areas.</p> <p>There is no increase in flooding event risk to existing development from new development or land use change.</p>	<ul style="list-style-type: none"> • Take a whole of catchment approach to managing development and land use change, recognise and understand the nature and behaviour of surface water systems within catchments and allow for the natural processes of those systems 	Lead/Partner
	<ul style="list-style-type: none"> • Recognise the importance of making local flood risk management decisions within a catchment context, and take into account cumulative effects 	Lead/Partner
	<ul style="list-style-type: none"> • Recognise the effects of climate change on surface water systems and potential increases in flood risk and undertake appropriate adaptation measures. 	Lead/Partner
<p>Urban development is avoided in flood-prone areas unless mitigation measures can be provided that do not affect the capacity / effective functioning of existing downstream stormwater systems.</p>	<ul style="list-style-type: none"> • Consider all practicable options to manage flood risk, including structural and non-structural opportunities • Ensure avoidance, mitigation and response management options are sustainable and affordable. 	Lead/Partner
	<p>Recognise flood risk management in the broader context of sustainable management by:</p> <ul style="list-style-type: none"> • Encouraging new subdivision, use and development (including infill and intensification of existing development opportunity) within areas that do not have a potential flood risk or which do not increase a potential flood risk within a catchment • Ensuring all development avoids flood-prone and coastal protection areas or mitigates the hazard through acceptable design solutions. 	Lead

GOAL	OUR APPROACH	OUR ROLE
Communities are engaged and informed about various approaches to stormwater management and their views are sought and taken into account.	<ul style="list-style-type: none"> • Roles and responsibilities amongst individuals, communities, councils and central government are clearly stated. • Engage communities and stakeholders in: <ul style="list-style-type: none"> • Understanding surface water systems and the flood risks associated with these • Actively managing the flood risks associated within surface water systems including long-term risks and residual risks • Enhancing their individual responsibility in managing personal risk. 	<p>Advocate</p> <p>Advocate/ Partner</p>
Compliance and monitoring activities are carried out.	<ul style="list-style-type: none"> • Quantify water quality issues by monitoring the effect of stormwater discharges on receiving environments and remedy as appropriate • Undertake contaminant loading studies, including those associated with roading stormwater systems • Explore the use of incentives to encourage run-off containment on sites. 	<p>Lead / Partner</p> <p>Research Monitoring</p> <p>Lead / Research/ Monitoring</p>
<p>Coastal Erosion Protection</p> <p>Communities are engaged and informed about various approaches to coastal erosion management and their views are sought and taken into account.</p>	<ul style="list-style-type: none"> • Roles and responsibilities amongst individuals, communities, councils and central government are clearly stated. • Engage communities and stakeholders in: <ul style="list-style-type: none"> • Understanding costal process and the erosion risks associated with these • Actively managing the erosion risks associated with the open coast including long-term risks and residual risks • Enhancing their individual responsibility in managing risk to coastal properties. 	<p>Advocate</p> <p>Advocate / Partner</p>

WHAT WE ARE PLANNING TO DO

All information from 2020 - 2028 includes an adjustment for inflation.

PROJECT NUMBER	PROJECT NAME	\$'000									
		2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
226312	Structure Plan Athenree Catchment 3c	-	-	-	-	165	-	-	-	-	-
226313	Structure Plan Athenree Catchment 6b	-	-	-	-	-	23	-	-	-	
226332	Waihi Beach Pump Station Renewals	48	34	18	42	45	74	45	96	80	63
226353	Waihi Beach 2 Mile Creek West Bank	1,140	1,025	2,096	-	-	-	-	-	-	
226355	Waihi Beach 1 Mile Creek Improved Flow Path	-	-	629	-	-	-	-	-	-	
226356	Waihi Beach Diversion of Maranui Flood Water	-	-	-	-	1,319	-	-	-	-	
226357	Waihi Beach Upper Catchment Attenuation/Darley Drain	-	-	-	537	-	-	-	-	-	
226358	Waihi Beach 2 Mile Creek Upper Catchment Attenuation	-	-	-	537	1,649	1,352	578	-	-	
226359	Waihi Beach Broadlands Block - Upgrade Drains	-	113	-	-	-	-	-	-	-	
226360	Waihi Beach Edinburgh Street Pipe Upgrade	-	-	-	-	-	372	-	-	-	
226361	Waihi Beach Pio Shores Stormwater Upgrade	100	256	262	268	275	-	-	-	-	
	Waihi Beach Pipe Upgrade	-	-	-	-	-	-	-	652	-	
226363	Waihi Beach Otto Road New Pumping System	-	-	-	-	-	-	635	-	-	
226364	Waihi Beach Earth Dam	-	-	-	826	725	-	-	-	-	
226413	Katikati Upgrades Highfield Drive	-	-	-	-	264	-	-	-	-	
226420	Katikati Upgrades Belmont Rise, Grosvenor Place	-	-	-	-	-	-	323	-	-	
226421	Katikati Upgrades Francis Drive	-	-	-	-	-	-	162	-	-	
226515	Omokoroa Upgrades Hamurana Road, Owen Place	-	-	-	-	-	-	-	-	341	83
226523	Omokoroa Upgrade Vivian Drive (OM 5)	-	123	472	-	-	-	-	-	-	
226524	Omokoroa Stormwater Renewals	-	-	-	-	330	-	-	-	-	
226525	Omokoroa Stormwater Upgrades, Omokoroa Road(OM7)	400	513	-	-	-	-	-	-	-	
226602	Te Puke Area 3 Structure Plan	-	220	1,153	-	-	992	-	-	-	
226620	Te Puke Stormwater Relating to Subdivision	-	-	-	-	714	733	-	-	-	
226633	Te Puke Upgrades Lee Street, Harris Street	-	349	105	-	-	-	-	78	-	
226636	Te Puke Upgrades Princess Street, Saunders Place	-	328	-	-	-	-	-	-	-	

PROJECT NUMBER	PROJECT NAME	\$'000										
		2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	
226638	Te Puke Upgrades Seddon Street Raymond, Dunlop, Bishoprick	-	-	-	328	-	-	-	-	-	-	-
226642	Te Puke Upgrades Williams Drive	-	-	-	-	-	-	-	-	244	-	-
226648	Te Puke Open Drain Safety Improvements	-	205	-	-	-	-	-	-	-	-	-
226651	Te Puke Upgrades Oxford Street/ Boucher Avenue	-	-	-	-	-	924	-	-	-	-	-
226652	Te Puke Stormwater - King Street Outfall	-	-	-	376	-	-	-	-	-	-	-
226655	Te Puke Upgrades Galway Place	-	-	-	-	55	-	-	-	-	-	-
226656	Te Puke Stormwater network upgrades Queen Street	300	-	-	-	-	-	-	-	-	-	-
311302	Stormwater Asset Validation	50	51	52	54	55	56	58	59	61	63	-
316601	Katikati Structure Plan Utilities Stormwater	-	-	1,306	-	-	-	-	1,522	-	-	-
317201	Omokoroa Structure Plan Stormwater	2,000	2,768	-	-	-	-	-	530	-	-	-
319601	Stormwater Network Upgrade / Comprehensive Stormwater Consents	340	369	231	215	220	225	231	237	244	251	-
331501	Waihi Beach Otawhiwhi Marae Stormwater Drain	50	-	-	-	-	440	-	-	-	-	-
331601	Te Puke Ohineangaanga Stream Upper Catchment Screen Device	420	-	-	-	-	-	-	-	-	-	-
340001	Growth Communities Stormwater Infrastructure Rehabilitation	17	17	18	18	19	19	20	13	13	14	-
340101	District Wide Stormwater Modelling	155	41	42	43	44	45	46	47	49	50	-
340201	Asset Management Waihi Land Drainage District	22	-	-	24	-	-	25	-	-	28	-
344501	Stormwater - Installation of Rain Gauges through out District	30	31	-	-	-	-	-	-	-	-	-
344601	Waihi Beach Stormwater - Athenree improvements	-	-	-	-	-	-	-	-	366	-	-
344701	Katikati Stevens Stormwater Pond Embankment Repair	-	21	189	-	-	-	-	-	-	-	-
344801	Omokoroa Upgrades Myrtle Drive, Gerald Place	-	-	-	-	165	-	-	-	-	-	-
344901	Omokoroa Stormwater- Harbour View Road Upgrade	-	21	-	-	-	-	-	557	-	-	-
345001	Omokoroa Stormwater - Upgrade for Omokoroa Road, Tory Way, Tralee Street	-	-	-	-	-	349	-	-	-	-	-

PROJECT NUMBER	PROJECT NAME	\$'000									
		2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
345101	Omokoroa Stormwater - Upgrade Precious Reserve Pond	-	-	-	-	-	-	116	-	-	-
345902	Waihi Beach Shoreline Protection Options Assessment	75	77	-	-	-	-	-	-	-	-
265413	Maketu Upper Catchment Attenuation	-	-	-	139	-	-	-	-	-	-
301808	Upgrade Pukehina Beach Road Stage 4	-	-	-	-	-	-	46	237	-	-
301829	Upgrades Pukehina Beach Road Stage 2, Stage 3	-	-	-	-	44	394	-	-	-	-
301830	Upgrades Pukehina Beach Road Stage 5, Stage 6	-	-	-	-	-	-	-	-	252	-
301831	Upgrades Pukehina Beach Road Stage 7, Stage 8	-	-	-	-	-	-	-	-	48	-
332614	Small Communities Stormwater Infrastructure rehabilitation	-	-	-	-	-	-	-	-	7	-
332615	Tanners Point Upgrades Tanners Point Road	-	-	92	-	-	-	-	-	-	-
332616	Tanners Point Upgrades Tanners Point Road East Stage 2	-	-	-	-	-	-	116	-	-	-
332617	Tanners Point Upgrades Tanners Pr Road North	-	-	-	-	-	-	-	119	98	213
332618	Tanners Point Upgrades Tanners Pt Road West	-	90	-	-	-	-	-	-	-	-
332621	Kauri Point Upgrades	-	-	-	-	154	338	-	-	-	-
332630	Pukehina Stormwater Contribution to Waihi Drainage Society	5	5	5	5	5	6	6	6	6	6
332635	Paengaroa Upgrades Halls Rd stg 1 & 2	-	-	-	-	-	-	-	486	768	-
332636	Paengaroa Restoration (Black Road Outlet)	-	-	-	-	-	147	-	-	-	-
332401	Minden Stormwater Investigation and Remedial Work	20	31	-	-	-	-	-	-	-	-

HOW WE WILL TRACK PROGRESS TOWARDS OUR GOALS

OUTCOME

Stormwater networks are designed and managed to meet community and environmental needs.

The Local Government Act 2002 introduced standard performance measures for storm water to be reported by all local authorities. These mandatory measures have been integrated into Council's performance framework and are also shown in italics.

Flooding event has been defined as an overflow of stormwater from a territorial authority's stormwater system that enters a habitable floor (Non-Financial Performance Measures Rules 2013).

GOAL	WE'LL KNOW WE'RE MEETING OUR GOAL IF	ACTUAL						TARGET	
		2017	2019	2020	2021	2022-24	2025-28		
<p>To develop a catchment based flood risk management framework that recognises and allows for the nature and behaviour of surface water systems to improve community resilience from potential flooding by ensure that:</p> <p>There is localised reduction of risk in existing floodable areas.</p> <p>There is no increase in flood risk to existing development from new development or land use change</p> <p>Urban development is avoided in flood-prone areas unless mitigation measures can be provided that do not affect the capacity / effective functioning of existing downstream stormwater systems</p> <p>Communities are engaged and informed about various approaches to stormwater management and their views are sought and taken into account</p> <p>Compliance and monitoring activities are carried out.</p>	<p>Key Performance Measure</p> <p>The number of times flooding occurs outside identified flood-prone urban areas during a one-in-50 year or less storm event.</p> <p>This performance measure is assessed on a per event basis i.e. flooding in more than one location in a single event will be counted as 1.</p>	5 events	≤3 events	≤3 events	≤3 events	≤3 events	≤3 events	≤3 events	≤3 events
	<p>Key Resident Measure</p> <p>Level of resident satisfaction with stormwater systems.</p>	69%	≥65%	≥65%	≥65%	≥65%	≥65%	≥65%	≥65%

HOW WE WILL TRACK PROGRESS - LEVELS OF SERVICE

GOAL	WE'LL KNOW WE'RE MEETING THE SERVICE IF	ACTUAL						TARGET			
		2017	2019	2020	2021	2022-24	2025-28				
We will provide stormwater assets to minimise risks of flooding events.	<p>The number of flooding events that occur within the Western Bay of Plenty District.</p> <p>For each flooding event (district wide), the number of habitable floors affected (expressed per 1000 properties connected to Council's stormwater system).</p>	0.05%	≤30 (3%) per event	≤30 (3%) per event	≤30 (3%) per event	≤25 (3%) per event	≤25 (3%) per event				
	<p>For a one in ten year flooding event, the number of habitable floors affected. (Expressed per 1000 properties connected to Council's stormwater system).</p>	Per event	Per event	Per event	Per event	Per event	Per event				
	• Waihi Beach	○	≤60 (6%)	≤60 (6%)	≤60 (6%)	≤60 (6%)	≤60 (6%)				
	• Katikati	○	≤10 (1%)	≤10 (1%)	≤10 (1%)	≤10 (1%)	≤10 (1%)				
	• Omokoroa	○	≤10 (1%)	≤10 (1%)	≤10 (1%)	≤10 (1%)	≤10 (1%)				
	• Te Puke	○	≤30 (3%)	≤30 (3%)	≤30 (3%)	≤30 (3%)	≤30 (3%)				
	• Maketu	○	≤30 (3%)	≤30 (3%)	≤30 (3%)	≤30 (3%)	≤30 (3%)				
<p>Compliance with Council's resource consents for discharge from our stormwater system, measured by the number of:</p> <ul style="list-style-type: none"> • Abatement notices • Infringement notices • Enforcement orders, and • Successful prosecutions <p>received by Council in relation to those resource consents</p>	○	○	○	○	○	○					
<p>○</p> <p>○</p> <p>○</p> <p>○</p>	○	○	○	○	○	○					
<p>○</p> <p>○</p>	○	○	○	○	○	○					
<p>○</p> <p>○</p>	○	○	○	○	○	○					
We will be responsive to customer's stormwater issues.	<p>The median response to attend a flooding event, measured from the time that Council receives the notification to the time that service personnel reach the site.</p>	13 minutes	≤120 minutes	≤120 minutes	≤120 minutes	≤120 minutes	≤120 minutes				
	<p>The number of complaints received by Council about the performance of its stormwater system, expressed per 1000 properties connected to the Councils stormwater system.</p>	10.8	≤30	≤30	≤30	≤20	≤20				

KEY ASSUMPTIONS

	ASSUMPTION	RISK
Land coverage imperviousness	Estimates of land coverage imperviousness are made based on the recommendations in the New Zealand Building Code Handbook.	<p>Significant differences between forecast population and household growth and actual out-turns would result in Council failing to provide appropriate and cost-effective levels of service to communities.</p> <p>Over-estimating the speed of growth could increase Councils debt if infrastructure development was undertaken in anticipation of growth that did not eventuate.</p>
Rainfall intensity values	Rainfall intensity values are generated from actual rainfall data. Factors have been applied to account for climate change up to the year 2030 as directed by the Bay of Plenty Regional Council. These factors are based on the Ministry for the Environment Climate Change recommendations.	If the rainfall intensity values increase significantly then a greater percentage of the stormwater infrastructure will be under sized. As a result the levels of service may not be achieved, and potentially the investment in stormwater infrastructure may need to increase.
Sea level changes	The sea level values used in relation to stormwater assets are based on the best estimate up to the year 2100, making allowances for high tide and storm surge as per the requirements of the Bay of Plenty Regional Council. The requirements are outlined in the Hydrological and Hydraulic Guidelines.	If sea levels vary from those estimated changes in system and funding requirements may occur as a result.
Stormwater asset cost estimates	Asset valuations have been calculated using data obtained from the Rawlinsons Publication. This publication contains average rates from contractors throughout New Zealand.	If asset valuations vary from those calculated changes in funding requirements will occur as a result.
Stormwater asset economic life	The estimates of economic life of stormwater assets are based on recommendations in the International Infrastructure Management Manual.	If the estimated economic life of assets is inaccurate estimates of renewal expenditure will be inaccurate and funding requirements may change as a result.

SIGNIFICANT EFFECTS OF PROVIDING THIS ACTIVITY

WELL-BEING	POSITIVE	NEGATIVE	HOW WE ARE ADDRESSING THESE EFFECTS
Social	<ul style="list-style-type: none"> ✓ The stormwater network reduces the risk of damage from flooding to individual properties. ✓ The stormwater network provides a safe living environment for the whole community. 	<ul style="list-style-type: none"> ✗ Disruption during the implementation of works. ✗ Individuals can affect the stormwater network and neighbouring properties by altering natural flowpaths. ✗ Flooding can affect public health and safety. ✗ Stormwater can cause public health issues through the bacterial contamination of beaches. 	<ul style="list-style-type: none"> • Continue to advise landowners of potentially flood-prone areas. • Monitor new developments to ensure natural flowpaths are maintained.
Environmental	<ul style="list-style-type: none"> ✓ The stormwater network can reduce the amount of sediment reaching sensitive receiving environments, such as wetlands, estuaries and harbours, after high rainfall events. ✓ The stormwater network can help prevent other contaminants from reaching sensitive. 	<ul style="list-style-type: none"> ✗ Stream degradation through erosion by inadequately controlled discharges. ✗ Barriers for fish, contamination from sediment and pollutants. ✗ Beach erosion from stormwater outlets. ✗ Transfer of contaminants such as silt, nutrients, toxic substances. 	<ul style="list-style-type: none"> • Continue to monitor discharges to comply with the consent conditions set by the Bay of Plenty Regional Council.
Economic	<ul style="list-style-type: none"> ✓ The stormwater network reduces the potential for damage and erosion to property, essential utilities and transport infrastructure. ✓ Efficiencies are available through integrating stormwater activities with others such as land use, transportation and industrial development. 	<ul style="list-style-type: none"> ✗ The cost of maintaining the stormwater network to ensure it is free from blockages before high rainfall events. ✗ Existing stormwater issues include costs associated with damage related to flooding, stream erosion and personal safety. 	<ul style="list-style-type: none"> • Continue to promote value for money by integrating stormwater upgrades with other projects.
Cultural	<ul style="list-style-type: none"> ✓ The stormwater network can help in protecting sites of cultural and historical significance from erosion and flooding. ✓ Acknowledges the significance of the receiving waters and the need to improve the mauri of water bodies, which improves health and well-being. 	<ul style="list-style-type: none"> ✗ Contamination of the receiving environment is unacceptable to Tangata Whenua. 	<ul style="list-style-type: none"> • Continuing to better identify sites of cultural significance • Continue to monitor discharges to comply with the consent conditions set by the Bay of Plenty Regional Council.

COUNCIL'S ADDITIONAL ASSET REQUIREMENTS

STORMWATER

All information from 2020-2028 includes an annual adjustment for inflation.

CAPITAL EXPENDITURE	\$'000									
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
To meet additional demand (capacity for future residents - growth)	2,000	3,008	2,648	-	1,044	2,096	116	2,052	-	-
To improve the level of service	2,577	2,858	3,456	3,292	4,484	4,238	1,677	2,415	2,067	541
To replace existing assets (renewals)	465	687	507	60	657	94	550	109	442	159
Total capital expenditure	5,042	6,553	6,611	3,352	6,185	6,427	2,342	4,576	2,510	700

WHERE THE MONEY COMES FROM

Please refer to Chapter 5 'Policies, Summaries & Statements' for the Revenue and Financing Policy for storm water.

FUNDING SOURCES FOR STORMWATER 2018/19

