STORMWATER AND LAND DRAINAGE

What we do

- Maintain stormwater systems and operate to manage drainage of excess rainfall.
- Develop and implement programmes to progressively improve stormwater systems in areas that experience localised flooding usually resulting from extreme rainfall episodes.
- Manage an integrated approach to planning and maintaining a stormwater system that includes: ecosystems, people, urban design, communities and businesses, as well as cultural, amenity and social values. Regulate property owner responsibilities to utilise public stormwater facilities to assist in the provision of a fully functional stormwater system.

Climate change and Rotorua District

With current knowledge the district is likely to be impacted in the following ways:

Temperature (winter)	plus 2 to 3°C
Rainfall (total)	0 to minus 5% (mid range)
Rainfall intensity	plus 4.3% to plus 8% per 1°C increase
Drought frequency	about a four fold increase (soil moisture deficit)
Ex-tropical storm risk	about same as current risk

Note:
The above information is summarised from the National Institute for Water and Atmospheric Research (NIWA) and is based on 2080 predictions. What this shows is that Rotorua will almost certainly have increased temperatures, higher intensity rainfalls and increased drought risk but there is considerable uncertainty regarding total rainfalls. Total rainfalls are important for lake levels, and possibly in the longer term for groundwater availability.

Why we do it

To manage the drainage of excess rainfall so that property and people are protected from flood damage, and to mitigate the adverse effects of stormwater run-off on the District's lakes and waterways.

Measuring our achievements

Council will measure its achievements towards the objectives by monitoring the following set of performance measures and targets:

Community outcome	How council contributes	Level of service (What we will do)	Performance measure	Performance targets					
				Current performance 2010/11	Data source	2012/13	2013/14	2014/15	2016 to 2022
Environment	▪ By controlling the level of pollutants in stormwater flows and protection of natural stream channel environments. This contributes to improved lake water quality.	Provide a stormwater network that minimises the impact on the environment	No breaches of consent conditions	Achieved – no breaches	Consents database	Achieved	Achieved	Achieved	Achieved
Excellent Facilities and Services	▪ By providing good quality infrastructure that will last for another 50-100 years.	Provide a stormwater network that minimises the impact of flooding to people, their properties and livelihoods.	Less than 3 dwellings per year affected by floodwaters	2	Flood report	<3	<3	<3	<3
			95% of blockages responded to in 24 hours	98%	Contractors records	95%	95%	95%	95%
			80% of people very/fairly satisfied with stormwater drainage schemes.	78%	Community satisfaction survey	80%	80%	80%	80%

Infrastructure Services

Performance

In order to plan for the future and ensure services are meeting our community's needs and expectations we assess past performance and feedback from the community.

Community Satisfaction Survey Results

Stormwater & Land Drainage
% of residents satisfied with stormwater drainage
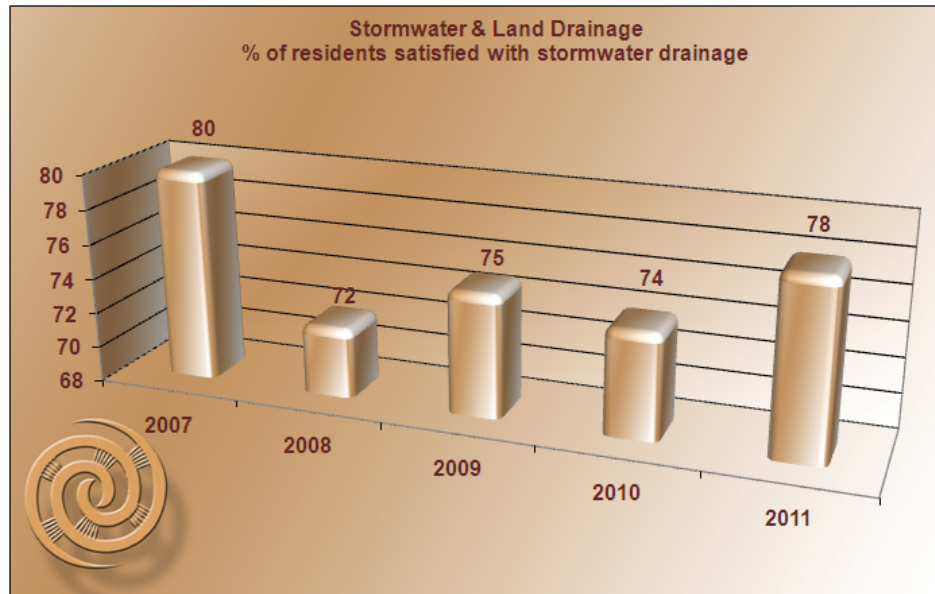
Issues/Risks/Negative impacts

Potential negative effects associated with undertaking the activity are described below along with actions undertaken to mitigate the effect. Effects from the activity can influence the social, cultural, environmental and economic wellbeing of the community/district. The negative effect could be physical or a perception.

Issue/Risk/Negative impact	Action Plan
Negative environmental impact on waters received downstream.	Current water services bylaw licensing. Investigate and develop treatment options of stormwater run-off. Optimise street sweeping regimes.
Flood damage to property.	Manage and control extreme discharges
Developers drive/influence where system upgrades are needed due to where development occurs.	Work closely with Planning departments during resource consent stage of new developments

Asset management

Key assets

The key assets associated with this activity are the:

- Major pipelines   243,134m
- Open ended culverts   6,848m
- Manholes   5,289
- Subsoil drains   9,407m
- Open drains   148km
- Timber lined drains   1,426m
- Silt traps   4
- Pump station   2
- Inlet/Outlet structures   5,357
- Flood detention dams   3
- Resource consents   71

Maintaining our assets

Council assets are maintained as per agreed specifications within service contracts. The performance of assets is regularly reviewed to ensure that current levels of service/community expectations are still being met by the asset/s. Major works are competitively tendered out to specialised contractors ensuring that the final product is of a high standard and delivered at a competitive cost to Council. A separate Asset Management Plan details the full lifecycle management of the asset/s.

Major changes planned for assets

Reason for change	What will be done?	Year 1 ($000)	Year 2 ($000)	Year 3 ($000)	Year 4-10 ($000)
Increase level of service/backlog	Stormwater renewals	80	162	168	1,205
	Stormwater upgrades	175	181	187	1,500
Increased demand	Stormwater upgrades	246	255	263	2,109
Renewal and replacement	Stormwater renewals	978	1,729	1,783	13,056
Total		**1,479**	**2,327**	**2,401**	**17,870**

Activity assumptions used in providing this activity

This activity has been prepared in line with Council's significant forecasting assumptions.

Infrastructure Services

Stormwater and Land Drainage - Funding Impact Statement

	Annual Plan Budget 2011/12 ($000)	Long-term Plan Budget >>									
		2012/13 ($000)	2013/14 ($000)	2014/15 ($000)	2015/16 ($000)	2016/17 ($000)	2017/18 ($000)	2018/19 ($000)	2019/20 ($000)	2020/21 ($000)	2021/22 ($000)
Sources of operating funding											
General Rates, uniform annual general charges, rates penalties	454	3,326	4,154	4,289	4,393	4,371	4,515	4,684	4,838	4,989	5,143
Targeted rates (other than a targeted rate for water supply)	2,000	-	-	-	-	-	-	-	-	-	-
Subsidies and grants for operating purposes	-	-	-	-	-	-	-	-	-	-	-
Fees, charges and targeted rates for water supply	-	-	-	-	-	-	-	-	-	-	-
Internal charges and overheads recovered	-	-	-	-	-	-	-	-	-	-	-
Local authorities fuel tax, fines, infringement fees and other receipts	112	120	124	128	132	136	140	144	148	153	158
Total operating funding (A)	**2,566**	**3,446**	**4,278**	**4,417**	**4,525**	**4,507**	**4,655**	**4,828**	**4,986**	**5,142**	**5,301**
Applications of operating funding											
Payments to staff and suppliers	294	433	445	459	474	490	503	518	534	552	570
Finance costs	484	730	762	803	803	894	956	1,032	1,079	1,113	1,154
Internal charges and overheads applied	1,258	1,340	1,391	1,434	1,488	1,526	1,563	1,607	1,658	1,712	1,760
Other operating funding applications	-	-	-	-	-	-	-	-	-	-	-
Total applications of operating funding (B)	**2,036**	**2,503**	**2,598**	**2,696**	**2,765**	**2,910**	**3,022**	**3,157**	**3,271**	**3,377**	**3,484**
Surplus (deficit) of operating funding (A - B)	**530**	**943**	**1,680**	**1,721**	**1,760**	**1,597**	**1,633**	**1,671**	**1,715**	**1,765**	**1,817**
Sources of capital funding											
Subsidies and grants for capital expenditure	5	-	-	-	-	-	-	-	-	-	-
Development and financial contributions	49	43	44	45	59	74	89	104	120	136	153
Increase (decrease) in debt	415	254	345	354	366	357	369	380	395	410	426
Gross proceeds from sale of assets	-	-	-	-	-	-	-	-	-	-	-
Lump sum contributions	-	-	-	-	-	-	-	-	-	-	-
Total sources of capital funding (C)	**469**	**297**	**389**	**399**	**425**	**431**	**458**	**484**	**515**	**546**	**579**
Applications of capital funding											
Capital expenditure											
- to meet additional demand	104	246	255	263	271	280	290	299	310	322	335
- to improve the level of service	415	255	344	354	367	357	369	381	395	410	426
- to replace existing assets	530	978	1,729	1,784	1,852	1,710	1,766	1,825	1,893	1,966	2,043
Increase (decrease) in reserves	(50)	(239)	(259)	(281)	(305)	(319)	(334)	(350)	(368)	(387)	(408)
Increase (decrease) in investments											
Total applications of capital funding (D)	**999**	**1,240**	**2,069**	**2,120**	**2,185**	**2,028**	**2,091**	**2,155**	**2,230**	**2,311**	**2,396**
Surplus (deficit) of capital funding (C - D)	**(530)**	**(943)**	**(1,680)**	**(1,721)**	**(1,760)**	**(1,597)**	**(1,633)**	**(1,671)**	**(1,715)**	**(1,765)**	**(1,817)**
Funding balance ((A - B) + (C - D))	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**