Infrastructural

Shaping Rotorua

infrastructural group

Overview of Group

This group is made up of the following activities of Council:

- City Services operations
- Stormwater and land drainage
- Transport
- Waste management
- Wastewater
- Water supplies

Infrastructural Group activities provide many of the traditional key services associated with councils, such as water, sewerage, roads and refuse collection. To provide these services, Council owns and manages many large and complex assets on behalf of the community.

Climate Change

Areas where Council needs to provide for the effects of climate change are Civil Defence and Emergency Management planning, utility infrastructure including Stormwater pipes, drains, detention ponds and treatment. All this planning has an additional cost which is difficult to quantify at this stage. Over time, as a better appreciation of the effects of climate change on the Rotorua district are understood, costs will be more reliably calculated.

Stormwater and Land Drainage

Stormwater is an area where there has been some lag in asset investment over recent years. It is a very technical area requiring sophisticated hydraulic modelling to ensure sustainable engineering solutions. Significant work has been done in recent years to model stormwater movements and a detailed plan is now being developed that will set out the amount and size of stormwater works needing to built in various part of Rotorua. Council will continue with its backlog and upgrade expenditure in stormwater infrastructure. This will, over time, reduce the risk of flooding from 1 in100 year storm events.

The major strategic issue will be development of a local stormwater strategy in accordance with the recently completed Regional Stormwater Strategy. This document requires Council to prepare catchment-wide consent applications for key catchments. A continuation of the capital upgrade programme to address a backlog in the urban network is included in the Ten Year Plan. No significant changes to levels of service as proposed.

Transport

The Transport Activity Plan is in line with requirements of the Land Transport Management Act 2003 which requires the development of a 'balanced' land transport programme. This means getting the mix right in terms of infrastructure development, alternative modes of transport, access and safety. To achieve this, the Rotorua Transport Strategy has been prepared to demonstrate compliance with the Land Transport Management Act and various national and regional strategies.

The Transport Strategy also links the individual components which include:

- Rotorua Urban Transportation Study 2003
- Safety Management Systems
- Bike Rotorua
- Road/Rail Strategic Assessment
- Passenger Transport Infrastructure
- Travel Demand Management strategy

From these individual strategies a number of major projects have been allowed for in the Ten Year Plan.

Road Upgrades

- Victoria Street Arterial
- Lake Road 4-Laning
- Eastern Arterial
- Ngongotaha/Fairy Springs Road 4-Laning

One of the major projects that Council will be involved in is the Victoria Street arterial. When complete it will provide a new arterial route from Old Taupo Road through to Te Ngae Road, eliminating the need to use parts of Amohau Street (State Highway 35). Although outside the timeframe of this Ten Year Plan, it is proposed to transfer responsibility for Amohau Street to Rotorua District Council and Victoria Street to the state highway road network.

infrastructural group cont.

Passenger Transport
- New transportation centre

Travel Demand Management
- Travel Demand Management strategy implementation

Cycleways
- Ngongotaha to CBD

For the projects above, no significant changes in levels of service are anticipated. However, there will be backlog and/or excess capacity in some areas.

There will be ongoing focus on:
- ride quality
- economic development
- surface water discharge to the environment
- safety

Rail
Council advocates the continued public ownership of the rail corridor.

Transport (Road Safety and Sustainability)
Key strategic issues for the next ten years include:
- Delivery of Council's Road Safety Strategy. In particular education initiatives are key to achieving a lower crash rate on the district's roads. The crash trend is a reducing one and we will aim to continue this by delivering projects and interaction with the community in conjunction with engineering and enforcement works. Council is largely driven by the crown road safety targets which attract a 75% government subsidy.
- Delivery of Council's cycling improvements and alternative travel encouragement programmes. Given the uncertain future of oil and likely changes in travel modes, either by choice or necessity, alternative forms of transport will be needed. Council intends to plan and implement an integrated cycle network over the coming ten years. This work will partially fulfil the districts, and region's Land Transport Management Act (LTMA) requirements which are essential for sustainable growth. Council is also presently focusing on 'inter modal' travel, travel demand management opportunities, and more co-ordination as part of regional initiatives.
- Ongoing external partnerships and collaborative initiatives including: Drivewise, Police, NZ Transport Agency, ACC, Toi Te Ora - Public Health Service, Environment Bay of Plenty and Environment Waikato.
- Responding to state sector review of transport and resultant changes of central government roles and agencies.
- Devolution of services to local government level and changes in funding criteria.
- Giving effect to the cycling policy review. This will present a significant change in emphasis for this mode of travel in the city. The policy outlines a number of key performance indicators and targets for the coming years.
- Undertake integrated marketing, in conjunction with Environment Bay of Plenty, to promote the benefits of using public transport.

The Drivewise Rotorua Trust represents community interest in road safety and sustainable transport. Its vision for transport safety and sustainability is "a vibrant, safe community with walking, cycling and road networks and public transport facilities that link our residential communities to shopping, parks, tourism and events venues".

The Bay of Plenty Regional Transport Committee is a governance body made up of representatives of the regional council, district and city councils, the New Zealand Transport Agency (NZTA), cultural interests, and people drawn from the wider community to represent the NZTA's five objectives, ie economic development, safety and personal security, public health, access and mobility, and environmental sustainability.

The Regional Transport Committee has prepared the Bay of Plenty Regional Land Transport Programme 2009/10 - 2011/12 for consultation and public submission. This document is important to the Rotorua District Council as it establishes regional priorities for many of the district's transport activities, including all state highway activities, local road improvements, walking and cycling and community road safety activities (as outlined in the Ten Year Plan). It also discusses regional funding for transportation projects to be allocated through the National Land Transport Fund.

Transport (State Highway Management)
The management and administration of the physical highway network within the district is undertaken by Council. This is a unique situation. Council works within the NZ Transport Agency management structure to deliver this output.

Council has delegated authority for operational management of the State Highway network. This includes capital and maintenance works. For this, Council is paid an administration fee but works are funded entirely from NZ Transport Agency budgets.

Presently the transport sector is being reshaped as a result of central government's Transport Sector Review. This activity area is involved indirectly through its involvement with the agency.

The district will need significant highway improvements within the ten year period. These include 4-laning projects and motorway construction. Council will be at the forefront of planning and delivery of these needs although this is dependent on national funding constraints and priorities.

The activity will likely expand and contract in terms of output and staffing in line with maintenance and project work over this period.

infrastructural group cont.

Key strategic issues for the next ten years include:

- Roles and functions of crown agencies (and this activity area) remain uncertain into the future. Additionally, funding streams and prioritisation, both regionally and nationally, are being heavily restructured and continue to evolve. The activity provides Council with an input and a view of the regional and national land transport function from both a highway and local road viewpoint, thereby covering the complete network. Current highway level of service and capital/safety project advances are governed nationally by the NZ Transport Agency. While Council can advocate for Rotorua, final decisions are made by that agency. Additionally, transport and planning initiatives and joint work streams are being undertaken with regional authorities and neighbouring territorial authorities in an effort to reduce uncertainties in project planning and cost. (It should be noted that Rotorua District falls within two regional council areas).

- A significant number of large highway projects (infrastructure) will exist into the future for the district. These include:
  - the eastern corridor
  - Ngongotaha Road 4-laning

  Additionally, a range of lesser improvements has been identified. Given that income for the activity is derived from works expenditure, this will vary during the course of the Ten Year Plan.

- All projects and associated investigations, designs and consent processes are included in the national highway planning regime. While Council will potentially deliver some or all of these, they will be funded externally and be at the discretion of the NZ Transport Agency. Therefore individual projects and timelines have not been included at this time.

Waste Minimisation

Council has a waste minimisation strategy that was reviewed in 2006. The strategy provides a number of goals and objectives that contribute towards reducing the amount of waste managed through the landfill. The strategy is focused around the waste hierarchy of reduction, reuse, recycle, recovery and residual. Some of the elements in the strategy include:

- Continuing to operate the RDC landfill for the foreseeable future.
  This includes continuing to develop the Atiamuri Road site with additional cells over time, as required to meet the needs of Rotorua business and residential communities.

- Establishing transfer stations for rural communities, (to the extent Council is able to secure resource consents).
  There are currently transfer stations at Tarawera and Rotoiti and these will be open for an additional day per week over the summer months. Council would also like to establish a transfer station at Rotoma but has not been able to identify a site that meets community acceptance and has for now left the matter in that community's hands.

- Operating the In-town Recycling Centre.
  This centre is very well used by the community and has allowed the Rotorua District to reach levels of reduction, reuse and recycling that are comparable with other cities of similar size in New Zealand.

Future Options for Waste Minisation

Over recent years there has a number of submissions to draft annual plans, requesting a kerbside recycling collection service. There have also been calls from parts of the community for Rotorua, as New Zealand's tourism capital, to have a more obvious green image with a residential kerbside recycling collection service.

A waste minimisation subcommittee has explored a range of new waste minimisation options. As a result of feedback during the consultation phase on the draft Ten Year Plan the council has called for a detailed investigation and report into the best way to deliver recycling services for the future. This report will also consider options for a kerbside recycling collection service. The report will be completed in the early part of the 2009/10 year so that any decisions to amend existing waste policy and current practice can be implemented from the commencement of the 2010/11 year.

The key to waste minimisation is increasing the level of individual (both residential and commercial) responsibility for reducing waste. Those local authorities that have adopted a zero waste goal, focus strongly on individual responsibility to the extent that many parks and reserves now do not have litter bins as they place responsibility on those that bring waste into reserves, to take the waste out with them, dispose of it properly, and without the need for a local authority to provide bins.

This is one of the more important issues facing Council. It has the potential to substantially affect costs: upwards, if current trends continue of providing waste services at every available situation, or downward if there is greater individual responsibility for waste minimisation.

infrastructural group cont.

To ensure there is commitment to a higher level of service for residential recycling during the Ten Year Plan, a financial provision has been included in 2010/11. There are still many questions associated with a possible kerbside service, including:

Issues	Some Options
■ Frequency of service	■ Weekly ■ 2 weekly ■ Monthly
■ Collection container	■ 50 litre bin, 120 litre, 240 litre ■ Wheelie bins ■ Households supply own
■ Contractor	■ Castlecorp (ie in-house) or tender out
■ Sorting of material	■ Household sorting at the kerb ■ At time of collection ■ At recycling centre
■ Pricing of service	■ Separate targeted rate ■ Include with current rubbish collection rate ■ General rate ■ Pay contractor directly
■ Future of current In-town Centre	■ Continue on a reduced scale ■ Close and refer those without kerbside service to landfill recycling site
■ Business	■ No service ■ Extend to commercial premises

It is also important to understand the various elements of the recycling chain as each element requires separate consideration. In summary they are:

- { Collection from kerbside
- Sorting material into recycling and reused streams
- Storage
- { Transport
- { Marketing and sales.

New waste minimisation legislation enacted in 2008 requires a much greater leadership role for local government, commencing with:

(a) A waste assessment
(b) A waste minimisation plan; and
(c) Bylaw review

In the meantime any financial decisions taken should keep all the strategic options open.

In preparing the draft Ten Year Plan $800,000 per annum has been included for eight years, totaling $6.4 million, to provide a waste minimisation 'solution' that will meet community expectations and wider recycling objectives. There will be a corresponding targeted rate on all properties that receive the service. Considerably more analysis is need before commencing any service of this kind, including identifying levels of public support.

'Waste 2 Gold'

The Wastewater Treatment Plant (WWTP) is an efficient system for the treatment of sewage from the city's 58,000 residents and business premises. The outputs of the wastewater treatment plant include:

- Water containing levels of nutrients, including nitrogen and phosphorus, which is pumped to settling ponds in the Whakarewarewa Forest. It is then spray irrigated to parts of the forest on a rotational basis to strip remaining nutrients down to a lower level before the water enters Lake Rotorua from the ground waste system.
- Sludge, which is sediment that cannot be treated any further. Currently, sludge is de-watered and then transported to the landfill for disposal. This process will be prohibited from 2012 onwards under a National Environmental Standard.

infrastructural group cont.

In 2005, Scion was engaged to identify options for the further use of sludge. They identified five options for potential beneficial reuse, and further consideration was given to an incineration option. However, after a short list of qualified consortia were invited to submit proposals, it proved economically unsustainable.

Scion has now proposed a new solution that has very high levels of sustainability and is branded 'Waste 2 Gold'.
The underlying principle of the Waste 2 Gold programme is the conversion of 'waste carbon' into useable energy. Scion is developing technology platforms "to maximise recovery of embodied energy from low-value carbon substrates, generate added value co-products, and minimise the environmental footprints of waste carbon generators and energy users."

Because Scion and the council are both based in Rotorua, they can work together seamlessly. This provides an exciting opportunity to be real leaders in New Zealand, in waste management. The benefits of the Waste 2 Gold opportunity, which encompasses both biosolids and broader landfill opportunities, include:

1. Significant extension of landfill life.
2. Increase in gate revenue at the landfill.
3. Process likely to be a 'permitted activity' as both the WWTP and the landfill sites are already consented.
4. Generation of revenue from end-products (eg methane to combined heat and power).
5. Potential to mine the old landfill, increasing future landfill capacity.
6. Potential to gain greenhouse gas credits through voluntary reduction in organic waste entering the landfill.
7. Elimination of biosolids currently going to landfill.
8. Substantial reduction in greenhouse gas emissions.
9. RDC alignment with the Waste Minimisation Bill.
10. Reduction in costs associated with the waste levy being introduced in 2009.
11. Elimination of carbon supplementation costs at the WWTP through the production of biologically available carbon (eg acetic acid).
12. Elimination of potential health issues associated with pathogens through disposal of biosolids at the landfill.
13. Creation of value-added products.

This project is one that, if successful, will provide a sustainable long term solution for the disposal of the Wastewater Treatment Plant's sludge.

Landfill Gas Flaring Project

The Waste 2 Gold project will significantly decrease the costs of building and operating the landfill for Council and potentially provide a future income stream as the waste is "mined" to provide a biofuel feed stock. However, it will adversely affect the availability of landfill gas for the landfill gas to energy project that Council has been developing with a private company.

The landfill gas to energy project is the combustion of methane by means of a gas flare. The sole source of revenue is from the sale of carbon credits. The company has obtained emission reduction units (carbon credits) from the New Zealand Government and Council has been offered an opportunity to participate in or purchase the project as a whole.

Rotorua Lakes Water Quality

The most important environmental issue facing Rotorua District is that of lake water quality of the district's 14 Lakes. This requires a long term sustainable solution. Rotorua's lakes play an iconic role in the district's identity. Their restoration is critical for Rotorua, as a visitor destination, and as a place with quality recreational opportunities for our communities.

There has been significant scientific investment in understanding the cause of the decline of lake water quality of many Rotorua lakes, and into the potential solutions.

Environment Bay of Plenty, Rotorua District Council and Te Arawa Lakes Trust have worked collaboratively to develop an understanding of the scientific issues, to implement strategic initiatives for improving lake water quality, and to monitor the effectiveness of investment.

The Government, through the Ministry of the Environment, has also played a major role in assisting with funding. In 2008 the ministry announced a $72 million contribution towards restoration strategies. Council is building sewerage schemes for lakeshore communities that currently rely on septic tanks, which adversely affect lake water quality by releasing nutrients into groundwater which ultimately reaches the lakes.

Plans have so far been concluded for the four priority lakes: Rotorua, Okareka, Rotoiti and Rotoehu.

Council has already completed lakeshore community sewerage schemes for Mourea, Marama Point and Okawa Bay/Duxton Hotel and these were commissioned in 2006. Water quality in the Okawa Bay area of Lake Rotoiti is now showing encouraging signs of improvement.

infrastructural group cont.

Wastewater

The Wastewater Activity Plan is in line with the requirements of the Resource Management Act, Local Government Act and Health Act.

The activity involves the collection, treatment and disposal of wastewater including related operation and maintenance activities.

Several major strategic documents have been prepared to address long term issues related to the activity. These include:

- Rotorua Basin Wastewater Strategic Plan
- Strategy for the Lakes of Rotorua District
- Lake Rotorua/Rotoiti Action Plan - complete
- Lake Okareka Catchment Management Action Plan
- Rotorua District Council Assessment of Water and Sanitary Services

The Rotorua Basin Wastewater Strategic Plan identifies around $45 million of capital expenditure for upgrade work over a 50 year period. Of this, approximately $21 million is included in this Ten Year Plan, and the remainder is for projects that will take place after 2018/19.

From the high level documents listed above, a number of major projects has been allowed for in the Ten Year Plan:

- $12.5 million over 2008/2009 and 2009/2010 for Brunswick/Rotokawa sewage collection and transfer to the Wastewater Treatment Plant.
- $9.7 million over 2008/2009 to 2010/2011 for the Lake Okareka Sewerage Scheme.
- $14.7 million over 2008/2009 to 2011/2012 for the Okere/Otaramarae/Whangamarino Sewerage Scheme.
- $11.9 million over 2008/2009 to 2012/2013 for the Gisborne Point/Hinehopu Sewerage Scheme.
- $15.0 million over 2008/2009 to 2012/2013 for the Hamurana/Awahou Sewerage Scheme.
- $13.8 million over 2012/2013 to 2014/2015 for the Lake Tarawera Sewerage Scheme.
- $12.4 million over 2011/2012 to 2012/2013 for the Lake Rotoma Sewerage Scheme.
- $6.0 million from 2014/2015 to 2016/17 for the Mamaku Sewerage Scheme.
- $1.84 million from 2008/2009 to 2010/2011 for the sewering of unserviced parts within the Urban Sewerage Area.
- $6.60 million from 2008/2009 to 2011/2012 for the upgrade of the Wastewater Treatment Plant.
- $5.30 million from 2010/2011 to 2016/2017 for the upgrade of the Land Treatment System.
- $8.23 million from 2008/2009 to 2018/2019 for the upgrade of the Urban Sewer Reticulation Network.

NB. These costs are reported in 2009 dollars whereas in the accounts they include inflation.

Funding of these schemes includes subsidies from the Ministry for the Environment and from Environment Bay of Plenty.

These schemes will benefit both the health of the community and the environment through lakes water quality improvements.

Environment Bay of Plenty has signalled a commitment to subsidising some of the schemes. Final approval and the amount will be determined after the final application is approved. Where the financial commitment from Environment Bay of Plenty is known it is shown in the respective scheme information in the wastewater activity plan.

Improving water quality of lakes will require converting existing individual on-site wastewater treatment and disposal systems servicing lakeside communities, to water- borne wastewater collection treatment and disposal systems. Provision has been made for implementation of several lakeside communities sewerage schemes over the next ten years.

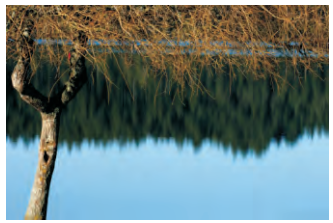
Council is obliged to comply with Environment Bay of Plenty regional rules and consent conditions for discharge of nutrients to water. Nutrients, such as phosphorous and nitrogen, are the single biggest contributor to a poor Trophic Level Index (TLI) rating, a key measure of water quality.

infrastructural group cont.

The adjacent table shows anticipated reductions in nutrients in the district's lakes as a result of Rotorua District Council's commitment to reticulated sewerage schemes replacing septic tanks:

	Nutrient loading from existing on-site sewage disposal (tonnes per year by scheme)		% Reduction of current loading from proposed schemes	
	Nitrogen	Phosphorus	Nitrogen	Phosphorus
Lake Rotorua Scheme				
Rotokawa/Brunswick	5.7	0.25	95%	100%
Hamurana/Awahou	5.7	0.25	95%	100%
Rural	0	0	0%	0%
Total tonnes/yr	11.4 tonnes/yr of nitrogen 0.5 tonnes/yr of phosphorus			
Lake Rotoiti Scheme				
Mourea/Okawa Bay	1.79	0.12	96.8%	100%
Okere Falls/Otaramarae	2.48	0.15	96.8%	100%
Gisborne Pt/Hinehopu	2.13	0.15	85%	100%
Rural	0	0	0%	0%
Total tonnes/yr	6.4 tonnes/yr of nitrogen 0.42 tonnes/yr phosphorus			
Lake Rotoma Scheme				
Rotoma	4.93	0.05	85%	100%
Rural	0	0	0%	0%
Total tonnes/yr	5.8 tonnes/yr of nitrogen 0.05 tonnes/yr of phosphorus			

	Nutrient loading from existing on-site sewage disposal (tonnes per year by scheme)		% Reduction of current loading from proposed schemes	
	Nitrogen	Phosphorus	Nitrogen	Phosphorus
Lake Okareka Scheme				
Okareka	2.4	0.02	100%	100%
Rural	0	0	0%	0%
Total tonnes/yr	2.4 tonnes/yr of nitrogen 0.02 tonnes/yr of phosphorus			
Lake Tarawera Scheme				
Tarawera	3.61	0.2	100%	100%
Rural	0	0	0%	0%
Total tonnes/yr	3.61 tonnes/yr of nitrogen 0.2 tonnes/yr of phosphorus			



Additional capacity required from future growth of service areas will be provided by planned upgrades of existing assets.

For more information on lakes water quality and Trophic Level Index (TLI) ratings refer to Environment Bay of Plenty's Long Term Council Community Plan and other resources.

infrastructural group cont.

Water Supplies

Over recent years, the government has increased the required standards for public water supplies, community operated private water supplies, and even individual supplies to households. These standards have increased the costs for Council in three ways. Firstly, as a result of more onerous monitoring programmes on all water supplies in our district; secondly, from the requirement to undertake a comprehensive risk assessment of all water supplies, and thirdly, because of increased capital costs of raising Council's community operated water supplies to the standard expected.

One million dollars has been invested in UV light treatment disinfection systems for each of the urban and rural water supplies. The financial effect of this is to increase operating costs and hence, the cost of water, requiring a targeted rate or water charges through metering.

Increasing development and difficulty in obtaining larger water allocations from existing sources has required a strategic plan for sustainable water sources and a servicing network to be prepared. This has identified significant capital works which have been included in the Ten Year Plan. These include investigation of new source development, large trunk delivery mains to developing areas and additional storage reservoirs.

Key strategic issues for the next ten years include:

- Requirement to service areas where development/growth is expected - $4.4 million.
- Installation of backflow prevention devices - $2.19 million from 2009 to 2011.
- Additional reservoir storage for the urban area - $2.97 million in 2013
- Consideration of additional water metering.

Growth components of the above projects are to be funded by Development Contributions.

Potential Significant Negative Effects

Stormwater and Land Drainage

Negative environmental effects generated from this activity include stormwater reticulation impacting on the quality of the lakes. A detailed assessment of this has been completed. See "Rotorua City Urban Stormwater Quality and Prediction of Environmental Impacts" – NIWA. Ongoing monitoring programmes check contaminant loads and efficiency of management regimes.

Transport

Transport can impact negatively, for example air and water pollution, noise, glare and vibration. It is proposed that the land use components, noise, glare etc be handled by way of an environmental effects zone through the district plan. Off-site effects are mitigated by way of management methodologies.

Transport (State Highway Management)

The activity in itself creates no significant negative effects. However, work streams stemming from this activity can, and these are mitigated or avoided using consent, environmental enhancement and consultation processes.

Waste Management

Waste has a negative effect on the environment and management aims to reduce that waste. The balance between affordability and funding is key in that high costs lead to illegal dumping. This is an ongoing issue.

Wastewater

Wastewater has a negative effect on the environment and particularly on Rotorua lakes. The activity of collecting and treating wastewater reduces the negative effects.

Water Supplies

Abstraction of water resources from the natural environment may have a negative effect on the environment but is subject to resources consents and conditions.

These and a number of other negative effects identified, and associated mitigation options, are provided in the respective Activity Plan sections.

Asset Management Plans Information

The key assets used in this Activity Group are:

- Buildings
- Wastewater Treatment Plant
- Land
- Roading
- Stormwater drainage
- Landfill
- Street Signals, Signs, Lighting
- Bridges
- City Focus
- Footpaths
- Water works
- Wastewater Reticulation
- Footpaths (Engineering)
- Waste Management Rural Bin Sites

Further details are provided in each activity section.

infrastructural group cont.

Net Cost of Service

Net Cost of Service by Activity ($000s)	Actual 2007/08	Annual Plan 2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
City Services Operations	1,287	1,558	1,463	1,474	1,493	1,515	1,558	1,593	1,605	1,619	1,622	1,664
Stormwater & Land Drainage	2,724	2,495	2,540	2,656	2,694	2,779	2,836	2,882	2,838	2,862	2,870	2,787
Transport	7,039	6,561	(1,147)	(3,980)	(815)	60	1,309	(11,919)	(4,541)	(1,720)	975	2,600
Waste Management	1,827	1,838	1,300	774	993	916	1,610	1,782	1,457	1,582	1,720	1,459
Wastewater	(121)	(3,973)	(8,134)	(11,318)	(13,905)	(14,966)	(13,903)	(5,417)	(5,908)	(7,703)	(6,839)	(6,536)
Water Supplies	(783)	(943)	(929)	(1,969)	(2,125)	(1,284)	(1,519)	(1,764)	(1,902)	(2,515)	(2,875)	(3,167)
Total Net Cost of Service	11,973	7,536	(4,907)	(12,363)	(11,665)	(10,980)	(8,109)	(12,843)	(6,451)	(5,875)	(2,527)	(1,193)

infrastructural group cont.

Infrastructural Assets

Asset Type	Cost/Valuation ($000s)	Accumulated Depreciation ($000s)	Book Value 1 July 2008 ($000s)
Bridges	13,117	690	12,427
Buildings	7,640	603	7,037
City Focus	230	99	131
Computer Hardware	653	505	148
Computer Software	433	420	13
Database	424	258	166
Engineering	21	10	11
Footpaths	26,259	1,385	24,873
Furniture	157	139	19
Land	11,353	-	11,353
Landfill	6,305	3,071	3,234
Office Equipment	371	259	112
Parking	922	205	716
Parks and Reserves	58	6	52
Plant and Machinery	1,466	873	592
Roading	231,106	11,718	219,387
Stormwater drainage	60,144	3,088	57,056
Street Signal. Sign & Light	4,970	938	4,031
Vehicle	76	68	8
Waste Mgnt Rural bin Site	749	47	702
Wastewater Reticulation	114,513	7,751	106,762
Wastewater Treatment Plant	41,562	4,541	37,021
Water Works	76,550	4,228	72,322
	599,077	**40,903**	**558,174**

city services operations activity plan

Why we do it

This service is provided to meet community expectations, and involves keeping the central city and environs, and other specified locations, clean, tidy, safe, welcoming, and vibrant.

To create and maintain a well presented, welcoming, clean, tidy, pleasant, and vibrant city centre and environs:

- to meet community expectations; and
- to impress visitors to Rotorua.

What we do

Council has adopted a range of policies encompassing this activity which cover the CBD, City Focus, public places, street appeals, provision and servicing of public conveniences, parking management, Lakefront and Government Gardens.

The activity is managed from the City Focus in the CBD to provide hands-on liaison with shoppers, retailers, residents and visitors.

Locations and properties managed or maintained include:

- City streets (cleaning)
- Central Business District
- City Focus
- Government Gardens
- Lakefront
- Tryon Street
- Western Heights shopping centre
- Ngongotaha village
- Public conveniences (12 facilities)
- Tourism kiosks and signage
- Skate park
- Off-street car park, Haupapa Street (95 spaces)
- Off-street parking building, Hinemoa Street (244 spaces)
- On-street parking (1,200 metered and 2,900 unmetered spaces)

Activities and services provided or supported include:

- Issue of permits for busking, street entertaining, sausage sizzles and cake/food stalls in the city centre
- Review of art in public places
- Review and comment on street openings in city centre
- Review and comment on road closures in city centre
- Crime prevention camera network
- Community policing and information centre
- Organising juvenile offenders' community work for Child, Youth and Family, and Department of Corrections
- Resident and visitor assistance and direction
- Facilitation and promotion of city events
- Street banners, flags, and decorative lighting features
- Promotion of city and district
- Review and comment on all city centre resource consent applications
- Membership of keep Rotorua Beautiful Committee
- Giant chess game
- Rotary time capsule (25 year uplift in 2028)
- Management and co-ordination of volunteer workers
- Spirit of Rotorua suggestions
- Advice on application of legislation

It also involves management of a range of:

- Regulations (including litter, dogs, liquor, signs and hoardings, traffic, skateboarders, etc.)
- Bylaws
- Engineering requirements
- Promotion initiatives
- Property management issues
- Administrative tasks
- Compliance issues

city services operations activity plan cont.

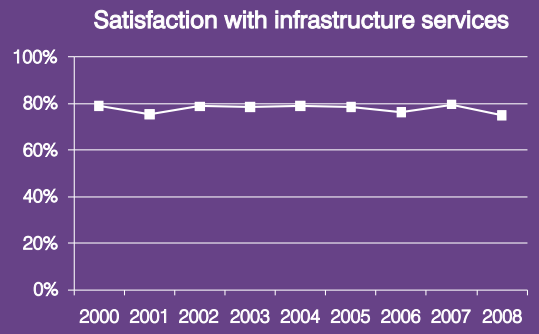
Community outcomes

Community Outcome	How the Council contributes
Safe & Caring	■ By providing safe public places, buildings, and streets. ■ By providing and managing a crime prevention camera network. ■ By ensuring a very high standard of cleaning and maintenance in the areas administered.
Environment	■ By removing tagging by 7.30 am daily. ■ By maintaining public conveniences to a very high standard of upkeep and cleanliness. ■ By ensuring the central city area is always clean and tidy.
Facilities & Services	■ By ensuring ease of getting from place to place. ■ By providing a good quality infrastructure for now and the future.
Happening	■ By providing well managed and organised events. ■ By ensuring activity in the City Focus and Central Business District is encouraged, adds flavour, and enhances Rotorua's character and reputation.

city services operations activity plan cont.

Did you know?

Rotorua residents have a high level of satisfaction with infrastructure such as footpaths and roads. However, people are less satisfied with the local recycling service, public toilets and stormwater drainage. Council continually seeks to improve its infrastructure services for the benefit of residents and visitors. Suggestions are welcomed through Council's annual and ten year planning processes.



What does the council plan to do in the future

What is the Council currently doing?	What will we do in years 1 to 3?	What will we do in years 4 to 10?	How will we know if we achieve our objective? (key result areas)
Providing city cleaning services.	Review level of service provided for activity.	CBD Revitalisation and Traffic Demand Management.	Visitor feedback is positive about the cleanliness and appearance of the CBD.
Provision of on-street and off-street parking.	Programme of changing existing meters to Pay and Display meters.		Residents are generally satisfied with the provision of services.(ie parking, public toilets, CBD cleaning, events at city centre).
	Review provision of city parking and charging policy.		
	Renewing the parking meter software.		
	Reviewing the process for collecting parking fees.		
Provision of public toilets.	Review strategy for provision of public toilets in CBD.		
CCTV surveillance of parts of CBD.	Increase CCTV surveillance and monitoring.	Increase CCTV network.	Visitor and resident feedback is positive about the safety of the CBD.

city services operations activity plan cont.

Measuring our achievements

Level of Service	Performance measures	Current performance	Performance targets									
			09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18	18/19
Provide a high standard of CBD cleaning and maintenance.	% of residents that are satisfied with appearance and cleanliness of CBD (as measured by periodic survey).	70%	70%									
Car parking availability in CBD is managed to the satisfaction of users.	% satisfied with parking in the CBD (as measured by periodic survey).	60%	60%									
Provision of public toilets in the CBD that meets the expectation of users.	% satisfied with public toilets (as measured by periodic survey).	55%	55%									
Facilitating events at the city centre which contribute to the vibrancy of the city.	Number of events held in the city centre annually.	300 events held annually.	>300 events									

Negative effects

Negative effects	Mitigation options
Affordability of services for residents (when services are largely for visitors).	Ensure that the level of service is affordable for residents.
Events at times will inconvenience residents (road closures, noise, etc).	Ensure number of events affecting residents and shopkeepers is not excessive. Ensure street cleaning work is undertaken in the early hours of the morning.
Parking restrictions are frustrating but are needed to ensure parking availability.	Administer policy for establishing parking meters and fees to balance competing needs.

city services operations activity plan cont.

Funding Considerations

This activity comprises two sub-activities is that are considered separately for funding. They are:

a) City Services
b) City Parking, both on-street and off-street

Who benefits from the activity?

- The community as a whole benefits from this activity; it is available and accessible to everyone. It provides an attractive, clean, well maintained, safe city and environs with easy and unobstructed access to attractive and safe shops and the surrounding environment.
- Retailers and landlords benefit from the commercial opportunity of operating in an attractive environment.
- Visitors to the city also derive a benefit.
- The entire community from the accessibility of central areas and transportation throughout.
- Road users and parking facility users.
- Retailers and landlords who benefit from shopping centres being made accessible.

What is the period of benefit?

- Benefits are intergenerational and ongoing as long as the infrastructure and service are maintained.

Who creates need for the activity?

- The need to undertake this activity derives from the community as a whole, by public expectation rather than any particular individuals or group.
- The need to undertake this activity is also partly created by shops and shoppers, including visitors.

Funding source

- Users of the off-street service are the prime beneficiaries and pay for the service as they use it.
- Fees are set at a level that will not dissuade use of the parking facilities, but meets the cost of this activity.
- Funding of this activity is 45% - 55% from user fees and charges and 45% - 55% from general rates.

Asset management

Key assets

- City Focus building
- Parking Building
- Haupapa Street carpark

Maintaining our assets

The asset management plan has a comprehensive renewal programme to maintain the service over its full lifecycle. Expenditure is set so that assets managed in the activity are maintained at the level of service the community expects.

Major changes planned for assets

There are no significant changes planned for these assets although there may be further acquisition of CCTV cameras (subject to funding being available) in response to community demand.

Major changes planned for assets

Reason for change	What will be done?	Year 1 ($000s)	Year 2 ($000s)	Year 3 ($000s)	Year 4 - 10 ($000s)
Renewals and replacements	City Focus	43	-	4	90
	Carpark Building barrier control	-	-	-	115
	Public toilets	-	-	-	223
	Parking meter aquisition	70	30	32	251
	CCTV cameras	50	52	53	419
	Revitalisation projects	45	-	-	-
	Totals	**208**	**82**	**89**	**1,098**

city services operations activity plan cont.

Financial summary (plan 2009/10 and forecast 2010/11 to 2018/19)

City Services Operations ($000s)	Actual 2007/08	Annual Plan 2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
Operating Expenses												
Direct Costs	2,433	2,731	2,619	2,682	2,752	2,827	2,908	2,984	3,063	3,150	3,240	3,339
Financial Costs	63	32	56	68	71	80	85	89	82	83	83	71
Depreciation	280	300	295	276	268	254	260	265	258	237	206	218
Other	-	-	-	-	-	-	-	-	-	-	-	-
Total Costs	**2,776**	**3,063**	**2,970**	**3,026**	**3,091**	**3,161**	**3,253**	**3,338**	**3,403**	**3,470**	**3,529**	**3,628**
Revenue												
Capital Revenue	-	-	-	-	-	-	-	-	-	-	-	-
Fees and Charges	1,488	1,498	1,500	1,545	1,591	1,639	1,688	1,738	1,791	1,844	1,900	1,957
Investment Income	-	-	-	-	-	-	-	-	-	-	-	-
Subsidies and Grants	-	-	-	-	-	-	-	-	-	-	-	-
Targeted Rates	-	-	-	-	-	-	-	-	-	-	-	-
Total Revenue	**1,488**	**1,498**	**1,500**	**1,545**	**1,591**	**1,639**	**1,688**	**1,738**	**1,791**	**1,844**	**1,900**	**1,957**
Internal Recoveries												
Internal Recoveries	1	7	7	7	7	7	7	7	7	7	7	7
Total Internal Recoveries	**1**	**7**	**7**	**7**	**7**	**7**	**7**	**7**	**7**	**7**	**7**	**7**
Net Cost of Service	**1,287**	**1,558**	**1,463**	**1,474**	**1,493**	**1,515**	**1,558**	**1,593**	**1,605**	**1,619**	**1,622**	**1,664**
Capital Costs												
Renewals	-	-	163	82	89	202	177	96	98	98	252	173
Growth	-	-	-	-	-	-	-	-	-	-	-	-
Backlog	-	-	-	-	-	-	-	-	-	-	-	-
Level of Service	-	-	-	-	-	-	-	-	-	-	-	-
Total Capital	**111**	**129**	**163**	**82**	**89**	**202**	**177**	**96**	**98**	**98**	**252**	**173**
Operational Funding												
Net Cost of Service			1,463	1,474	1,493	1,515	1,558	1,593	1,605	1,619	1,622	1,664
Plus Capital Revenue	-	-	-	-	-	-	-	-	-	-	-	-
Less Depreciation	-	-	(295)	(276)	(268)	(254)	(260)	(265)	(258)	(237)	(206)	(218)
Add back Depreciation Funded by Rates	-	-	163	82	89	202	177	96	98	98	252	173
Operations Funded by General Rates	**-**	**-**	**1,331**	**1,280**	**1,314**	**1,463**	**1,475**	**1,424**	**1,445**	**1,480**	**1,669**	**1,619**
Capital Funding												
Funding from Depreciation (Rates)	-	-	163	82	89	202	177	96	98	98	252	173
Loans from/(to) Corporate Fund	-	-	-	-	-	-	-	-	-	-	-	-
Capital Grants	-	-	-	-	-	-	-	-	-	-	-	-
Development Contributions	-	-	-	-	-	-	-	-	-	-	-	-
Total Capital	**111**	**129**	**163**	**82**	**89**	**202**	**177**	**96**	**98**	**98**	**252**	**173**

Minor roundings may occur in above totals

stormwater and land drainage activity plan

Why we do it

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

What we do

- Stormwater systems are maintained and operated to manage the drainage of excess rainfall (not what is poured or flushed down household or business drains).
- The purpose of the stormwater system is to protect building floor levels from flooding during heavy rain up to the level of a once in 50 year flood.
- Stormwater pipes are mostly less than 50 years old. The system generally has the capacity to cope with periods of heavy rain although in some areas of intensive development, extreme rainfall will result in localised flooding. The council has a programme to progressively reduce this flooding.
- The management of stormwater and flooding is complex, requiring an integrated approach covering ecosystems, people, urban design, communities and businesses, as well as cultural, amenity and social values. Individual property owner activities can have a major impact on stormwater management. Regulation of property owner responsibilities is important as a function for local government as is being a provider of public stormwater facilities. Performance measures should therefore be developed for both the regulatory and service provider roles.

The stormwater network consists of:

- 450m of lined channel
- 87.9km of open channels
- 742m of overland flowpaths
- 230.4km of piped networks
- 2 pump stations
- 3 flood detention dams

Climate change and Rotorua District

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

Temperature (winter)	- plus 2°C to 3°C
Rainfall (total)	- minus 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

The above information is summarised from the National Institute for Water and Atmospheric Research (NIWA) and is based on 2080 predictions. What the above 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 groundwater availability.

Community outcomes

Community Outcome	How the Council contributes
Safe & Caring	■ By protecting people and property from flooding.
Environment	■ By controlling the level of pollutants in stormwater flows and protection of natural stream channel environments. This contributes to improved lake water quality.
Facilities & Services	■ By providing good quality infrastructure that will last for another 50-100 years.

stormwater and land drainage activity plan cont.

What does the council plan to do in the future

What is the Council currently doing?	What will we do in years 1 to 3?	What will we do in years 4 to 10?	How will we know if we achieve our objective? (key result areas)
Providing and maintaining land drainage infrastructure.	Providing and maintaining land drainage infrastructure.	Providing and maintaining land drainage infrastructure.	Minimal impact of flooding on community – Annual Flood Report.
Reducing nutrient impact from stormwater 10 tonnes/annum N* 2 tonnes/annum P**	Reducing nutrient impact from stormwater 9 tonnes/annum N 1.8 tonnes/annum P	Reducing nutrient impact from stormwater 7 tonnes/annum N 1.5 tonnes/annum P	Reduced nutrient impact as measured by regular monitoring.

*N = Nitrogen **P= Phosphorus

Measuring our achievement

Level of Service	Performance measures	Current performance	Performance targets									
			09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18	18/19
Provision of a stormwater network to minimise the impact of flooding.	Number of dwellings per year affected by flood waters.	0	< 3*									
	% of blockages responded to within 24 hours.	95%	>95%									
	% satisfaction of people protected by urban land drainage schemes as measured by annual NRB survey.	72%	>80%									
Provision of a stormwater network to minimise the impact on the environment.	Number of breaches of consent conditions notified by Regional Council.	0	0									

* Records show that in most years no dwellings are affected by flooding but in a significant rainfall event some dwellings would be expected to be affected by flood waters. The performance target shown is therefore an average per year over the 10 year period.

stormwater and land drainage activity plan cont.

Negative effects	Mitigation options
Environmental impact on waters received downstream.	Water Services Bylaw licensing. Management and treatment options for stormwater runoff.
Flood damage to property.	Manage and control extreme discharges.
Developers can influence where works need to be undertaken.	This work is proposed to be funded 100% by Development Contributions.

Funding considerations

Who benefits from the activity?

- The community as a whole benefits from safe and efficient discharge of stormwater.
- Owners of property more prone to effects of stormwater also gain a particular benefit.

What is the period of benefit?

- Benefits are ongoing as long as the infrastructure is maintained.

Who creates the need for the activity?

- The community as a whole creates the need for a safe urban environment where stormwater discharges are adequately dealt with.
- Property owners directly affected by stormwater create a need for infrastructure to maintain adequate protection.

Funding source

This activity benefits:

- Both existing and future owners and occupiers of properties.
- Owners and occupiers who are connected to the system and those who are not connected but are within the catchment.
- The community as a whole by reducing the risk to public health resulting from storm events.
- It is considered all residents live within a catchment so benefit to greater or lesser extent.

This activity is currently funded by general rates after allowing for some development contributions. It is proposed that development contributions be used more in future. This, however, is subject to specific analysis per development, as the capital programme in this Ten Year Plan addresses backlog only.

Asset management

Key assets

- Stormwater drainage reticulation

Maintaining our assets

The asset management plan has a comprehensive renewal programme to maintain the service over its full lifecycle. Expenditure is set so that assets managed in the activity are maintained at the level of service the community expects.

Major changes planned for assets

Reason for change	What will be done?	Year 1 ($000s)	Year 2 ($000s)	Year 3 ($000s)	Year 4 - 10 ($000s)
Renewals and replacements	Renewals	800 Catchment 17 (Koutu)	515 Catchment 17 (Koutu)	530 Catchment to be determined	4,186 Catchment to be determined
Increased demand and backlog	Upgrades	489 Catchment 17 (Koutu)	504 Catchment 7 (Springfield)	519 Catchment 15 (Western Heights)	4,094 Catchment to be determined

stormwater and land drainage activity plan cont.

Financial summary (plan 2009/10 and forecast 2010/11 to 2018/19)

Stormwater & Land Drainage ($000s)	Actual 2007/08	Annual Plan 2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
Operating Expenses												
Direct Costs	1,237	1,311	1,264	1,297	1,326	1,351	1,390	1,427	1,461	1,507	1,546	1,592
Financial Costs	579	263	440	535	560	637	675	704	650	661	657	563
Depreciation	1,049	1,038	1,117	1,125	1,131	1,138	1,143	1,150	1,154	1,152	1,158	1,158
Other	-	-	-	-	-	-	-	-	-	-	-	-
Total Costs	**2,865**	**2,612**	**2,821**	**2,957**	**3,017**	**3,126**	**3,208**	**3,281**	**3,265**	**3,320**	**3,361**	**3,313**
Revenue												
Capital Revenue	22	13	175	180	186	191	197	203	209	215	222	228
Fees and Charges	118	104	104	107	110	114	117	121	124	128	132	136
Investment Income	1	-	2	14	27	42	58	75	94	115	137	162
Subsidies and Grants	-	-	-	-	-	-	-	-	-	-	-	-
Targeted Rates	-	-	-	-	-	-	-	-	-	-	-	-
Total Revenue	**141**	**117**	**281**	**301**	**323**	**347**	**372**	**399**	**427**	**458**	**491**	**526**
Internal Recoveries												
Internal Recoveries	-	-	-	-	-	-	-	-	-	-	-	-
Total Internal Recoveries	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Net Cost of Service	**2,724**	**2,495**	**2,540**	**2,656**	**2,694**	**2,779**	**2,836**	**2,882**	**2,838**	**2,862**	**2,870**	**2,787**
Capital Costs												
Renewals	-	-	500	515	530	546	563	580	597	615	633	652
Growth	-	-	158	101	104	107	110	113	117	120	124	128
Backlog	-	-	631	403	415	427	440	454	467	481	496	510
Level of Service	-	-	-	-	-	-	-	-	-	-	-	-
Total Capital	**1,349**	**957**	**1,289**	**1,019**	**1,049**	**1,080**	**1,113**	**1,147**	**1,181**	**1,216**	**1,253**	**1,290**
Operational Funding												
Net Cost of Service			2,540	2,656	2,694	2,779	2,836	2,882	2,838	2,862	2,870	2,787
Plus Capital Revenue	-	-	175	180	186	191	197	203	209	215	222	228
Less Depreciation	-	-	(1,117)	(1,125)	(1,131)	(1,138)	(1,143)	(1,150)	(1,154)	(1,152)	(1,158)	(1,158)
Add back Depreciation Funded by Rates	-	-	500	515	530	546	563	580	597	615	633	652
Operations Funded by General Rates	**-**	**-**	**2,098**	**2,226**	**2,279**	**2,379**	**2,453**	**2,515**	**2,490**	**2,540**	**2,567**	**2,510**
Capital Funding												
Funding from Depreciation (Rates)	-	-	500	515	530	546	563	580	597	615	633	652
Loans from/(to) Corporate Fund	-	-	789	504	519	534	550	567	584	601	619	638
Capital Grants	-	-	-	-	-	-	-	-	-	-	-	-
Development Contributions	-	-	-	-	-	-	-	-	-	-	-	-
Total Capital	**1,349**	**957**	**1,289**	**1,019**	**1,049**	**1,080**	**1,113**	**1,147**	**1,181**	**1,216**	**1,252**	**1,290**

Minor roundings may occur in above totals

transport activity plan

Why we do it

The council provides roads and transport so that people can have safe, easy and comfortable access to homes, shops, businesses, and recreational and leisure destinations. An efficient transport network is vital to assist the district's economy. Street corridors also provide access for power, telecommunications, gas, water supply and waste disposal activities.

Council has a strong focus on road safety including reducing road crashes in our district and encouraging sustainable (buses, rail, cycling and walking) modes of travel.

The council also provides local input into highway asset management, projects and decision-making.

What we do

- Manage and maintain the local road network, including road marking, traffic signals, signage and street furniture.
- Plan, implement and manage capital development programmes.
- Prioritise and manage programme of road safety improvements.
- Provide, maintain and manage infrastructure to support walking, cycling and public transport (by providing and managing bus shelters and bus stops).
- Provide footpath and verge maintenance and construction in both urban and rural areas.
- Provide an ongoing programme of seal extension in the rural areas.
- Provide kerbing and channeling maintenance and construction throughout the district.
- Provide and manage streetlighting.
- Provide roadside mowing and vegetation control.
- Promoting demand management and providing education about road safety and alternatives to private passenger vehicles.
- Provide co-ordination, resources, support and advice to individuals, community groups and other agencies on road safety and sustainability projects.
- Management and administration of the local highway network is undertaken by council. This is a unique situation, normally undertaken by the NZ Transport Agency (NZTA). Council must work within the national funding and policy system but can develop and try to advance locally needed works or improvements through advocacy from within the system. The activity is virtually self-funding via a management fee on-charged to NZTA.
- Act as delegated highway manager
- Manage highway maintenance activities within nationally set levels of service
- Develop and deliver improvements to the network
- Provide information and respond to the public on local highway issues
- Provide strategic planning advice
- Provide local emergency response on highway corridors
- Provide local area contact for the NZ Transport Agency for highways.

Rotorua's key local road network assets are summarised as follows;

- 824km of sealed roads and 179km of unsealed roads
- 96 bridges and footbridges
- 5.5kms of shared path ('share with care') cycleways
- 17.5kms of State Highway cycle lanes
- 392.4km of footpaths
- 6,690 streetlights
- numerous road signs, traffic signals and marker posts
- 124 bus shelters.

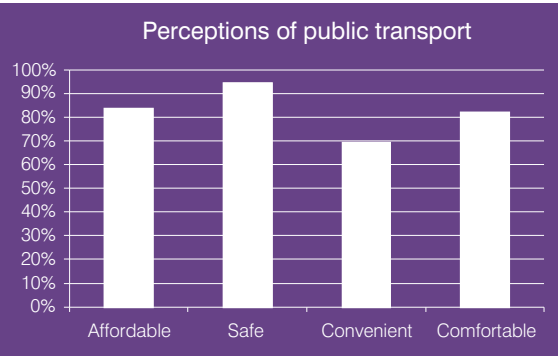
transport activity plan cont.

Community outcomes

Community Outcome	How the Council contributes
Safe & Caring	■ By increased public awareness leading to reduced road injuries, deaths and crashes. ■ By improved safety in public places and when travelling, from provision of a safe transport system.
Environment	■ By providing roading and transport services in a sustainable manner that mitigates the impact on our air and water resources.
Health	■ By improving health through the encouragement and awareness of more active travel choices and more opportunities to walk and cycle.
Prosperity	■ By encouraging growth and more investment in our district through the provision of an efficient and affordable transport system.
Facilities & Services	■ By making it easier to get from place to place and to walk and cycle in the city. ■ By provision of good, safe, maintained services and roads.

Did you know?

According to a survey in 2006, Rotorua residents were relatively happy that public transport in the area was affordable, safe, convenient and comfortable. Since that survey, Rotorua's public transport systems have been greatly improved. Promoting alternatives to private motor vehicles is one way in which Council is seeking to make Rotorua a more sustainable District.



transport activity plan cont.

What does the council plan to do in the future

What is the Council currently doing?	What will we do in years 1 to 3?	What will we do in years 4 to 10?	How will we know if we achieve our objective? (key result areas)
Providing safe, efficient roads.			Declining crash rate and low level of congestion.
Providing convenient walking facilities.			Increasing use of alternative transport modes.
Providing passenger transport infrastructure.			Increasing numbers utilising public transport.
Providing cycling facilities including completion of the Ngongotaha cycleway in the first 3 years of the Plan.			Increasing use of alternative transport modes.
Managing parking demand.	Review parking.	Implement reviewed parking regime.	Parking surveys showing 15% availability on street.
Managing competing use for space.			Minimal disruption between utility companies.
Delivering annual programmes around: **Road Safety**			
Walking/cycling – education and encouragement.	Review Cycling Strategy. Continue to co-fund with Crown projects in line with the supporting strategies (Bike Rotorua/Recreation).		Increasing recreational opportunities. Fewer road crashes. Improving health status. Good quality infrastructure built at the right time.
Community Safety Fund – local funds for local projects in the community.	Increasing emphasis on transport sustainability.		
Deliver licensing – aiding drivers into the graduated license system.	Continue to co-fund with Crown projects in line with supporting strategies (Road Safety).		
Child restraints initiatives/education. Adult restraints initiatives/education.	Continue to co-fund with Crown projects in line with supporting strategies (Road Safety).		
Speed reduction projects.			
Use of intersections projects.			
Safe with Age programmes.			
Provision of Rueben the Road Safety Bear.			

transport activity plan cont.

What does the council plan to do in the future

What is the Council currently doing?	What will we do in years 1 to 3?	What will we do in years 4 to 10?	How will we know if we achieve our objective? (key result areas)
Sustainable Transport			
Cycling promotion/projects.	Continue to co-fund with Crown projects in line with supporting strategies (Bike Rotorua, Transport Demand Management).		Improving health status. Easy travel for all modes of choice within and across the district.
Walking School Bus project.			
Workplace travel planning.			
Travel demand management implementation.			
State Highways			
Managing maintenance contractors' monthly operations.	Continue to maintain the network.		Fewer road crashes. Good, safe, maintained services and roads.
Providing asset management and planning role for district highways.	Continue to plan the network.		Good quality infrastructure built at the right time.
Providing a public contact for any highway issue.	Advance deliver and advocate for projects.		Good, safe, maintained services and roads.
Developing and advancing safety improvement and projects.	Develop the Rotorua Eastern Corridor.		Easy travel for all modes of choice within and across the district.
Projects currently being advanced are: **Local Roads:** Lake Road 4-laning Victoria Street arterial Expansion of transport centres Ngongotaha to CBD cycleway	Continue to develop and advance these projects.	Develop the Ngongotaha straights corridor.	Fewer road crashes. Good quality infrastructure built at the right time. Easy travel for all modes of choice within and across the District.

transport activity plan cont.

What does the council plan to do in the future

What is the Council currently doing?	What will we do in years 1 to 3?	What will we do in years 4 to 10?	How will we know if we achieve our objective? (key result areas)
State Highways: Fairy Springs Road 4-laning Tauranga Direct Road widening Hamurana intersection Mangapouri bridge Ngongotaha roundabout Mangorewa Gorge Waiteti intersection Oturoa intersection Sun Valley realignment Apirana curves Maraeroa passing lane Banksia Road passing lane 5 Mile Gate passing lane Mourea Bridge	Continue to develop and advance these projects.	Develop the Ngongotaha straights corridor.	Fewer road crashes. Good quality infrastructure built at the right time. Easy travel for all modes of choice within and across the district.

transport activity plan cont.

Measuring our achievements

Level of Service	Performance measures	Current performance	Performance targets									
			09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18	18/19
Improve the safety of the roading network.	RDC at or below peer* group for crashes per 100 million vehicle km travelled.	106 and declining.	Continued decline over 10 year period (compared against peer group statistics annually*)									
Provision of an efficient transport system that enables generally free movement from place to place.	95% of public bus services run on time	95% (Measured by EBOP)	95%								98%	
Maintain parking availability in CBD.	% average parking availability (1 in 7 spaces available between 10am and 3pm as measured by survey**).	15%	15%									
Maintain road condition ratings at a level near to national average (local road only).	Cumulative road condition indices to be a minimum of -1.5% below national average.	+1.5%	-1.5% minimum									
Educational and sustainability programmes are supported.	At least 6 programmes are delivered per year.	100%	100%									

* peer group is similarly sized councils in New Zealand e.g. New Plymouth, Hastings.
** a number of blocks are surveyed each year in response to feedback from parking enforcement officers or queries from retailers and shoppers.

transport activity plan cont.

Negative effects

Negative effects	Mitigation options
Air quality.	Minimise congestion and maximise efficiency – plus traffic demand management measures.
Lake water quality	Treatment of road runoff – targeting risk with level of treatment.
Noise.	Manage through proposed Environmental Effects Area in district plan.
Vibration.	Optimise commercial traffic on key routes and minimise on local roads.
Effects during construction – energy use, noise, vibration, nuisance, sediments, pollutants, disruptions, the use of non-renewable resources, public and site staff safety issues and production of waste.	Design projects around economies of scale, control of construction site issues, safe traffic management, use of recycled resource materials, integration and responsible waste disposal.

Funding Considerations

Activity Distinction

Transport activity consists of activities related to State Highway management, local roading management and road safety.

Funding of part of the activity is governed by NZ Transport Agency Policy so it is appropriate that maximum advantage is taken of this funding source.

Who benefits from the activity?

- The community as a whole benefits from accessibility of city and ease of transportation throughout the city and district.
- Road users gain a specific benefit.
- Users of parking facilities gain a specific benefit.
- Owners of properties adjacent to or connected to the network, and commercial operators derive a benefit, depending on the network.
- Visitors to the district also benefit.
- Developers gain specific benefits.
- All road users benefit through increased safety.

What is the period of benefit?

- Benefits are ongoing as long as infrastructure is maintained.
- Benefits will be ongoing and be intergenerational.

Who creates need for the activity?

- The community as a whole creates the need for an accessible urban environment where transport links are readily available for both business and public use. Growth also creates the need for expansion and upgrading of the network.
- Transport operators and businesses derive a benefit from being able to carry out their activities.
- The need is created by Council taking on community leadership and responsibility to try to reduce the effects of road crashes on personal lives in terms of death and injury for those directly involved and wider with family and work.
- Users for provision of facilities, encouragement and education to increase walking and cycling as more active modes of transport for Health and sustainability.
- Road users create the need for the activity by way of education to increase safety.
- Road users also create the benefit by way of provision of facilities, encouragement and education to increase walking and cycling as active modes of transport for health and sustainability.
- The community as a whole creates the need for a sustainable, accessible and planned transport network.
- Development pressures place constraints on the activity by lowering level of service and creating uneven distribution of demand. It is appropriate that the growth portion is funded from Development Contributions.

Funding source

- This activity essentially serves the community as a whole. Council cannot practically recover costs for this activity.
- The New Zealand Transport Agency (NZTA) pays 46% of roading maintenance costs, 56% of capital upgrade costs, 100% of state highway costs and 75% of road safety costs from transport and petrol taxes collected. The financial assistance rate (FAR) is set by NZTA policy. The local share for capital work can be met by a combination of development contributions and general rates.

transport activity plan cont.

Asset management

Key assets

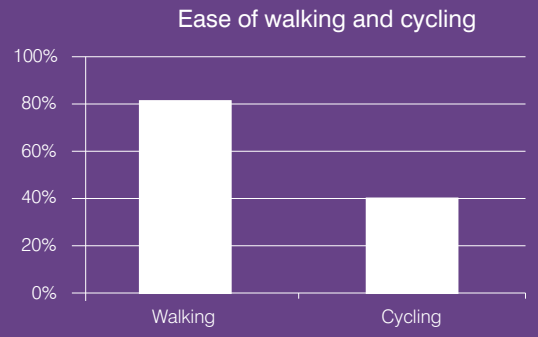
- Bridges
- Footpaths
- Land
- Street signals, signs, lights
- Roads
- Structures
- Parks Roads
- Kerb and Channel
- Drainage

Maintaining our assets

The Asset Management Plan has a comprehensive renewal programme that is required to maintain the service over its full lifecycle.

Did you know?

Survey results from 2006 show that most residents feel Rotorua is well suited for walking but less easily navigated on a bicycle. Council is working with other stakeholders to encourage walking and cycling as alternatives to motor transport.



transport activity plan cont.

Major changes planned for assets

Reason for change	What will be done?	Year 1 ($000s)	Year 2 ($000s)	Year 3 ($000s)	Year 4 - 10 ($000s)
Level of Service/ Policy Allocation	Cycle and walking facilities	50	51	53	226
	Land acquisition	50	51	53	307
	Rural Seal Extension	1,008 Rotoehu Rd Gavin Rd Cecil Rd	1,037 Cecil Rd Kapukapu Rd Pauti Rd	1,067 Ashpit Rd Endean Rd Maniatutu Rd	8,198
	Rural Street Improvements	384 Spencer Rd Footpath Oxford Rd	395 Spencer Rd Footpath Maraeroa Rd	407 Spencer Rd Footpath Rotoma/Rotoiti Footpath	3,123
	Malfroy/Ranolf Roundabout	500	-	-	-
	Maori Roadlines	80	82	85	651
	Urban Street Improvements	200 Service Lanes	206 Service Lanes	212 Service Lanes	1,627
	Rotorua Hospital Entrance	-	-	212	1,740
	Subsidised Minor Safety	460	474	486	4,020
	Unsubsidised Minor Safety	32	33	34	260
	Preventable maintenance	27	28	29	220
	Major Drainage	35	36	37	285
	Subtotals	**2,826**	**2,393**	**2,675**	**20,657**

transport activity plan cont.

Major changes planned for assets

Reason for change	What will be done?	Year 1 ($000s)	Year 2 ($000s)	Year 3 ($000s)	Year 4 - 10 ($000s)
Renewals and replacements	Reseals @ 75 km/yr	2,638	2,715	2,793	21,455
	Road re-habilitation	1,531	1,575	1,621	13,219
	Broadlands Rd: 0.7 km				
	Dansey Rd: 0.7 km				
	Waikite Valley Rd: 0.6km				
	Settler's Rd: 0.5km				
	Rawhiti Rd: 1.7km				
	Parks roads	107	-	-	-
	Drainage	37	38	39	301
	Structures	120	123	127	976
	Traffic services (Streetlights)	165	170	175	1,342
	Traffic lights (Fenton/Hinemoa)	79	-	-	-
	Kerb and channel	51	52	54	415
	Development assistance	50	51	53	307
	Footpath renewals	132	136	140	407
	Subtotals	**4,910**	**4,861**	**5,002**	**38,422**
Increased demand	Lake Road	162	7,388	-	-
	Victoria St Arterial	-	-	-	47,817
	Passenger Transport Centre	250	-	2,118	1,107
	Ngongotaha to CBD cycleway	300	308	318	181
	Development Assistance	630	649	666	4,944
	Passenger Transport Infrastructure	101	104	107	821
	Subtotals	**1,443**	**8,449**	**3,209**	**54,870**
	Total Transport Capital Expenditure	**9,179**	**15,703**	**10,886**	**113,949**

transport activity plan cont.

Financial summary (plan 2009/10 and forecast 2010/11 to 2018/19)

Transport ($000s)	Actual 2007/08	Annual Plan 2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
Operating Expenses												
Direct Costs	6,999	7,840	7,797	8,046	8,246	8,425	8,746	8,974	9,189	9,536	9,794	10,049
Financial Costs	1,113	1,188	1,979	2,405	2,635	3,005	3,166	3,251	3,704	4,107	4,363	4,091
Depreciation	5,330	4,931	5,423	6,308	6,528	6,687	7,329	7,918	8,057	8,929	9,288	9,554
Other	-	-	-	-	-	-	-	-	-	-	-	-
Total Costs	**13,442**	**13,959**	**15,199**	**16,759**	**17,409**	**18,117**	**19,241**	**20,143**	**20,950**	**22,572**	**23,445**	**23,694**
Revenue												
Capital Revenue	1,470	3,054	4,066	8,054	5,215	4,668	4,150	17,837	10,756	9,029	6,665	4,736
Fees and Charges	225	349	182	188	199	210	226	285	396	511	629	751
Investment Income	8	-	18	57	-	-	-	-	-	-	-	-
Subsidies and Grants	4,620	3,850	3,453	3,554	3,658	3,752	3,846	3,939	4,038	4,142	4,248	4,351
Targeted Rates	-	-	8,627	8,886	9,152	9,427	9,710	10,001	10,301	10,610	10,928	11,256
Total Revenue	**6,323**	**7,253**	**16,346**	**20,739**	**18,224**	**18,057**	**17,932**	**32,062**	**25,491**	**24,292**	**22,470**	**21,094**
Internal Recoveries												
Internal Recoveries	80	145	-	-	-	-	-	-	-	-	-	-
Total Internal Recoveries	**80**	**145**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Net Cost of Service	**7,039**	**6,561**	**(1,147)**	**(3,980)**	**(815)**	**60**	**1,309**	**(11,919)**	**(4,541)**	**(1,720)**	**975**	**2,600**
Capital Costs												
Renewals	-	-	4,910	4,861	5,002	5,122	5,240	5,355	5,478	5,610	5,744	5,871
Growth	-	-	1,443	8,449	3,209	1,900	811	25,088	12,445	9,181	4,537	908
Backlog	-	-	-	-	-	-	-	-	-	-	-	-
Level of Service	-	-	2,826	2,393	2,675	2,522	2,580	2,637	4,437	2,762	2,828	2,891
Total Capital	**7,248**	**9,360**	**9,179**	**15,703**	**10,886**	**9,544**	**8,631**	**33,080**	**22,360**	**17,553**	**13,109**	**9,670**
Operational Funding												
Net Cost of Service			(1,147)	(3,980)	(815)	60	1,309	(11,919)	(4,541)	(1,720)	975	2,600
Plus Capital Revenue	-	-	4,066	8,054	5,215	4,668	4,150	17,837	10,756	9,029	6,665	4,736
Less Depreciation	-	-	(5,423)	(6,308)	(6,528)	(6,687)	(7,329)	(7,918)	(8,057)	(8,929)	(9,288)	(9,554)
Add back Depreciation Funded by Rates	-	-	5,301	5,636	5,817	5,958	6,320	6,655	6,789	7,264	7,505	7,698
Add back Half Share Roading Depreciation	-	-	(2,494)	(2,901)	(3,003)	(3,076)	(3,371)	(3,642)	(3,706)	(4,107)	(4,272)	(4,395)
Operations Funded by General Rates	**-**	**-**	**304**	**501**	**687**	**923**	**1,078**	**1,013**	**1,240**	**1,537**	**1,584**	**1,084**
Capital Funding												
Funding from Depreciation (Rates)	-	-	2,808	2,735	2,814	2,882	2,948	3,013	3,083	3,157	3,232	3,304
Loans from/(to) Corporate Fund	-	-	2,520	2,367	2,647	2,351	2,405	2,458	4,254	2,574	2,636	2,694
Capital Grants	-	-	3,151	6,817	3,943	3,261	2,702	16,346	9,319	7,548	5,005	3,027
Resource management fees	-	-	-	-	-	-	-	-	-	-	-	-
Development Contributions	-	-	700	3,785	1,481	1,050	576	11,262	5,705	4,274	2,236	645
Total Capital	**7,248**	**9,360**	**9,179**	**15,704**	**10,885**	**9,544**	**8,631**	**33,079**	**22,361**	**17,553**	**13,109**	**9,670**

Minor roundings may occur in above totals

waste management activity plan

Why we do it

To manage the collection, reduction, re-use, recycling and disposal of waste in an environmentally sustainable manner.

What we do

- Refuse collection, recycling, landfill and all aspects of waste management. The activity is undertaken to provide a district-wide integrated approach to waste management, to protect public health and to provide cost effective disposal facilities. There is also a public expectation that council will provide such services.
- Plan, provide and manage waste disposal facilities.
- Manage and provide recycling and re-use services.
- Provide a weekly refuse collection service for residential properties.
- Provide litter collection and management services.
- Provide waste minimisation education to the community.

Community outcomes

Community Outcome	How the Council contributes
Safe & Caring	■ By providing safe collection and disposal of refuse.
Environment	■ By encouraging waste reduction and minimisation. ■ By looking after our air, land and water resource.
Facilities & Services	■ By providing good quality infrastructure for the future.
Learning	■ By providing waste minimisation education.

waste management activity plan cont.

What does the council plan to do in the future

What is the Council currently doing?	What will we do in years 1 to 3?	What will we do in years 4 to 10?	How will we know if we achieve our objective? (key result areas)
Currently provide recycling centres and will undertake a detailed investigation and report in October 2009 into the best way to deliver recycling services for the future.			Facilities are increasingly utilised, recovery rates continue to increase and residents support the services ultimately provided.
Provide landfill with hazardous waste collection, green waste and concrete waste re-use. Provide for the transfer stations at Tarawera and Rotoiti to be open for an additional day per week over the summer months from Year 1.			Trending decrease in landfilled volumes and recovery of reprocessed materials maximised.
Provide weekly domestic refuse collection service.			Refuse is collected weekly.
Provide litter management facilities at public places, events and controls on public walkways etc.			Public places and events have minimal litter issues.
Minimising landfill disposal	Investigate disposal/reprocessing options	Implement reprocessing options.	Trending decrease in landfilled volumes and recovery of reprocessed materials maximised.

waste management activity plan cont.

Measuring our achievements

Level of Service	Performance measures	Current performance	Performance targets									
			09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18	18/19
Provide recycling facilities within 13km to 95% of population.	Increase in recovery of recyclable materials of at least 5% pa.*	3,500 tonnes	3,675	3,860	4,050	4,250	4,470	4,690	4,925	5,170	5,430	5,700
Provide for recovery of green waste and concrete.	Number of tonnes per annum of green waste and concrete recovered.	16,000 tonnes/pa ± 10%	16,000 tonnes/ pa ± 10%									
Provision of weekly refuse collection to communities where majority request service.	Refuse collection is completed as scheduled.	Completion by 4pm daily	Maintain									
Provision of landfill/ hazardous waste disposal facilities.	% reduction in total landfilled volume.	65,000 tonnes/pa	62,500 tonnes ± 10%				62,000 tonnes ± 10%			61,500 tonnes ± 10%		
Minimise impact on environment.	Number of breaches of consent conditions notified by Regional Council.	1 breach	No breaches									

* Performance targets show a 5% year on year increase from the base figure of 3,500 tonnes in 2008/09

Negative effects

Negative effects	Mitigation options
Landfill leakage directly impacts environment	Provision of emergency overflow with back-up
Greenhouse gasses produced by landfill	Use gasses in generator plant or reprocess waste stream
Illegal dumping	Combination of education, enforcement and provision of affordable disposal facilities
Litter creating unsightly nuisance	Combination of provision of facilities, clean-ups, education and community involvement

waste management activity plan cont.

Funding considerations

This activity comprises three sub-activities that are considered separately for funding. They are:

a) Refuse Collection
b) Waste Management
c) Landfill

Who benefits from the activity?

- The community as a whole, including future generations, benefit from:
  - The safe and efficient disposal of solid waste.
  - Maintaining a clean and healthy environment, removing
  - hazardous wastes, and protecting standards of health and safety.
- The landfill benefits users so it is appropriate that users pay.
- Recycling benefits the landfill along with a wider public good. It is appropriate that funding is split 75% to landfill and 25% to public good.
- Litter control activities essentially benefit the whole community.
- Refuse collection benefits those using the service so it is appropriate that this is funded on a user pays basis.

What is the period of benefit?

- Benefits are intergenerational and ongoing as long as the infrastructure and service is maintained.

Who creates need for the activity?

- The need to undertake this activity is created by the community as a whole.
- The need to undertake this activity derives from individuals, groups, households, and businesses that create solid waste.

Funding source

Funding for this activity is apportioned approximately 35% - 45% from user fees and charges, 25% - 35% from targeted rates and 20% - 40% from general rates. However, within the activity funding is more specifically apportioned as follows:

Refuse Collection

This activity benefits residential properties and businesses by removing solid waste. The service does not cover all properties. Those that are not serviced have to make their own provision at their own cost. It is practical to identify and direct charge properties that receive the benefit. Council therefore recovers this cost by way of targeted rate.

Waste Management

This activity benefits both the community as a whole and individuals and groups in the community.

Whilst litter is typically deposited by the public, it is primarily generated from packaging originating from commercial premises. These owners and operators receive a primary benefit from litter clearance.

Since the service is available to the community as a whole, inclusive of external visitors, and there are no practical mechanisms to identify individual contributors, the cost is recovered mainly from general rates.

Landfill

The main benefits derive to individuals and businesses who use the landfill to dispose of solid waste. This also benefits the community as a whole.

Costs can reasonably be recovered by direct charges to users of the landfill in line with the NZ Waste Strategy.

Asset management

Key assets

- Buildings
- Land
- Roading
- Landfill
- Plant and machinery
- Waste management rural bin sites

waste management activity plan cont.

Major changes planned for assets

Reason for change	What will be done?	Year 1 cost ($000s)	Year 2 cost ($000s)	Year 3 cost ($000s)	Year 4 - 10 cost ($000s)
Renewals and replacements		50	309	-	718
Increased levels of service	Establishment of recycling facilities	-	1,813	-	-
	Landfill	1,051	-	-	-
Increased demand	Waste to gold project	240	-	7,426	-

waste management activity plan cont.

Financial summary (plan 2009/10 and forecast 2010/11 to 2018/19)

Waste Management ($000s)	Actual 2007/08	Annual Plan 2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
Operating Expenses												
Direct Costs	5,119	5,426	6,431	7,499	8,177	8,378	8,627	8,879	9,130	9,408	9,682	9,974
Financial Costs	149	223	152	189	141	597	532	518	510	474	451	434
Depreciation	1,211	992	909	507	620	631	565	607	553	550	556	581
Other	-	-	-	-	-	-	-	-	-	-	-	-
Total Costs	**6,479**	**6,641**	**7,492**	**8,195**	**8,938**	**9,606**	**9,724**	**10,004**	**10,193**	**10,432**	**10,689**	**10,989**
Revenue												
Capital Revenue	7	-	-	-	-	-	-	-	-	-	-	-
Fees and Charges	2,238	2,273	3,146	3,493	3,938	4,521	3,851	3,862	4,187	4,199	4,211	4,565
Investment Income	18	20	24	24	24	23	22	21	20	20	19	19
Subsidies and Grants	-	-	250	258	265	273	281	290	299	307	317	326
Targeted Rates	1,709	1,780	1,872	2,746	2,818	2,892	2,979	3,068	3,161	3,255	3,353	3,454
Total Revenue	**3,972**	**4,073**	**5,292**	**6,521**	**7,045**	**7,709**	**7,133**	**7,241**	**7,667**	**7,781**	**7,900**	**8,364**
Internal Recoveries												
Internal Recoveries	680	730	900	900	900	981	981	981	1,069	1,069	1,069	1,166
Total Internal Recoveries	**680**	**730**	**900**	**900**	**900**	**981**	**981**	**981**	**1,069**	**1,069**	**1,069**	**1,166**
Net Cost of Service	**1,827**	**1,838**	**1,300**	**774**	**993**	**916**	**1,610**	**1,782**	**1,457**	**1,582**	**1,720**	**1,459**
Capital Costs												
Renewals	-	-	-	258	-	-	-	-	-	-	-	-
Growth	-	-	240	-	7,426	-	-	-	-	-	-	-
Backlog	-	-	-	-	-	-	-	-	-	-	-	-
Level of Service	-	-	1,101	1,864	-	109	113	116	-	123	127	130
Total Capital	**1,828**	**1,389**	**1,341**	**2,122**	**7,426**	**109**	**113**	**116**	**-**	**123**	**127**	**130**
Operational Funding												
Net Cost of Service			1,300	774	993	916	1,610	1,782	1,457	1,582	1,720	1,459
Plus Capital Revenue	-	-	-	-	-	-	-	-	-	-	-	-
Less Depreciation	-	-	(909)	(507)	(620)	(631)	(565)	(607)	(553)	(550)	(556)	(581)
Add back Depreciation Funded by Rates	-	-	-	-	-	-	-	-	-	-	-	-
Self Funding/DC Reserve Movements	-	-	825	992	923	1,024	303	211	516	434	343	674
Operations Funded by General Rates	**-**	**-**	**1,216**	**1,260**	**1,295**	**1,309**	**1,347**	**1,385**	**1,420**	**1,466**	**1,507**	**1,553**
Capital Funding												
Funding from Depreciation (Rates)	-	-	-	-	-	-	-	-	-	-	-	-
Loans from/(to) Corporate Fund	-	-	-	1,813	-	-	-	-	-	-	-	-
Development Contributions	-	-	-	-	-	-	-	-	-	-	-	-
Capital Grants	-	-	-	-	-	-	-	-	-	-	-	-
Reserves Net	-	-	1,341	309	7,426	109	113	116	-	123	127	130
Total Capital	**-**	**-**	**1,341**	**2,122**	**7,426**	**109**	**113**	**116**	**-**	**123**	**127**	**130**

Minor roundings may occur in above totals

wastewater activity plan

Why we do it

To provide environmentally safe, efficient and sustainable collection, treatment and disposal of water borne waste and by-products.

What we do

The wastewater activity comprises the collection, treatment and disposal of wastewater treatment and disposal of wastewater from the three urban areas of Rotorua (Ngongotaha, city and eastern suburbs) as well as identified rural lakeside communities (at present Mourea, Marama Point and Okawa Bay/Duxton Hotel). The serviced area is programmed to be extended to include Brunswick, Rotokawa, Okareka, Okere, Otaramarae, Whangamarino, Tarawera, Hamurana, Gisborne Point/Hinehopu, Rotoma and Mamaku.

The functions required for the provision of these services include:

- strategic planning and improvement of wastewater networks to provide for growth within the district.
- planning and implementation of renewal work to ensure infrastructure is maintained.
- developing of maintenance, levels of service and quality standards.
- management and maintenance of assets and services including monitoring of flow and wastewater treatment effluent quality.
- developing of emergency and contingency plans to ensure service is maintained during adverse events.
- provision of information and education to the public regarding wastewater services and systems.
- development of funding policies and systems to enable continuing provision of the service into the future.

Rotorua's key wastewater assets are summarised as follows:

- 1 central wastewater treatment plant
- 1 composting plant
- 1 land effluent disposal system
- 68 pumping stations
- 7,270 manholes
- 418km of sewer gravity and rising mains
- 20,300 lateral connections

Services under the wastewater activity areas are provided because the community expects council to make provision for the removal of sewage and liquid trade wastes from communities, to promote public health and minimise the impact of communities on the environment. Council has the resources and knowledge to provide leadership in this area.

Legislation, such as the Local Government Act, Resource Management Act and Health Act, also requires Council to provide this service.

Moreover, the community expects that council will ensure through strategies and sound planning, that these services are available to areas of the district in which growth and development is expected, and also to developed areas which are in close proximity to lakes and streams.

Community outcomes

Community Outcome	How the Council contributes
Environment	■ By protecting the environment and lake water quality through wastewater treatment.
Health	■ By providing a sanitary wastewater collection and treatment service.
Facilities & Services	■ By providing good, quality infrastructure for the future.

wastewater activity plan cont.

What does the council plan to do in the future

What is the Council currently doing?	What will we do in years 1 to 3?	What will we do in years 4 to 10?	How will we know if we achieve our objective? (key result areas)
Renewal and replacement of pipelines and plant at the end of their serviceable lives.			Reduced blockages, overflow incidents and non-occurrence of public health issues.
Investigation and design of Wastewater Treatment Plant upgrade.	Upgrading Wastewater Treatment Plant to increase capacity		Reduced nutrient discharge.
Design of community sewerage schemes in rural areas and unserviced urban areas.	Implementation of urban/rural/lakeside community sewerage schemes.		Completion of sewerage schemes and improvement in lake water quality.
Investigating beneficial use of sewage sludge	Implementing works to beneficially use sewage sludge		Landfilling of sludge discontinued.

Measuring our achievements

Level of Service	Performance measures	Current performance	Performance targets								
			09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18	18/19
Implementation and management of schemes to minimise the impact on the environment.	% compliance with air, land and water discharge requirements.	99%	99%	100%								
	Completion of new sewerage schemes.*		Brunswick/ Rotokawa	Okareka Okere/ Otaramarae/ Whangamarino	Hinehopu/ Gisborne Point	Hamurana /Rotoma		Tarawera		Mamaku		
Provision of an efficient collection and disposal service.	Number of overflows to waterways.	3	< 2									
	Total number of overflows caused by network faults (per 100km of mains).	14	<14									
	% of customers satisfied with wastewater services as measured by annual NRB survey.	99%	99%									

* Subject to Resource Consent and other planning constraints.

wastewater activity plan cont.

Negative effects

Negative effects	Mitigation options
Greater quantities of wastewater and sludge due to increasing population and business activity.	Ongoing asset and activity management planning to ensure infrastructure has the required capacity.
Environmental impact of wastewater on lake water quality.	Ongoing management and capital works to ensure that resource consent conditions are met.
Sewage overflows during wet weather.	Continual replacement, renewal and upgrade of pipework and infrastructure.
Odour from Wastewater Treatment Plant sludge.	Compliance with odour management plan.

Funding considerations

Who benefits from the activity?

- The community as a whole including domestic, commercial, institutional and industrial premises connected to the public wastewater reticulation system.
- Visitors to the District.
- Developers gain specific benefits.

What is the period of benefit?

- Benefits are intergenerational and ongoing as long as the infrastructure is maintained and the service continued.

Who creates need for the activity?

- The community as a whole creates the need for environmentally safe and efficient treatment and disposal of wastewater.
- The need to undertake this activity is also created by legislation.
- The need to undertake this activity derives from households and businesses.

Funding source

Funding is 100% from targeted rates.

Asset management

Key assets

- Buildings
- Land
- Gravity and pressure pipelines
- Structures (tanks, wet wells, manholes)
- Mechanical and electrical plant

Maintaining our assets

Council Engineering and Castlecorp staff manage and carry out ongoing monitoring, replacement and repair work to ensure that the assets are maintained at a sustainable level of condition. Consultants and contractors are also engaged to provide specialist services where appropriate.

Did you know?

Lakes water quality has been falling in some Rotorua District lakes due to the entry of too much nutrients. As part of Rotorua's wastewater treatment system, effluent is pumped to the forest for land disposal, removing 80% of the nitrogen and 97% of the phosphorus. Council's Trade Waste Officer also helps to educate citizens about wastewater pollution and controls, and the relationship with lakes water quality. Examples of Council's contribution include:

- Upgrading the Wastewater Treatment Plan to increase capacity for population growth.
- Implementation of rural and lakeside community sewerage schemes.
- Encouraging residents to purchase more environmentally friendly dishwashing liquid and other chemicals.

wastewater activity plan cont.

Major changes planned for assets

Reason for change	What will be done?	Year 1 ($000s)	Year 2 ($000s)	Year 3 ($000s)	Year 4 - 10 ($000s)
Renewals	Sewer main replacements	1,100	2,993	1,064	11,218
	Land Treatment System renewals	199	356	300	3,964
	Pump station plant renewal	951	156	188	4,028
	WWTP Renewals	367	744	392	8,252
	Network renewals	156	480	501	177
	Subtotals	**2,773**	**4,729**	**2,445**	**27,639**
Increased levels of service	New sewerage schemes at:				
	• Okareka	2,280	6,667	-	-
	• Gisborne Point/Hinehopu	650	1,651	5,320	4,886
	• Hamurana/Awahou	651	516	4,788	10,047
	• Rotoma	-	-	-	14,111
	• Tarawera	-	-	-	15,712
	• Mamaku	-	-	-	7,635
	• Brunswick/Rotokawa	3,220	351	-	-
	• Okere/Otaramarae/Whangamarino	3,135	6,799	4,880	-
	Capacity improvements of:				
	• Land Treatment System	79	82	899	928
	• Sewer Mains	546	1,522	1,585	559
	• Treatment Plant	3,953	3,821	-	444
	Subtotals	**14,514**	**21,409**	**17,472**	**54,322**
	Totals	**17,287**	**26,138**	**19,917**	**81,961**

wastewater activity plan cont.

Financial summary (plan 2009/10 and forecast 2010/11 to 2018/19)

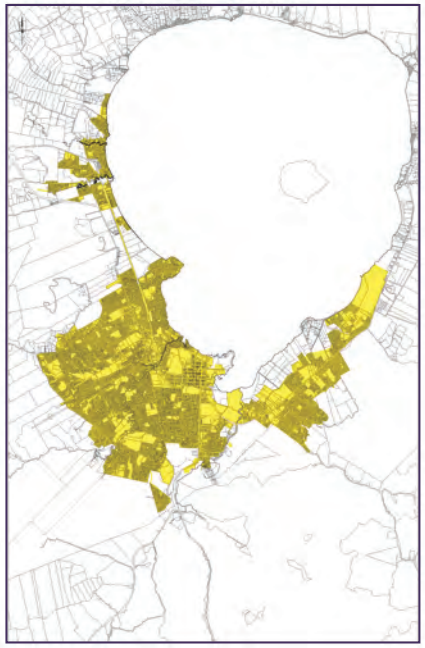
Wastewater ($000s)	Actual 2007/08	Annual Plan 2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
Operating Expenses												
Direct Costs	5,402	6,181	5,874	6,280	6,131	6,410	6,481	6,655	6,841	7,033	7,230	7,464
Financial Costs	516	1,094	517	763	1,288	1,415	1,552	2,170	2,429	2,288	2,263	2,330
Depreciation	4,488	4,235	4,181	4,513	5,024	5,302	5,963	6,508	6,449	6,515	6,932	7,280
Other	-	-	-	-	-	-	-	-	-	-	-	-
Total Costs	**10,406**	**11,510**	**10,572**	**11,556**	**12,443**	**13,127**	**13,996**	**15,333**	**15,719**	**15,836**	**16,425**	**17,074**
Revenue												
Capital Revenue	319	4,571	6,671	10,641	10,504	10,499	12,873	6,826	3,746	4,926	5,034	3,820
Fees and Charges	180	20	20	21	21	22	23	23	24	25	25	26
Investment Income	373	450	382	280	94	193	282	364	861	1,392	1,882	2,248
Subsidies and Grants	-	-	-	-	-	-	-	-	-	-	-	-
Targeted Rates	9,652	10,441	10,691	10,976	14,758	16,396	13,730	12,534	15,980	16,169	15,287	16,470
Total Revenue	**10,524**	**15,482**	**17,764**	**21,918**	**25,377**	**27,110**	**26,908**	**19,747**	**20,611**	**22,512**	**22,228**	**22,564**
Internal Recoveries												
Internal Recoveries	3	1	942	956	971	983	991	1,003	1,016	1,027	1,036	1,046
Total Internal Recoveries	**3**	**1**	**942**	**956**	**971**	**983**	**991**	**1,003**	**1,016**	**1,027**	**1,036**	**1,046**
Net Cost of Service	(121)	(3,973)	(8,134)	(11,318)	(13,905)	(14,966)	(13,903)	(5,417)	(5,908)	(7,703)	(6,839)	(6,536)
Capital Costs												
Renewals	-	-	2,786	4,729	2,445	2,206	6,015	1,508	2,146	3,520	5,612	6,632
Growth	-	-	14,421	21,331	17,472	17,957	21,510	7,010	606	3,339	3,890	-
Backlog	-	-	79	76	-	-	-	-	-	-	9	-
Level of Service	-	-	-	-	-	-	-	-	-	-	-	-
Total Capital	4,137	16,626	17,286	26,136	19,917	20,163	27,525	8,518	2,752	6,859	9,511	6,632
Operational Funding												
Net Cost of Service			(8,134)	(11,318)	(13,905)	(14,966)	(13,903)	(5,417)	(5,908)	(7,703)	(6,839)	(6,536)
Plus Capital Revenue	-	-	-	-	-	-	-	-	-	-	-	-
Less Depreciation	-	-	(4,181)	(4,513)	(5,024)	(5,302)	(5,963)	(6,508)	(6,449)	(6,515)	(6,932)	(7,280)
Add back Depreciation Funded by Rates	-	-	-	-	-	-	-	-	-	-	-	-
Self Funding/DC Reserve Movements	-	-	12,314	15,831	18,929	20,267	19,866	11,925	12,357	14,218	13,771	13,816
Operations Funded by General Rates	-	-	-	-	-	-	-	-	-	-	-	-
Capital Funding												
Funding from Depreciation (Rates)	-	-	-	-	-	-	-	-	-	-	-	-
Loans from/(to) Corporate Fund	-	-	-	-	-	-	-	-	-	-	-	-
Capital Grants	-	-	4,968	7,991	7,494	8,235	10,755	3,505	303	1,670	1,728	-
Development Contributions	-	-	1,473	1,162	1,404	1,820	1,572	503	33	184	190	-
Reserves Net	-	-	10,846	16,984	11,019	10,108	15,197	4,509	2,416	5,006	7,593	6,632
Total Capital	4,137	16,626	17,287	26,137	19,917	20,163	27,524	8,517	2,752	6,860	9,511	6,632

Minor roundings may occur in above totals

wastewater activity plan cont.

Rotorua Urban Sewerage Scheme

Approximately 20,300 lateral pipes connect drains at the property boundary to a network of 418 km of pipes. These pipes and 68 pump stations convey the wastewater to the Treatment Plant.



Rotorua District Council Plan Number 11163, Sheet 2

Description of Area
The Urban area of Rotorua City, including the Eastern Suburbs and Ngongotaha areas, as shown on RDC Plan No 11163, Sheet 2. Refer also to District Plan Maps 7 – 43, 104, 105, 107 & 108.

History
Parts of Rotorua City have been served by a public sewerage system since 1892. This has been extended a number of times since then. Following the construction of the first Wastewater Treatment Plant, full reticulation was extended to all of the city, plus Eastern Suburbs and Ngongotaha in 1980.

Levels of Service
The following levels of service are those which Council will endeavour to maintain within the Wastewater Service Area. Every serviceable property is entitled to a single 100 mm diameter wastewater connection to the boundary of the property. Council will maintain the sewer system in a state that will enable domestic type sewage to be carried away and treated by the system without blockages.

Note: Serviceable properties are those properties with some part of the land within 30 metres or the building within 60 metres of a public sewer main and are capable of being effectively connected, either directly or through a private drain. These properties, if not connected to the public sewer, are required to pay an availability charge.

There are several areas within Rotorua Urban where service is not available. Council has budgeted to progressively service these areas over eight years from 2005/06.

Effluent Quality
Council will treat all sewage discharged into its system in accordance with its Resource Consents.

Funding
The Rotorua Urban Waste Water Scheme has historically been self-funding, with all costs and revenues identified in a separate stand-alone account. The principles of this self funding account are as outlined below.

Capital Works
The funding sources for the capital costs of upgrades for the urban sewerage system will be from a combination of urban sewerage development rate, lakes enhancement rate, targeted rates and Development Contributions.

Operating Expenditure
Operating costs incurred in all sewerage schemes discharging to the Urban Waste Water Treatment Plant are combined in the Rotorua Basin Waste Water Account. Other scheme operation costs will need specific consideration once more details of the capital and operating costs are known.

Financial/Technical Planning
Key documents ensuring sound management of the Wastewater System are the Annual Business Plan and the Asset Management Plan, which are available from the Engineering Department of Council.

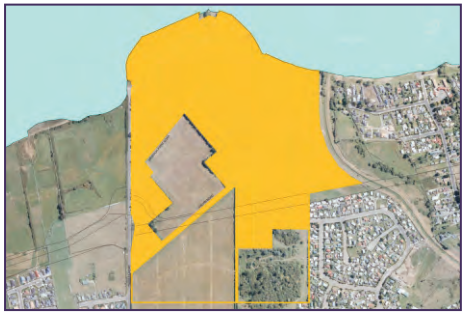
Related Documents

Legislation
Local Government Act 2002, Local Government (Rating) Act 2002, Health Act 1956.
Water Services and Trade Wastes Bylaw 2004.

RDC Files
85 08 010, 85 08 130

wastewater activity plan cont.

Hinemoa Point Sewerage Scheme



Rotorua District Council Plan Number 11608, Sheet 8

Description of Area
The community is within the Rotorua urban area as shown on RDC plan no. 11608, Sheet 8.

Levels of Service
The following levels of service are those which Council will endeavour to maintain within the Wastewater Service Area. Every serviceable property is entitled to a wastewater connection. Council will maintain the sewer system in a state that will enable domestic type sewage to be carried away and treated by the system without blockages.

Note: Serviceable properties are those properties with some part of the land within 30 metres or the building within 60 metres of a public sewer main and are capable of being effectively connected, either directly or through a private drain.

Effluent Quality
Council will treat all sewage discharged into its system in accordance with its Resource Consents.

Funding
The Rotorua Urban Waste Water Scheme has historically been self-funding, with all costs and revenues identified in a separate stand-alone account. Council is currently proposing a new funding policy to take into account proposed rural waste water schemes.

Capital Works
The funding services of the capital cost of the proposed sewerage schemes includes a 50% subsidy from Central Government through the Ministry of Health (Mourea, Marama Point, Okawa Bay/Duxton Hotel) and Ministry for the Environment (Brunswick, Rotokawa, Okere, Otaramarae, Whangamarino, Okareka/Blue Lake, Gisborne Point/Hinehopu, Hamurana/Awahou and Hinemoa Point).

The remainder of costs will be funded by a combination of Environment BOP, grants, commercial users contributions, Rotorua District Council general rates, and individual ratepayers' contributions. Funding sources and proportions for the other proposed schemes are still under consideration.

These amounts for the Hinemoa Point area scheme are as shown below:

Total Scheme Cost	$1,433,307
Ministry for the Environment	-716,654
Development Contribution	-206,167
RDC general rates	-99,000
Cost to be recovered from Ratepayers	$411,486

Operating Expenditure
Operating costs incurred in all sewerage schemes discharging to the Urban Waste Water Treatment Plant are combined in the Rotorua Basin Waste Water Account. Other scheme operation costs will need specific consideration once more details of the capital and operating costs are known.

Financial/Technical Planning
Key documents ensuring sound management of the Wastewater System are the Annual Plan and the Asset Management Plan, which are available from the Engineering Department of Council.

Related Documents

Legislation
Local Government Act 2002, Local Government (Rating) Act 2002, Health Act 1956.
Water Services and Trade Wastes Bylaw 2004.

RDC Files
85 08 010

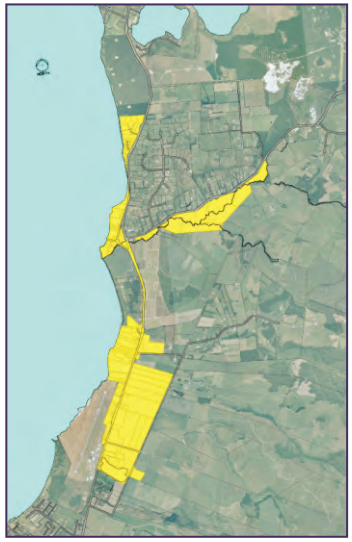
wastewater activity plan cont.

History of Other Sewerage Schemes

In response to concern over the health of Rotorua's lakes and the effect of lakeside settlements, Council in 2004 commenced the establishment of rural sewerage schemes to remove effluent input into the lakes.

Approval has been given to commence design development and construction of eight new schemes known as Brunswick and Rotokawa Sewerage Schemes, Okere, Otaramarae and Whangamarino Sewerage Schemes, Okareka/Blue Lake, Gisborne Point/Hinehopu and Hamurana/Awahou Sewerage Schemes. Funding has been earmarked for Tarawera, Rotoma and Mamaku sewerage Schemes. The Mourea, Marama Point, and OkawaBay/Duxton Hotel schemes were completed in mid 2006.

Rotokawa Area Sewerage Scheme



Rotorua District Council Plan Number 11608, Sheet 2

Description of Area
A rural area to the east of Rotorua City, generally from the Airport to the SH 30/SH 33 intersection as shown on RDC Plan No.11608, Sheet 2. Refer also to District Plan Maps 44-51.

Levels of Service
The following levels of service are those which Council will endeavour to maintain within the Wastewater Service Area. Every serviceable property is entitled to a wastewater connection. Council will maintain the sewer system in a state that will enable domestic type sewage to be carried away and treated by the system without blockages.

Note: Serviceable properties are those properties with some part of the land within 30 metres or the building within 60 metres of a public sewer main and are capable of being effectively connected, either directly or through a private drain.

Effluent Quality
Council will treat all sewage discharged into its system in accordance with its Resource Consents.

Funding
The Rotorua Urban Waste Water Scheme has historically been self-funding, with all costs and revenues identified in a separate stand-alone account. Council is currently proposing a new funding policy to take into account proposed rural waste water schemes. The principles of this are as outlined below.

Capital Works
The funding services of the capital cost of the proposed sewerage schemes includes a 50% subsidy from Central Government through the Ministry of Health (Mourea, Marama Point, Okawa Bay/Duxton Hotel) and Ministry for the Environment (Brunswick, Brunswick Stages 4 & 6, Rotokawa, Okere/Otaramarae/Whangamarino, Okareka/Blue Lake, Gisborne Point/Hinehopu, Hamurana/Awahou and Hinemoa Point).

The remainder of costs will be funded by a combination of Environment BOP, grants, commercial users contributions, Rotorua District Council general rates, and individual ratepayers' contributions. Funding sources and proportions for the other proposed schemes are still under consideration.

These amounts for the Rotokawa area scheme are as shown below:

Total Scheme Cost	**$6,348,115**
Ministry for Environment	-3,174,057
Environment BOP	-1,104,457
RDC General	-277,500
Development Contribution	-1,354,391
Cost to be recovered from Ratepayers	**$437,710**

Operating Expenditure
Operating costs incurred in all sewerage schemes discharging to the Urban Waste Water Treatment Plant are combined in the Rotorua Basin Waste Water Account. Other scheme operation costs will need specific consideration once more details of the capital and operating costs are known.

Financial/Technical Planning
Key documents ensuring sound management of the Wastewater System are the Annual Plan and the Asset Management Plan, which are available from the Engineering Department of Council.

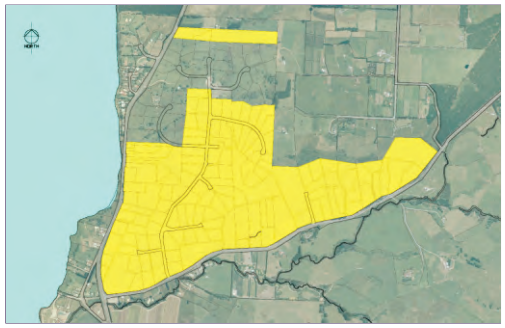
Related Documents

Legislation
Local Government Act 2002, Local Government (Rating) Act 2002, Health Act 1956.
Water Services and Trade Wastes Bylaw 2004.

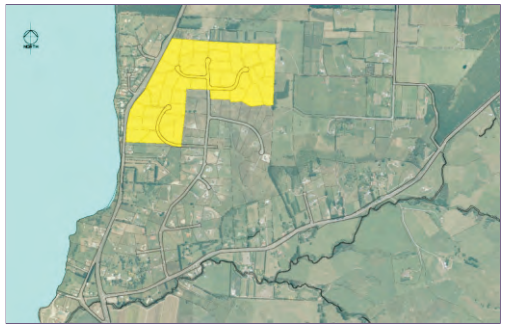
RDC Files
85 08 010, 85 08 130

wastewater activity plan cont.

Brunswick Area Sewerage Scheme



Rotorua District Council Plan Number 11608, Sheet 10



Rotorua District Council Plan Number 11608, Sheet 11

Description of Area

A rural area to the east of Rotorua City, generally from the junction of SH 30 and SH 33 to Banksia Place as shown on RDC Plan No.11608, Sheets 10 & 11. Refer also to District Plan Maps 44-51.

Levels of Service

The following levels of service are those which Council will endeavour to maintain within the Wastewater Service Area. Every serviceable property is entitled to a wastewater connection. Council will maintain the sewer system in a state that will enable domestic type sewage to be carried away and treated by the system without blockages.

Note: Serviceable properties are those properties with some part of the land within 30 metres or the building within 60 metres of a public sewer main and are capable of being effectively connected, either directly or through a private drain.

Effluent Quality

Council will treat all sewage discharged into its system in accordance with its Resource Consents.

Funding

The Rotorua Urban Waste Water Scheme has historically been self-funding, with all costs and revenues identified in a separate stand-alone account. Council is currently proposing a new funding policy to take into account proposed rural waste water schemes. The principles of this are as outlined below.

Capital Works

The funding services of the capital cost of the proposed sewerage schemes includes a 50% subsidy from Central Government through the Ministry of Health (Mourea, Okawa Bay) and Ministry for the Environment (Brunswick, Brunswick Stages 4 & 6, Rotokawa, Okere/Otaramarae/Whangamarino, Okareka/Blue Lake, Gisborne Point/Hinehopu, Hamurana/Awahou and Hinemoa Point).

The remainder of costs will be funded by a combination of Environment BOP, grants, commercial users contributions, Rotorua District Council general rates, and individual ratepayers' contributions. Funding sources and proportions for the other proposed schemes are still under consideration.

These amounts for the Brunswick area scheme are as shown below:

Total Scheme Cost	$7,172,897
Ministry for Environment	-3,586,448
Development Contributions	-1,186,378
RDC General	-181,500
Cost to be recovered from Ratepayers	$2,218,571

Brunswick Stages IV and VI will only contribute toward the trunk/local mains and WWTP upgrade as the internal reticulation was provided by the developer.

Operating Expenditure

Operating costs incurred in all sewerage schemes discharging to the Urban Waste Water Treatment Plant are combined in the Rotorua Basin Waste Water Account. Other scheme operation costs will need specific consideration once more details of the capital and operating costs are known.

Financial/Technical Planning

Key documents ensuring sound management of the Wastewater System are the Annual Plan and the Asset Management Plan, which are available from the Engineering Department of Council.

Related Documents:

Legislation

Local Government Act 2002, Local Government (Rating) Act 2002, Health Act 1956.
Water Services and Trade Wastes Bylaw 2004.

RDC Files

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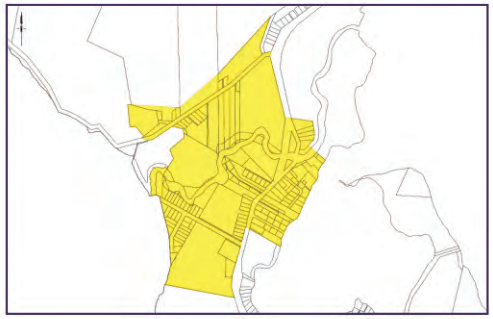
wastewater activity plan cont.

Mourea Sewerage Scheme



Rotorua District Council Plan Number 11163, Sheet 4

Description of Area
An area enclosing the lakeside community of Mourea, as shown on RDC Plan No.11163, Sheet 4. Refer also to District Plan Maps 51 and 54.

Levels of Service
The following levels of service are those which Council will endeavour to maintain within the Wastewater Service Area. Every serviceable property is entitled to a single 100 mm diameter wastewater connection to the boundary of the property. Council will maintain the sewer system in a state that will enable domestic type sewage to be carried away and treated by the system without blockages.
Note: Serviceable properties are those properties with some part of the land within 30 metres or the building within 60 metres of a public sewer main and are capable of being effectively connected, either directly or through a private drain. These properties, if not connected to the public sewer, are required to pay an availability charge.

Effluent Quality
Council will treat all sewage discharged into its system in accordance with its Resource Consents.

Funding
The Rotorua Urban Waste Water Scheme has historically been self-funding, with all costs and revenues identified in a separate stand-alone account. Council is currently proposing a new funding policy to take into account proposed rural waste water schemes. The principles of this are as outlined below.

Capital Works
The funding services of the capital cost of the proposed sewerage schemes includes a 50% subsidy from Central Government through the Ministry of Health (Mourea, Marama Point, Okawa Bay/Duxton Hotel) and Ministry for the Environment (Brunswick, Rotokawa, Okere, Otaramarae, Whangamarino, Okareka/Blue Lake, Gisborne Point/Hinehopu, Hamurana/Awahou and Hinemoa Point).

The remainder of costs will be funded by a combination of Environment BOP, grants, commercial users contributions, Rotorua District Council general rates, and individual ratepayers' contributions. Funding sources and proportions for the other proposed schemes are still under consideration.

These amounts for the Mourea scheme are as shown below:

Total Scheme Cost	$3,263,607
Ministry of Health	-1,534,536
Environment BOP	-493,370
RDC General	-219,000
Development Contribution	-454,695
Cost to be recovered from Ratepayers	$562,005

Operating Expenditure
Operating costs incurred in all sewerage schemes discharging to the Urban Waste Water Treatment Plant are combined in the Rotorua Basin Waste Water. Other scheme operation costs will need specific consideration once more details of the capital and operating costs are known.

Financial/Technical Planning
Key documents ensuring sound management of the Wastewater System are the Annual Plan and the Asset Management Plan, which are available from the Engineering Department of Council.

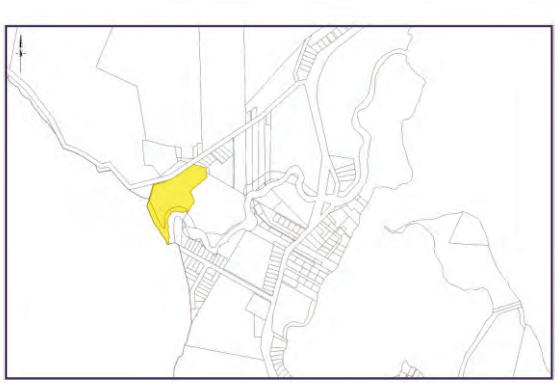
Related Documents

Legislation
Local Government Act 2002, Local Government (Rating) Act 2002, Health Act 1956.
Water Services and Trade Wastes Bylaw 2004.

RDC Files
85 08 010, 85 08 130

wastewater activity plan cont.

Marama Point Sewerage Scheme



Rotorua District Council Plan Number 11163, Sheet 14

Description of Area
An area enclosing the Marama Point area, as shown on RDC Plan No.11163, Sheet 14. Refer also to District Plan Maps 51 and 54.

Levels of Service
The following levels of service are those which Council will endeavour to maintain within the Wastewater Service Area. Every serviceable property is entitled to a single 100 mm diameter wastewater connection to the boundary of the property. Council will maintain the sewer system in a state that will enable domestic type sewage to be carried away and treated by the system without blockages.
Note: Serviceable properties are those properties with some part of the land within 30 metres or the building within 60 metres of a public sewer main and are capable of being effectively connected, either directly or through a private drain. These properties, if not connected to the public sewer, are required to pay an availability charge.

Effluent Quality
Council will treat all sewage discharged into its system in accordance with its Resource Consents.

Funding
The Rotorua Urban Waste Water Scheme has historically been self-funding, with all costs and revenues identified in a separate stand-alone account. Council is currently proposing a new funding policy to take into account proposed rural waste water schemes. The principles of this are as outlined below.

Capital Works
The funding services of the capital cost of the proposed sewerage schemes includes a 50% subsidy from Central Government through the Ministry of Health (Mourea, Marama Point, Okawa Bay/Duxton Hotel) and Ministry for the Environment (Brunswick, Rotokawa, Okere, Otaramarae, Whangamarino, Okareka/Blue Lake, Gisborne Point/Hinehopu, Hamurana/Awahou and Hinemoa Point).

The remainder of costs will be funded by a combination of Environment BOP, grants, commercial users contributions, Rotorua District Council general rates, and individual ratepayers' contributions. Funding sources and proportions for the other proposed schemes are still under consideration.

These amounts for the Mourea scheme are as shown below:

Total Scheme Cost	$1,101,997
Ministry of Health	-518,155
Environment BOP	-166,593
Advance Payment	-56,277
RDC General	-117,000
Development Contribution	-
Cost to be recovered from Ratepayers	$243,973

Operating Expenditure
Operating costs incurred in all sewerage schemes discharging to the Urban Waste Water Treatment Plant are combined in the Rotorua Basin Waste Water Account. Other scheme operation costs will need specific consideration once more details of the capital and operating costs are known.

Financial/Technical Planning
Key documents ensuring sound management of the Wastewater System are the Annual Plan and the Asset Management Plan, which are available from the Engineering Department of Council.

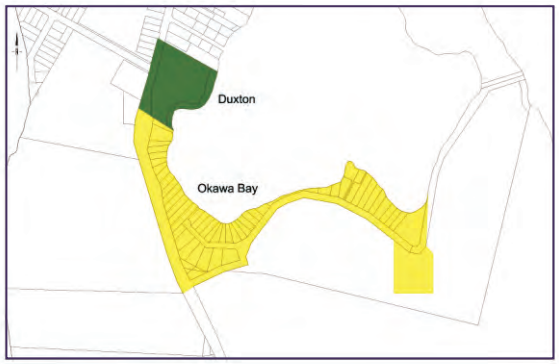
Related Documents

Legislation
Local Government Act 2002, Local Government (Rating) Act 2002, Health Act 1956.
Water Services and Trade Wastes Bylaw 2004.

RDC Files
85 08 010, 85 08 130

wastewater activity plan cont.

Okawa Bay Sewerage Scheme / Duxton Hotel



Rotorua District Council Plan Number 11163, Sheet 5

Description of Area
An area enclosing the lakeside community of Okawa Bay, as shown on RDC Plan No.11163, Sheet 5. Refer also to District Plan Maps 51 and 54.

Levels of Service
The following levels of service are those which Council will endeavour to maintain within the Wastewater Service Area. Every serviceable property is entitled to a single 100 mm diameter wastewater connection to the boundary of the property. Council will maintain the sewer system in a state that will enable domestic type sewage to be carried away and treated by the system without blockages.

Note: Serviceable properties are those properties with some part of the land within 30 metres or the building within 60 metres of a public sewer main and are capable of being effectively connected, either directly or through a private drain. These properties, if not connected to the public sewer, are required to pay an availability charge.

Effluent Quality
Council will treat all sewage discharged into its system in accordance with its Resource Consents.

Funding
The Rotorua Urban Waste Water Scheme has historically been self-funding, with all costs and revenues identified in a separate stand-alone account. Council is currently proposing a new funding policy to take into account proposed rural waste water schemes. The principles of this are as outlined below.

Capital Works
The funding services of the capital cost of the proposed sewerage schemes includes a 50% subsidy from Central Government through the Ministry of Health (Mourea, Marama Point, Okawa Bay/Duxton Hotel) and Ministry for the Environment (Brunswick, Rotokawa, Okere, Otaramarae, Whangamarino, Okareka/Blue Lake, Gisborne Point/Hinehopu, Hamurana/Awahou and Hinemoa Point).

The remainder of costs will be funded by a combination of Environment BOP, grants, commercial users contributions, Rotorua District Council general rates, and individual ratepayers' contributions. Funding sources and proportions for the other proposed schemes are still under consideration.

These amounts for the Okawa Bay scheme are as shown below:

	Okawa Bay	Duxton Hotel
Total Scheme Cost	**$791,177**	**$595,441**
Ministry of Health	-376,643	-270,655
Development Contribution	-14,970	-74,566
RDC General	-81,000	-93,000
Cost to be recovered from Ratepayers	**$318,564**	**$157,220**

Operating Expenditure
Operating costs incurred in all sewerage schemes discharging to the Urban Waste Water Treatment Plant are combined in the Rotorua Basin Waste Water Account. Other scheme operation costs will need specific consideration once more details of the capital and operating costs are known.

Financial/Technical Planning
Key documents ensuring sound management of the Wastewater System are the Annual Plan and the Asset Management Plan, which are available from the Engineering Department of Council.

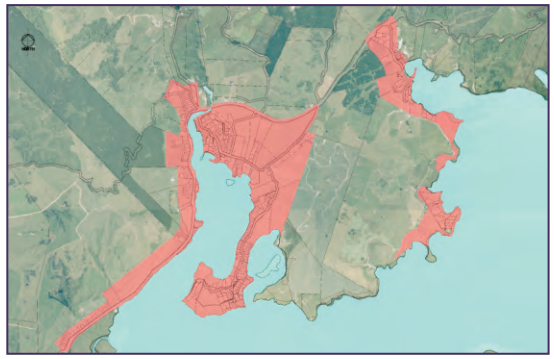
Related Documents

Legislation
Local Government Act 2002, Local Government (Rating) Act 2002, Health Act 1956.
Water Services and Trade Wastes Bylaw 2004.

RDC Files
85 08 010, 85 08 130

wastewater activity plan cont.

Okere Falls/Otaramarae/Whangamarino Sewerage Scheme



Rotorua District Council Plan Number 11608, Sheet 1

Description of Area
An area on the shore of Lake Rotoiti from Mourea northwards, as shown on RDC Plan No.11608, Sheet 1. Refer also District Plan Maps 54, 55, 57 and 59.

Levels of Service
The following levels of service are those which Council will endeavour to maintain within the Wastewater Service Area. Every serviceable property is entitled to a wastewater connection. Council will maintain the sewer system in a state that will enable domestic type sewage to be carried away and treated by the system without blockages.

Note: Serviceable properties are those properties with some part of the land within 30 metres or the building within 60 metres of a public sewer main and are capable of being effectively connected, either directly or through a private drain.

Effluent Quality
Council will treat all sewage discharged into its system in accordance with its Resource Consents.

Funding
The Rotorua Urban Waste Water Scheme has historically been self-funding, with all costs and revenues identified in a separate stand-alone account. Council is currently proposing a new funding policy to take into account proposed rural waste water schemes.

Capital Works
The funding services of the capital cost of the proposed sewerage schemes includes a 50% subsidy from Central Government through the Ministry of Health (Mourea, Marama Point, Okawa Bay/Duxton Hotel) and Ministry for the Environment (Brunswick, Brunswick Stages 4 & 6 Rotokawa, Okere/Otaramarae/Whangamarino, Okareka/Blue Lake, Gisborne Point/Hinehopu, Hamurana/Awahou and Hinemoa Point).

The remainder of costs will be funded by a combination of Environment BOP, grants, commercial users contributions, Rotorua District Council general rates, and individual ratepayers' contributions. Funding sources and proportions for the other proposed schemes are still under consideration.

The specific amounts for each funding source, such as the Ministry for the Environment subsidy, Environment BOP subsidy, RDC General Rates, Development Contribution and cost to be recovered from ratepayers within the service area, will be set through a Funding Policy prior to the construction of the scheme.

Operating Expenditure
Operating costs incurred in all sewerage schemes discharging to the Urban Waste Water Treatment Plant are combined in the Rotorua Basin Waste Water Account. Other scheme operation costs will need specific consideration once more details of the capital and operating costs are known.

Financial/Technical Planning
Key documents ensuring sound management of the Wastewater System are the Annual Plan and the Asset Management Plan, which is available from the Engineering Department of Council.

Related Documents:

Legislation
Local Government Act 2002, Local Government (Rating) Act 2002, Health Act 1956.
Water Services and Trade Wastes Bylaw 2004.

RDC Files
85 08 010, 85 08 130

wastewater activity plan cont.

Okareka/Blue Lake Sewerage Scheme

Rotorua District Council Plan Number 11608, Sheet 3

Description of Area
An area on the shore of Lake Okareka consisting of the Okareka residential community as shown on RDC Plan No.11608, Sheet 3. Refer also District Plan Map 78.

Levels of Service
The following levels of service are those which Council will endeavour to maintain within the Wastewater Service Area. Every serviceable property is entitled to a wastewater connection. Council will maintain the sewer system in a state that will enable domestic type sewage to be carried away and treated by the system without blockages.

Note: Serviceable properties are those properties with some part of the land within 30 metres or the building within 60 metres of a public sewer main and are capable of being effectively connected, either directly or through a private drain.

Effluent Quality
Council will treat all sewage discharged into its system in accordance with its Resource Consents.

Funding
The Rotorua Urban Waste Water Scheme has historically been self-funding, with all costs and revenues identified in a separate stand-alone account. Council is currently proposing a new funding policy to take into account proposed rural waste water schemes.

Capital Works
The funding services of the capital cost of the proposed sewerage schemes includes a 50% subsidy from Central Government through the Ministry of Health (Mourea, Marama Point, Okawa Bay/Duxton Hotel) and Ministry for the Environment (Brunswick, Brunswick Stages 4 & 6, Rotokawa, Okere/Otaramarae/Whangamarino, Okareka/Blue Lake, Gisborne Point/Hinehopu, Hamurana/Awahou and Hinemoa Point).

The remainder of costs will be funded by a combination of Environment BOP, grants, commercial users contributions, Rotorua District Council general rates, and individual ratepayers' contributions. Funding sources and proportions for the other proposed schemes are still under consideration.

The specific amounts for each funding source such as the Ministry for the Environment subsidy, Environment BOP subsidy, RDC General Rates, Development Contribution and cost to be recovered from ratepayers within the service area will be set through a Funding Policy prior to the construction of the scheme.

Operating Expenditure
Operating costs incurred in all sewerage schemes discharging to the Urban Waste Water Treatment Plant are combined in the Rotorua Basin Waste Water Account. Other scheme operation costs will need specific consideration once more details of the capital and operating costs are known.

Financial/Technical Planning
Key documents ensuring sound management of the Wastewater System are the Annual Plan and the Asset Management Plan, which are available from the Engineering Department of Council.

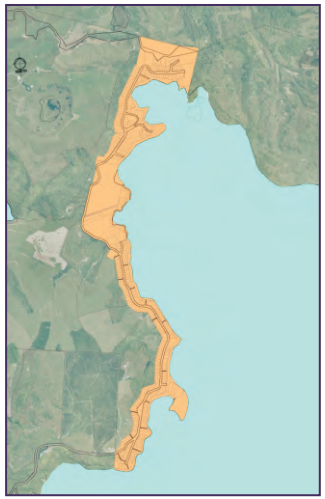
Related Documents

Legislation
Local Government Act 2002, Local Government (Rating) Act 2002, Health Act 1956.
Water Services and Trade Wastes Bylaw 2004.

RDC Files
85 08 010, 85 08 130

wastewater activity plan cont.

Tarawera Sewerage Scheme



Rotorua District Council Plan Number 11608, Sheet 4

Description of Area
An area on the western shore of Lake Tarawera comprising the current residential development as shown on RDC Plan No.11608, Sheet 4. Refer also to District Plan Maps 79-82.

Levels of Service
The following levels of service are those which Council will endeavour to maintain within the Wastewater Service Area. Every serviceable property is entitled to a wastewater connection. Council will maintain the sewer system in a state that will enable domestic type sewage to be carried away and treated by the system without blockages.

Note: Serviceable properties are those properties with some part of the land within 30 metres or the building within 60 metres of a public sewer main and are capable of being effectively connected, either directly or through a private drain.

Effluent Quality
Council will treat all sewage discharged into its system in accordance with its Resource Consents.

Funding
The Rotorua Urban Waste Water Scheme has historically been self-funding, with all costs and revenues identified in a separate stand-alone account. Council is currently proposing a new funding policy to take into account proposed rural waste water schemes.

Capital Works
The funding services of the capital cost of the proposed sewerage schemes includes a 50% subsidy from Central Government through the Ministry of Health (Mourea, Marama Point, Okawa Bay/Duxton Hotel) and Ministry for the Environment (Brunswick, Brunswick Stages 4 & 6, Rotokawa, Okere/Otaramarae/Whangamarino, Okareka/Blue Lake, Gisborne Point/Hinehopu, Hamurana/Awahou and Hinemoa Point).

The remainder of costs will be funded by a combination of Environment BOP, grants, commercial users contributions, Rotorua District Council general rates, and individual ratepayers' contributions. Funding sources and proportions for the other proposed schemes are still under consideration.

The specific amounts for each funding source such as the Ministry for the Environment subsidy, Environment BOP subsidy, RDC General Rates, Development Contribution and cost to be recovered from ratepayers within the service area will be set through a Funding Policy prior to the construction of the scheme.

Operating Expenditure
Operating costs incurred in all sewerage schemes discharging to the Urban Waste Water Treatment Plant are combined in the Rotorua Basin Waste Water Account. Other scheme operation costs will need specific consideration once more details of the capital and operating costs are known.

Financial/Technical Planning
Key documents ensuring sound management of the wastewater system are the Annual Plan and the Asset Management Plan, which are available from the Engineering Department of Council.

Related Documents

Legislation
Local Government Act 2002, Local Government (Rating) Act 2002, Health Act 1956.
Water Services and Trade Wastes Bylaw 2004.

RDC Files
85 08 010, 85 08 130

wastewater activity plan cont.

Gisborne Point / Hinehopu Sewerage Scheme

Rotorua District Council Plan Number 11608, Sheet 5

Description of Area
An area on the eastern shore of Lake Rotoiti from Gisborne Point to Hinehopu, as shown on RDC Plan No.11608, Sheet 5. Refer also to District Plan Maps 65-68.

Levels of Service
The following levels of service are those which Council will endeavour to maintain within the Wastewater Service Area. Every serviceable property is entitled to a wastewater connection. Council will maintain the sewer system in a state that will enable domestic type sewage to be carried away and treated by the system without blockages.

Note: Serviceable properties are those properties with some part of the land within 30 metres or the building within 60 metres of a public sewer main and are capable of being effectively connected, either directly or through a private drain.

Effluent Quality
Council will treat all sewage discharged into its system in accordance with its Resource Consents.

Funding
The Rotorua Urban Waste Water Scheme has historically been self-funding, with all costs and revenues identified in a separate stand-alone account. Council is currently proposing a new funding policy to take into account proposed rural waste water schemes.

Capital Works
The funding services of the capital cost of the proposed sewerage schemes includes a 50% subsidy from Central Government through the Ministry of Health (Mourea, Marama Point, Okawa Bay/Duxton Hotel) and Ministry for the Environment (Brunswick, Brunswick Stages 4 & 6, Rotokawa, Okere/Otaramarae/Whangamarino, Okareka/Blue Lake, Gisborne Point/Hinehopu, Hamurana/Awahou and Hinemoa Point).

The remainder of costs will be funded by a combination of Environment BOP, grants, commercial users contributions, Rotorua District Council general rates, and individual ratepayers' contributions. Funding sources and proportions for the other proposed schemes are still under consideration.

The specific amounts for each funding source such as the Ministry for the Environment subsidy, Environment BOP subsidy, RDC General Rates, Development Contribution and cost to be recovered from ratepayers within the service area will be set through a Funding Policy prior to the construction of the scheme.

Operating Expenditure
Operating costs incurred in all sewerage schemes discharging to the Urban Waste Water Treatment Plant are combined in the Rotorua Basin Waste Water Account. Other scheme operation costs will need specific consideration once more details of the capital and operating costs are known.

Financial/Technical Planning
Key documents ensuring sound management of the wastewater system are the Annual Plan and the Asset Management Plan, which are available from the Engineering Department of Council.

Related Documents

Legislation
Local Government Act 2002, Local Government (Rating) Act 2002, Health Act 1956.
Water Services and Trade Wastes Bylaw 2004.

RDC Files
85 08 010, 85 08 130

wastewater activity plan cont.

Hamurana/Awahou Sewerage Scheme

Rotorua District Council Plan Number 11608, Sheet 7

Description of Area
An area on the northern shore of Lake Rotorua encompassing the Hamurana residential area as shown on RDC Plan No.11608, Sheet 7. Refer also to District Plan Maps 4, 6 and 7.

Levels of Service
The following levels of service are those which Council will endeavour to maintain within the Wastewater Service Area. Every serviceable property is entitled to a wastewater connection. Council will maintain the sewer system in a state that will enable domestic type sewage to be carried away and treated by the system without blockages.

Note: Serviceable properties are those properties with some part of the land within 30 metres or the building within 60 metres of a public sewer main and are capable of being effectively connected, either directly or through a private drain.

Effluent Quality
Council will treat all sewage discharged into its system in accordance with its Resource Consents.

Funding
The Rotorua Urban Waste Water Scheme has historically been self-funding, with all costs and revenues identified in a separate stand-alone account. Council is currently proposing a new funding policy to take into account proposed rural waste water schemes.

Capital Works
The funding services of the capital cost of the proposed sewerage schemes includes a 50% subsidy from Central Government through the Ministry of Health (Mourea, Marama Point, Okawa Bay/Duxton Hotel) and Ministry for the Environment (Brunswick, Brunswick Stages 4 & 6, Rotokawa, Okere/Otaramarae/Whangamarino, Okareka/Blue Lake, Gisborne Point/Hinehopu, Hamurana/Awahou and Hinemoa Point).

The remainder of costs will be funded by a combination of Environment BOP, grants, commercial users contributions, Rotorua District Council general rates, and individual ratepayers' contributions. Funding sources and proportions for the other proposed schemes are still under consideration.

The specific amounts for each funding source such as the Ministry for the Environment subsidy, Environment BOP subsidy, RDC General Rates, Development Contribution and cost to be recovered from ratepayers within the service area will be set through a Funding Policy prior to the construction of the scheme.

Operating Expenditure
Operating costs incurred in all sewerage schemes discharging to the Urban Waste Water Treatment Plant are combined in the Rotorua Basin Waste Water Account. Other scheme operation costs will need specific consideration once more details of the capital and operating costs are known.

Financial/Technical Planning
Key documents ensuring sound management of the wastewater system are the Annual Plan and the Asset Management Plan, which are available from the Engineering Department of Council.

Related Documents

Legislation
Local Government Act 2002, Local Government (Rating) Act 2002, Health Act 1956.
Water Services and Trade Wastes Bylaw 2004.

RDC Files
85 08 010, 85 08 130

wastewater activity plan cont.

Rotoma Sewerage Scheme

Rotorua District Council Plan Number 11608, Sheet 6

Description of Area
An area on the southern shore of Lake Rotoma, as shown on RDC Plan No.11608, Sheet 3. Refer also to District Plan Maps 72-75.

Levels of Service
The following levels of service are those which Council will endeavour to maintain within the Wastewater Service Area. Every serviceable property is entitled to a wastewater connection. Council will maintain the sewer system in a state that will enable domestic type sewage to be carried away and treated by the system without blockages.

Note: Serviceable properties are those properties with some part of the land within 30 metres or the building within 60 metres of a public sewer main and are capable of being effectively connected, either directly or through a private drain.

Effluent Quality
Council will treat all sewage discharged into its system in accordance with its Resource Consents.

Funding
The Rotorua Urban Waste Water Scheme has historically been self-funding, with all costs and revenues identified in a separate stand-alone account. Council is currently proposing a new funding policy to take into account proposed rural waste water schemes.

Capital Works
The funding services of the capital cost of the proposed sewerage schemes includes a 50% subsidy from Central Government through the Ministry of Health (Mourea, Marama Point, Okawa Bay/Duxton Hotel) and Ministry for the Environment (Brunswick, Brunswick Stages 4 & 6, Rotokawa, Okere/Otaramarae/Whangamarino, Okareka/Blue Lake, Gisborne Point/Hinehopu, Hamurana/Awahou and Hinemoa Point).

The remainder of costs will be funded by a combination of Environment BOP, grants, commercial users contributions, Rotorua District Council general rates, and individual ratepayers' contributions. Funding sources and proportions for the other proposed schemes are still under consideration.

The specific amounts for each funding source such as the Ministry for the Environment subsidy, Environment BOP subsidy, RDC General Rates, Development Contribution and cost to be recovered from ratepayers within the service area will be set through a Funding Policy prior to the construction of the scheme.

Operating Expenditure
Operating costs incurred in all sewerage schemes discharging to the Urban Waste Water Treatment Plant are combined in the Rotorua Basin Waste Water Account. Other scheme operation costs will need specific consideration once more details of the capital and operating costs are known.

Financial/Technical Planning
Key documents ensuring sound management of the wastewater system are the Annual Plan and the Asset Management Plan, which are available from the Engineering Department of Council.

Related Documents

Legislation
Local Government Act 2002, Local Government (Rating) Act 2002, Health Act 1956.
Water Services and Trade Wastes Bylaw 2004.

RDC Files
85 08 010

wastewater activity plan cont.

Mamaku Sewerage Scheme

Rotorua District Council Plan Number 11163, Sheet 16

Description of Area
A rural area to the west of Rotorua as shown on RDC plan no. 11163, Sheet 16. Refer also to District Plan Maps 76-77.

Levels of Service
The following levels of service are those which Council will endeavour to maintain within the Wastewater Service Area. Every serviceable property is entitled to a wastewater connection. Council will maintain the sewer system in a state that will enable domestic type sewage to be carried away and treated by the system without blockages.

Note: Serviceable properties are those properties with some part of the land within 30 metres or the building within 60 metres of a public sewer main and are capable of being effectively connected, either directly or through a private drain.

Effluent Quality
Council will treat all sewage discharged into its system in accordance with its Resource Consents.

Funding
The Rotorua Urban Waste Water Scheme has historically been self-funding, with all costs and revenues identified in a separate stand-alone account. Council is currently proposing a new funding policy to take into account proposed rural waste water schemes.

Capital Works
The funding services of the capital cost of the proposed sewerage schemes includes a 50% subsidy from Central Government through the Ministry of Health (Mourea, Marama Point, Okawa Bay/Duxton Hotel) and Ministry for the Environment (Brunswick, Brunswick Stages 4 & 6, Rotokawa, Okere/Otaramarae/Whangamarino, Okareka/Blue Lake, Gisborne Point/Hinehopu, Hamurana/Awahou and Hinemoa Point).

The remainder of costs will be funded by a combination of Environment BOP, grants, commercial users contributions, Rotorua District Council general rates, and individual ratepayers' contributions. Funding sources and proportions for the other proposed schemes are still under consideration.

The specific amounts for each funding source such as the Ministry for the Environment subsidy, Environment BOP subsidy, RDC General Rates, Development Contribution and cost to be recovered from ratepayers within the service area will be set through a Funding Policy prior to the construction of the scheme.

Operating Expenditure
Operating costs incurred in all sewerage schemes discharging to the Urban Waste Water Treatment Plant are combined in the Rotorua Basin Waste Water Account. Other scheme operation costs will need specific consideration once more details of the capital and operating costs are known.

Financial/Technical Planning
Key documents ensuring sound management of the wastewater system are the Annual Plan and the Asset Management Plan, which are available from the Engineering Department of Council.

Related Documents

Legislation
Local Government Act 2002, Local Government (Rating) Act 2002, Health Act 1956.
Water Services and Trade Wastes Bylaw 2004.

RDC Files
85 08 010

water supplies activity plan

Did you know?

Council provides clean, safe drinking water through 688km of pipes and 24,000 connections throughout the district. Residents consistently rate the quality of water supply very highly. Through ongoing monitoring and careful management, Council seeks to ensure that all supplies comply with national Drinking Water Standards. Examples of current activities and plans include:

- Installation of ultraviolet (UV) treatment systems.
- Completion of Public Health Risk Management Plans for all supplies.
- Assessing community demand for new water systems in rural and lakeside areas.

Why we do it

To provide, in a cost-effective manner, a constant, adequate, sustainable and high quality supply of water to meet the needs of communities within the district.

What we do

The water supply activity comprises the provision of potable water to three urban supply areas, five rural residential supply areas and two farming supply areas.

The functions required to be carried out in providing the service include.

- Strategic planning and improvement of water networks to provide for growth within the district.
- Planning and implementation of renewal work to ensure infrastructure is maintained.
- Developing of maintenance planning, levels of service and quality standards.
- Management and maintenance of assets and services including monitoring of pressure, flow and water quality.
- Developing of emergency and contingency plans to ensure service is maintained during adverse events.
- Provision of information and education to the public regarding water use and conservation.
- Development of funding policies and systems to enable continuing provision of the service into the future.

Rotorua's key water supply assets are summarised as follows:

- 9 sources
- 16 pump stations
- 22 reservoirs
- 24,000 connections
- 688km of pipe work

Council will, in areas where it is cost-effective to do so, provide a supply of drinking water which is "safe." Council has the resources and knowledge to provide leadership and infrastructure in this area. The commercial / industrial sector, including dairy farming, also expects council in currently-served areas to ensure there is adequate water provided for these businesses to operate and develop. Council will ensure, through strategies and sound planning, that these services will be available to areas of the district in which growth and development is expected.

The Health Act 1956 (section 23) requires councils to improve, promote and protect public health. Whilst not expressly requiring councils to provide a public water supply, the provision of a safe, potable water supply to dwellings contributes significantly towards this objective.

The Local Government Act 2002 requires councils currently providing public water supplies to continue to do so.

water supplies activity plan cont.

Community outcomes

Community Outcome	How the Council contributes
Safe & Caring	■ By maintaining sufficient water for fire fighting purposes.
Environment	■ By using water efficiently and encouraging others to do so too.
Health	■ By providing safe drinking water to the community.
Prosperity	■ By providing opportunities for businesses to develop and grow through meeting commercial water needs.
Facilities & Services	■ By providing good quality infrastructure for the future.

What does the council plan to do in the future

What is the Council currently doing?	What will we do in years 1 to 3?	What will we do in years 4 to 10?	How will we know if we achieve our objective? (key result areas)
Design and tendering of UV Treatment Systems	Installation of UV Treatment Systems and improvement of water gradings	Provision of additional reservoir storage in the urban area.	Safe drinking water that complies with DWSNZ and is appropriately graded Good quality infrastructure providing adequate capacity for the serviced areas.
Developing of public health risk management plans	Completion of public health risk management plans for all supplies		
Strategic planning of network extensions in eastern and western zones	Upgrading and extension of reservoir storage and pipelines in the eastern Area		
Development of additional bore source for Mamaku	Installation of backflow prevention devices		
Assessing community demand for new water systems in rural/lakeside areas			
Replacement of ageing asbestos cement water mains.			

water supplies activity plan cont.

Measuring our achievements

Level of Service	Performance measures	Current performance	Performance targets									
			09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18	18/19
Provision of safe drinking water.	% compliance with the DWSNZ monitoring requirements.	99%	100%									
	Ministry of Health public health gradings are maintained at appropriate minimum levels for all supplies.	Ee	Ee	Cc								
Water supply is adequate for fire fighting purposes within urban fire districts.	% of fire hydrants comply with NZ Fire Service Code of Practice within urban fire districts.	95%	95%									
Reliable and effective water network and treatment facilities.	% of connections meet minimum flow and pressure at point of supply during normal operation.	95%	95%									
	% of urban customers satisfied with water services as measured by annual NRB survey	93%	93%									
	Number of water restrictions imposed on consumers due to inability to meet full demand.	None	None									

Negative effects

Negative effects	Mitigation options
Abstraction of water resources from the natural environment	All abstractions are subject to the issue of resource consents and conditions contained within them to mitigate environmental impacts.
Input of water into the wastewater system	Rotorua District Council has in place and follows a water conservation strategy and a trade waste bylaw to regulate discharges to the waste water system.

water supplies activity plan cont.

Funding considerations

This activity comprises five sub-activities that are considered separately for funding. They are:

a) Urban supply - operating (cost of running and monitoring the scheme) and capital (major improvements/ extensions).
b) Rural residential - capital (major improvements/ extensions).
c) Rural residential - operating (cost of running and monitoring the scheme).
d) Rural farming - capital (major improvements/extensions).
e) Rural farming - operating (cost of running and monitoring the scheme).

Funding of capital expenditure for growth will be by development contributions as described in Appendix E Capital Expenditure Related to Growth of the draft Development Contributions Policy contained in Volume 2, Part C of the Ten Year Plan.

Urban supply (operating and capital)

Who benefits from the activity?

- The community as a whole benefits from:
  - Safe and efficient provision of drinking water.
  - Provision of water services for fire fighting to maintain community safety services.
- Commercial businesses benefit specifically from the provision of water services.
- Households benefit from the provision of water services.
- Developers gain specific benefits.

What is the period of benefit?

- Benefits are intergenerational and ongoing as long as the infrastructure is maintained and the service continued.

Who creates need for the activity?

- The community as a whole creates the need for a safe urban environment where water services are adequately provided and health standards maintained.
- Commercial and industrial enterprises create need for water services applicable to their business.
- Fire fighting services create need for water services to carry out their job.
- Property owners create the need for the service.

Funding source

- The primary beneficiaries are existing and future users (consumers) of the water supply, and non-users within the water supply area (whose property values increase due to the availability of the supply and the improved fire protection capability).
- The community as a whole benefits in terms of improved health, clean environment and fire fighting capabilities.
- The activity is funded by user charges comprising:
  - Domestic by way of targeted rate of a uniform amount.
  - Business by way of targeted rate based on metered use.

Rural residential (capital)

Who benefits from the activity?

- The community as a whole benefits from:
  - Safe and efficient provision of drinking water.
  - Provision of water services for fire fighting to maintain community safety services.
- Commercial businesses benefit specifically from the provision of water services.
- Households benefit from the provision of water services.
- Developers gain specific benefits.

What is the period of benefit?

- Benefits are intergenerational and ongoing as long as the infrastructure is maintained and the service continued.

Who creates need for the activity?

- The community as a whole creates the need for a safe urban environment where water services are adequately provided and health standards maintained.
- Commercial and industrial enterprises create need for water services applicable to their business.
- Fire fighting services create need for water services to carry out their job.
- Property owners create the need for the service.

Funding source

- The primary beneficiaries are existing and future users (consumers) of the water supply, and non-users within the water supply area (whose property values increase due to the availability of the supply and the improved fire protection capability).
- The community as a whole benefits in terms of improved health, clean environment and fire fighting capabilities.
- Each property within the scheme contributes a maximum of $2,500 towards the costs of any rural water supply scheme and any extension to an existing rural water supply scheme that is deemed necessary, and the balance by way of general rates as a measure of the benefit to the community.

Rural residential (operating)

Who benefits from the activity?

- The community as a whole benefits from:
  - Safe and efficient provision of drinking water.
  - Provision of water services for fire fighting to maintain community safety services.

water supplies activity plan cont.

- Commercial businesses benefit specifically from the provision of water services.
- Households benefit from the provision of water services.

What is the period of benefit?

- Benefits are intergenerational and ongoing as long as the infrastructure is maintained and the service continued.

Who creates need for the activity?

- The community as a whole creates the need for a safe urban environment where water services are adequately provided and health standards maintained.
- Commercial and industrial enterprises create need for water services applicable to their business.
- Fire fighting services create need for water services to carry out their job.
- Property owners create the need for the service.

Funding source

- The primary beneficiaries are existing and future users (consumers) of the water supply, and non-users within the water supply area (whose property values increase due to the availability of the supply and the improved fire protection capability).
- The community as a whole benefits in terms of improved health, clean environment and fire fighting capabilities.
- The Mamaku, Rotoiti, Rotoma, Hamurana, Kaharoa and Okareka supplies are 100% user pays by a combination of fixed quarterly charge which is set to recover 75% of the fixed costs of the scheme, and a charge per cubic metre consumed. The cost per cubic metre is set to recover all of the variable costs of the scheme plus 25% of the fixed costs. However, where this formula results in a reduction in the fixed charge from the previous year, the 75 /25 ratio shall be modified so that the fixed change stays the same.

Rural farming (capital)

Who benefits from the activity?

- The community as a whole benefits from:
  - Safe and efficient provision of drinking water.
  - Provision of water services for fire fighting to maintain community safety services.
- Commercial businesses benefit specifically from the provision of water services.
- Households benefit from the provision of water services.
- Developers gain specific benefits.

What is the period of benefit?

- Benefits are intergenerational and ongoing as long as the infrastructure is maintained and the service continued.

Who creates need for the activity?

- The community as a whole creates the need for a safe urban environment where water services are adequately provided and health standards maintained.
- Commercial and industrial enterprises create need for water services applicable to their business.
- Fire fighting services create need for water services to carry out their job.
- Property owners create the need for the service.

Funding source

- It is considered that the benefits obtained from expenditure on this activity are primarily private in relation to each farm. The private beneficiaries are the existing and future users (consumers) of the water supply, with water for stock being the predominant use (commercial purposes). Funding is 100% by user charges (metered consumption)..
- It is noted that new farming water supply schemes are used primarily to increase farm productivity and are based on a commercial decision by the farming community to increase productivity and the wealth of the district.

Rural farming (operating)

Who benefits from the activity?

- The community as a whole benefits from:
  - Safe and efficient provision of drinking water.
  - Provision of water services for fire fighting to maintain community safety services.
- Commercial businesses benefit specifically from the provision of water services.
- Households benefit from the provision of water services.

What is the period of benefit?

- Benefits are intergenerational and ongoing as long as the infrastructure is maintained and the service continued.

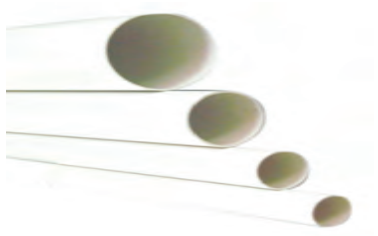
Who creates need for the activity?

- The community as a whole creates the need for a safe urban environment where water services are adequately provided and health standards maintained.
- Commercial and industrial enterprises create need for water services applicable to their business.
- Fire fighting services create need for water services to carry out their job.
- Property owners create the need for the service.

Funding source

- This activity relates solely to the Reporoa water supply at this stage. It is considered that the benefits obtained from expenditure on this activity are primarily private in relation to each farm. The private beneficiaries are the existing and future users (consumers) of the water supply, with water for stock being the predominant use (commercial purposes). Residents receive the benefit of supply to the farms.
- It is noted that currently the activity is funded by way of 100% user charges by a combination of fixed quarterly charges and metered consumption over and above a fixed quarterly quantity.

water supplies activity plan cont.



Asset management

Key assets

- Buildings
- Land
- Structures (reservoirs, civil works)
- Pipelines
- Mechanical and electrical plant.

Maintaining our assets

Council Engineering and Castlecorp staff manage and carry out ongoing monitoring, replacement and repair work to ensure that the assets are maintained at a sustainable level of condition. Consultants and contractors are also engaged to provide specialist services where appropriate.

Major changes planned for assets

Reason for change	What will be done?	Year 1 cost ($000s)	Year 2 cost ($000s)	Year 3 cost ($000s)	Year 4 - 10 cost ($000s)
Renewals and replacements	Urban supply:				
	• Network	1,825	1,558	1,256	6,758
	• Plant	548	118	124	614
	• Meters	35	36	37	293
	• Monitoring equipment	10	10	11	84
	Rural water supplies:				
	• Hamurana	-	-	9	45
	• Kaharoa	4	-	-	81
	• Mamaku	37	17	18	23
	• Okareka	-	-	-	26
	• Reporoa	520	252	-	23
	• Rotoiti	29	-	7	26
	• Rotoma	-	-	-	32
	Subtotals	**3,008**	**1,991**	**1,462**	**8,005**
Increased levels of service/backlog	Reporoa Network improvements	105	-	-	-
	Urban plant improvements	382	15	254	2,597
	Eastern area improvements	1,336	1,187	-	-
	Urban network improvements	400	840	1,223	1,244
	Subtotals	**2,223**	**2,042**	**1,477**	**3,841**
Increased demand	Reporoa Network improvements	75	-	-	-
	Urban plant improvements	1,510	15	254	2,596
	Eastern area improvements	884	1,033	-	-
	Urban network improvements	-	-	623	634
	Subtotals	**2,469**	**1,048**	**877**	**3,230**
	Totals	**7,700**	**5,081**	**3,816**	**15,076**

water supplies activity plan cont.

Financial summary (plan 2009/10 and forecast 2010/11 to 2018/19)

Water Supplies ($000s)	Actual 2007/08	Annual Plan 2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
Operating Expenses												
Direct Costs	4,258	5,640	4,972	5,167	5,379	5,478	5,645	5,766	5,923	6,075	6,257	6,430
Financial Costs	86	253	181	384	463	510	577	653	656	645	633	617
Depreciation	2,154	2,108	2,149	2,084	2,045	2,171	2,152	2,151	2,326	2,070	2,057	2,181
Other	-	-	-	-	-	-	-	-	-	-	-	-
Total Costs	**6,498**	**8,001**	**7,302**	**7,635**	**7,887**	**8,159**	**8,374**	**8,570**	**8,905**	**8,790**	**8,947**	**9,228**
Revenue												
Capital Revenue	145	756	185	1,308	1,378	480	548	599	651	671	691	712
Fees and Charges	35	127	20	144	255	262	270	278	287	295	304	313
Investment Income	16	(16)	150	32	40	126	245	376	529	724	931	1,179
Subsidies and Grants	-	-	-	-	-	-	-	-	-	-	-	-
Targeted Rates	6,223	6,716	6,792	6,995	7,203	7,418	7,639	7,867	8,102	8,343	8,592	8,849
Total Revenue	**6,419**	**7,583**	**7,147**	**8,479**	**8,876**	**8,286**	**8,702**	**9,120**	**9,569**	**10,033**	**10,518**	**11,053**
Internal Recoveries												
Internal Recoveries	862	1,361	1,084	1,125	1,136	1,157	1,191	1,214	1,238	1,272	1,304	1,342
Total Internal Recoveries	**862**	**1,361**	**1,084**	**1,125**	**1,136**	**1,157**	**1,191**	**1,214**	**1,238**	**1,272**	**1,304**	**1,342**
Net Cost of Service	(783)	(943)	(929)	(1,969)	(2,125)	(1,284)	(1,519)	(1,764)	(1,902)	(2,515)	(2,875)	(3,167)
Capital Costs												
Renewals	-	-	2,746	1,981	1,451	1,079	1,085	1,289	1,019	1,174	893	949
Growth	-	-	2,469	1,048	877	1,187	1,311	278	108	112	115	119
Backlog	-	-	2,453	2,041	1,298	441	477	220	182	188	194	200
Level of Service	-	-	33	-	-	-	-	-	-	-	-	-
Total Capital	2,939	7,908	7,701	5,070	3,626	2,707	2,873	1,787	1,309	1,474	1,202	1,268
Operational Funding												
Net Cost of Service			(929)	(1,969)	(2,125)	(1,284)	(1,519)	(1,764)	(1,902)	(2,515)	(2,875)	(3,167)
Plus Capital Revenue	-	-	-	-	-	-	-	-	-	-	-	-
Less Depreciation	-	-	(2,149)	(2,084)	(2,045)	(2,171)	(2,152)	(2,151)	(2,326)	(2,070)	(2,057)	(2,181)
Add back Depreciation Funded by Rates	-	-	-	-	-	-	-	-	-	-	-	-
Self Funding/DC Reserve Movements	-	-	3,078	4,053	4,170	3,455	3,671	3,915	4,228	4,585	4,932	5,348
Operations Funded by General Rates	-	-	-	-	-	-	-	-	-	-	-	-
Capital Funding												
Funding from Depreciation (Rates)	-	-	-	-	-	-	-	-	-	-	-	-
Loans from/(to) Corporate Fund	-	-	-	-	-	-	-	-	-	-	-	-
Development Contributions	-	-	2,394	1,048	877	1,187	1,311	278	108	112	115	119
Capital Grants	-	-	-	-	-	-	-	-	-	-	-	-
Reserves Net	-	-	5,307	4,022	2,750	1,520	1,562	1,509	1,202	1,361	1,087	1,149
Total Capital	2,939	7,908	7,701	5,070	3,627	2,707	2,873	1,787	1,310	1,473	1,202	1,268

Minor roundings may occur in above totals

water supplies activity plan cont.

Central Urban Water Supply

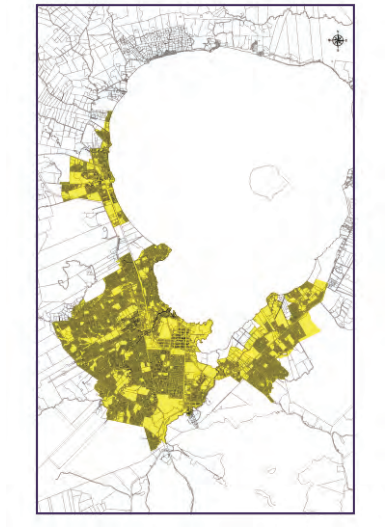
Water is drawn from the Karamu-Takina Springs and pumped via two pump stations (Matipo and Utuhina) to storage reservoirs. A further three booster stations (Pukehangi, Thomas Crescent and Tihiotonga) are used to service the supply area. The supply serves a population of 38,960 with an estimated 16,091 connections covering an area of 2,600 hectares. An average of 24,291m^3 was used daily in 2008, with estimated peak day consumption of 34,904m^3, which is supplied through 292km of pipe work. The supply is lightly chlorinated. Total reservoir capacity is 32,655m^3.

Eastern Area Water Supply

A predominantly urban supply serving a population of 9,616 with 3,913 total connections including 327 industrial or commercial connections covering an area of 1,900 hectares. Water is drawn from springs in Whakarewarewa Forest and pumped to a high level storage reservoir in Tarawera Road, then gravitated to the main reservoir just above Highfield Place in Tarawera Road. The area served by the supply extends from the Puarenga Stream, north east along the lakeshore, to the airport, and south up to about the 335m contour level. An average of 4,185m^3 was used daily in 2008, with a estimated peak day consumption of 6,087m^3 which is supplied through 85km of pipework. The supply is lightly chlorinated. Total reservoir capacity 7,270m^3.

Ngongotaha Water Supply

Originally a predominantly urban supply for the Ngongotaha Township but now with minor extensions, services some of the adjoining farmlands. The supply services a population of 4,382 with 1,996 total connections including 332 industrial/ commercial connections covering an area of 1300 hectares. Water is drawn from the Taniwha Springs and pumped to reservoirs in Central Road and Henderson Road. An average of 2,486m^3 was used daily in 2008 with a peak consumption of 3,580m^3, which is supplied through 49km of pipework. The supply is lightly chlorinated. Total reservoir capacity is 6,130m^3.



Rotorua District Council Plan Number 11015 Sheet 1

Description of Area

An urban area encompassing the Ngongotaha, Rotorua City and Eastern Suburbs as shown on RDC Drawing No: 11015 Sheet 1. Refer also to District Plan Maps 7 – 43, 104, 105, 107, 108.

History

A water supply for the Rotorua Township was first established in 1887. Since then, a number of improvements and extensions have been made as the City has developed. A public supply was first established for Ngongotaha in 1924, and for the Eastern Suburbs in 1963.

Levels of Service

The following levels of service are those which Council will endeavour to maintain within the Water Supply Area. The following stated minimum levels of service for flow and pressure are not achievable for every single connection at all times. Council's aim is that at least 95% of connections will meet these levels under normal demand.

Quality

Flow	Domestic Connections - minimum 30 litres/minute. Commercial/Extraordinary - dependent on size of connection.
Pressure Range	Minimum 30 metres pressure head Maximum 90 metres pressure head
Note:	Flow/Pressure figures are at point of supply.
Fire-fighting Water	95% of fire hydrants are to meet the NZ Fire Service Code of Practice for Fire fighting Water Supplies.
Water Quality	2004 Public Health Grading – Central Zone Ee (2006) – Eastern Zone Ee (2006) – Ngongotaha Zone Da (2007)

Supply Funding

Costs and revenues for the Rotorua Urban Water Supply are combined with those of the Rotokawa Water Supply and Ngongotaha Rural Water Supply in one stand-alone self-funding account.

water supplies activity plan cont.

Financial/Technical Planning

Key documents ensuring sound management of the Water Supply are the Annual Business Plan and the Asset Management Plan, which are available from the Engineering Department of Council.

Related Documents

Legislation

Local Government Act 2002; Local Government (Rating) Act 2002, Health Act 1956, Water Supply Protection Regulations 1961, Water Services and Trade Wastes Bylaw 2004.

RDC Files

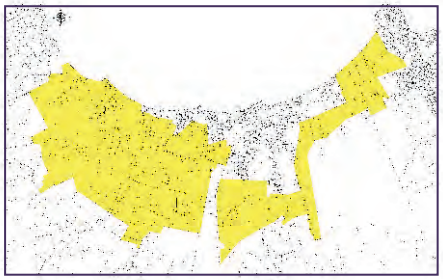
87 09 020, 87 09 010, 87 09 011, 87 09 060, 87 06 010, 87 06 020,
87 06 030, 87 03 010, 87 03 020, 87 03 030, 87 03 040.

Council Minutes

Works Committee Rec. E 95/08/19 Resolved 26 September 1995
Works Committee Rec. E 89/04/16 Resolved 20 April 1989
Works Committee Rec. E 92/03/10 Resolved 7 April 1992

water supplies activity plan cont.

Ngongotaha Rural



Rotorua District Council Plan Number 11015, Sheet 2

Description of Area
A predominantly farming/lifestyle area surrounding the Ngongotaha township as shown on RDC Plan No: 11015, Sheet 2. Refer also to District Plan Maps 6, 7, 8, 9, 10, 11, 12, 13, 104, 105.

History
This area was originally supplied with water by ad-hoc extensions to the previously – known Ngongotaha Water Supply. Consumers in the area were advised of the proposed formation of this area and proposed levels of service by letter in May 2000.

Levels of Service
The following levels of service are those which Council will endeavour to maintain within the Water Supply Area.

Quantity

Flow	Minimum 1,500 litres per day
Pressure Range	Minimum 10 metres pressure head Maximum 90 metres pressure head
Note:	Flow/Pressure figures are at point of supply.
Fire-fighting Water	Although a number of fire hydrants are installed, there is no guarantee that these will meet the NZ Fire Service Code of Practice for Fire fighting Water Supplies.
Water Quality	2007 Public Health Grading – Da

Supply Funding
Costs and revenues for the Ngongotaha Rural Water Supply are combined with those of the Rotorua Urban Water Supply and Rotokawa Water Supply in one stand-alone self-funding account.

Financial/Technical Planning
Key documents ensuring sound management of the Wastewater System are the Annual Business Plan and the Asset Management Plan, which are available from the Engineering Department of Council.

Related Documents

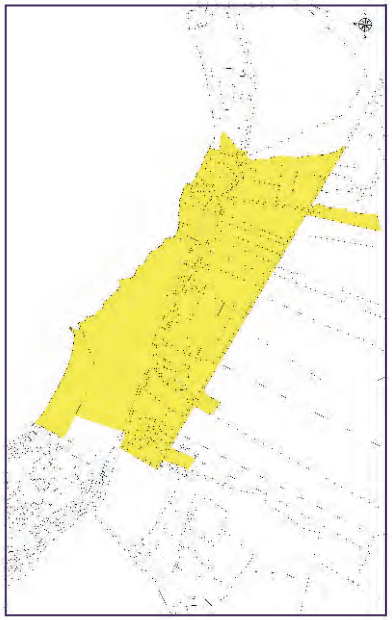
Legislation
Local Government Act 2002; Local Government (Rating) Act 2002, Health Act 1956, Water Supply Protection Regulations 1961, Water Services and Trade Wastes Bylaw 2004.

RDC Files
87 09 060, 87 06 030, 87 03 030

Council Minutes
Works Committee Rec. E 95/08/19 Resolved 26 Sept. 1995
Works Committee Rec. E 89/04/16 Resolved 20 April 1989

water supplies activity plan cont.

Rotokawa Water Supply



Rotorua District Council Plan Number 11015, Sheet 3

Description of Area
A predominantly domestic/lifestyle area to the East of Lake Rotorua as shown on RDC Plan No: 11015, Sheet 3. Included in this area are the Airport and the Eastgate Business Park. Water is supplied from the Eastern Zone of the Rotorua Urban Water supply. Refer also District Plan Maps 22, 44, 45, 46, 105.

History
This area was originally an extension of the previous Eastern Water Supply which occurred in 1963, All consumers in the area were advised of the proposed formation of this area and proposed levels of service by letter in May 2000.

Levels of Service
The following levels of service are those, which Council will endeavour to maintain within the Water Supply Area.

Quantity

Flow	There is no minimum flow standard – although consumers will normally receive some flow continuously during peak demand periods.
Pressure Range	Minimum 5 metres pressure head Maximum 90 metres pressure head
Note:	Flow/Pressure figures are at point of supply.
Fire-fighting Water	Although a number of fire hydrants are installed, there is no guarantee that these will meet the NZ Fire Service Code of Practice for Fire fighting Water Supplies.
Water Quality	2006 Public Health Grading – Ee

Supply Funding
Costs and revenues for the Rotokawa Water Supply are combined with those of the Rotorua Urban Water Supply and Ngongotaha Rural Water supply in one stand-alone self-funding account.

Financial/Technical Planning
Key documents ensuring sound management of the Water Supply are the Annual Business Plan and the Asset Management Plan, which are available from the Engineering Department of Council.

Related Documents

Legislation
Local Government Act 2002; Local Government (Rating) Act 2002, Health Act 1956, Water Supply Protection Regulations 1961, Water Services and Trade Wastes Bylaw 2004.

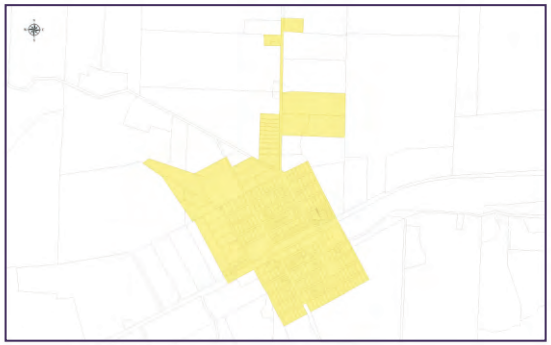
RDC Files
87 03 072, 87 09 010, 87 09 011, 87 06 020, 87 03 020

Council Minutes
Works Committee Rec. E 95/08/19 Resolved 26 Sept. 1995
Works Committee Rec. E 89/04/16 Resolved 20 April 1989

water supplies activity plan cont.

Mamaku Water Supply

A predominantly residential supply serving 267 properties. Water is drawn from a deep bore, pumped to a storage reservoir in Mamaku Domain and fed into reticulation via a hydro-pneumatic booster station because of the flat terrain. An average of 207m³ was used daily in 2008, with a peak consumption of 273m³, which is supplied through 13km of pipework. The supply is lightly chlorinated. Total reservoir capacity is 225m³.



Rotorua District Council Plan Number 11015, Sheet 4

Description of Area
A predominantly residential area covering the Mamaku Village as shown on RDC Plan No: 11015, Sheet 4. Refer also to District Plan maps 76, 77, 104.

History
First commissioned in 1987, and subsequently extended in 1997.

Levels of Service
The following levels of service are those which Council will endeavour to maintain within the Water Supply Area.

Quantity

Flow	Domestic connections 20 litres per minute Commercial/Extraordinary – dependent on size of connection
Pressure Range	Minimum 20 metres pressure head Maximum 90 metres pressure head
Note:	Flow/Pressure figures are at point of supply.
Fire-fighting Water	95% of fire hydrants are to meet the NZ Fire Service Code of Practice for Fire Fighting Water Supplies
Water Quality	2007 Public Health Grading – Da

Supply Funding
The Mamaku Water Supply is self-funding, with all costs and revenues identified in a separate stand-alone account.

Financial/Technical Planning
Key documents ensuring sound management of the Water Supply are the Annual Business Plan and the Asset Management Plan, which are available from the Engineering Department of Council.

Related Documents

Legislation
Local Government Act 2002; Local Government (Rating) Act 2002, Health Act 1956, Water Supply Protection Regulations 1961, Water Services and Trade Wastes Bylaw 2004.

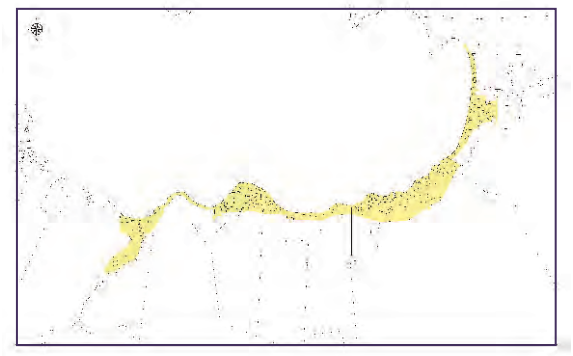
RDC Files
87 09 040, 87 02 030, 87 06 070.

Council Minutes
Works Committee Rec. E 95/08/19 Resolved 26 September 1995
Works Committee Rec. E 89/04/16 Resolved 20 April 1989
Works Committee Rec. E 96/04/10 Resolved 22 April 1996

water supplies activity plan cont.

Rotoiti Water Supply

A predominantly residential supply servicing 334 properties. Water is drawn from the Wai-iti Springs and pumped directly into reticulation to storage reservoirs at Gisborne Point and Hinehopu. An average of 293m^3 was used daily in 2008, with a peak consumption of 463m^3, which is supplied through 13.4km of pipework. The supply is lightly chlorinated. Total reservoir capacity is 308m^3.



Rotorua District Council Plan Number 11015, Sheet 5

Description of Area
A predominantly residential area on the Southern shores of Lake Rotoiti as shown on RDC Plan No: 11015, Sheet 5. Refer also to District Plan maps 64, 65, 66, 67, 68, 106.

History
The supply was established in 1976.

Levels of Service
The following levels of service are those which Council will endeavour to maintain within the Water Supply Area.

Quantity

Flow	Residential minimum – 20 litres per minute Commercial/Extraordinary – dependent on size
Pressure Range	Minimum 20 metres pressure head Maximum 90 metres pressure head
Note:	Flow/Pressure figures are at point of supply.
Fire-fighting Water	Although a number of fire hydrants are installed, there is no guarantee that these will meet the NZ Fire Service Code of Practice for Fire fighting Water Supplies.
Water Quality	2007 Public Health Grading – Db

Supply Funding
The Rotoiti Water Supply is self-funding, with all costs and revenues identified in a separate stand-alone account.

Financial/Technical
Key documents ensuring sound management of the Water Supply are the Annual Business Plan and the Asset Management Plan, which are available from the Engineering Department of Council.

Related Documents

Legislation
Local Government Act 2002; Local Government (Rating) Act 2002, Health Act 1956, Water Supply Protection Regulations 1961, Water Services and Trade Wastes Bylaw 2004.

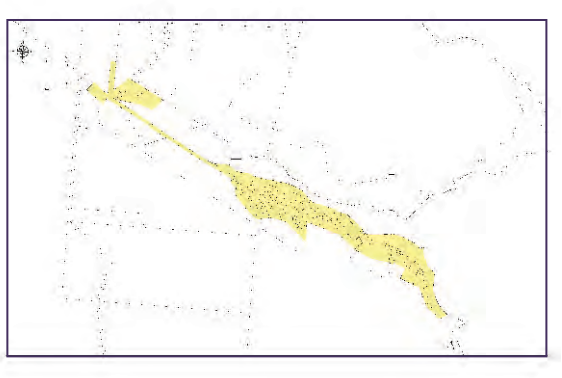
RDC Files
87 09 080, 87 05 010, 87 02 050, 87 06 050.

Council Minutes
Works Committee Rec. E 95/08/19 Resolved 26 Sept. 1995
Works Committee Rec. E 89/04/16 Resolved 20 April 1989

water supplies activity plan cont.

Rotoma Water Supply

A predominantly residential supply serving 130 properties. Water is drawn from Lake Rotoma and pumped to a storage reservoir in Oxford Road. An average of 54m³ was used daily in 2008, with a peak consumption of 110m³, which is supplied through 7.1km of pipework. The supply is lightly chlorinated. Total reservoir capacity is 220m³.



Rotorua District Council Plan Number 11015, Sheet 6

Description of Area
A predominantly residential area on the Southern shores of Lake Rotoma as shown on RDC Plan No: 11015, Sheet 6. Refer also to District Plan maps 71, 72, 73, 106.

History
The supply was established in 1983.

Levels of Service
The following levels of service are those, which Council will endeavour to maintain within the Water Supply Area.

Quantity

Flow	Domestic connections 20 litres per minute Commercial/Extraordinary – dependent on size of connection
Pressure Range	Minimum 20 metres pressure head Maximum 90 metres pressure head
Note:	Flow/Pressure figures are at point of supply.
Fire-fighting Water	Although a number of fire hydrants are installed, there is no guarantee that these will meet the NZ Fire Service Code of Practice for Fire fighting Water Supplies.
Water Quality	2006 Public Health Grading – Ee

Supply Funding
The Rotoma Water Supply is self-funding, with all costs and revenues identified in a separate stand-alone account.

Financial/Technical Planning
Key documents ensuring sound management of the Water Supply are the Annual Business Plan and the Asset Management Plan, which are available from the Engineering Department of Council.

Related Documents

Legislation
Local Government Act 2002; Local Government (Rating) Act 2002, Health Act 1956, Water Supply Protection Regulations 1961, Water Services and Trade Wastes Bylaw 2004.

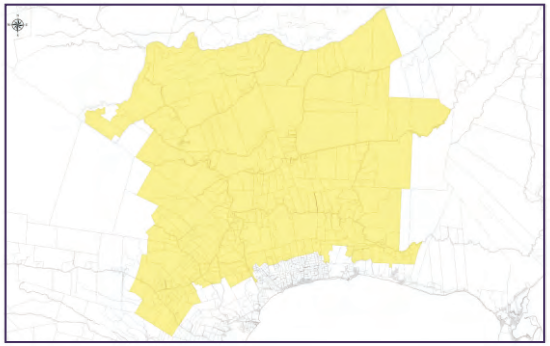
RDC Files
87 09 090, 87 02 020, 87 06 050

Council Minutes
Works Committee Rec. E 95/08/19 Resolved 26 Sept. 1995

water supplies activity plan cont.

Kaharoa Water Supply

A predominantly rural supply serving 291 properties supplying 7,500 hectares of farmland. Water is drawn from Hamurana Springs and pumped to a storage reservoir in Te Waerenga Road and fed on via a booster station in Tauranga Direct Road to a reservoir in Roy Road from where it is further boosted to consumers on Lagoon Road. An average of 1,469m^3 was used daily in 2008, with a peak consumption of 2,717m^3, which is supplied through 56km of pipework. The supply is lightly is lightly chlorinated. Total reservoir capacity is 1,218m3.



Rotorua District Council Plan Number 11015, Sheet 7

Description of Area
A predominantly farming and lifestyle area to the north of Lake Rotorua on the Mamaku Plateau incorporating the Kaharoa locality as shown on Rotorua District Council's Drawing No: 11015, Sheet 7. Refer also District Planning Maps 5, 6, 101, 102, 104, 105.

History
First commissioned as a Council supply in 1980. Subject to two extensions of area in 1984 and 1988.

Levels of Service
The following levels of service are those which Council will endeavour to maintain within the Water Supply Area.

The quantity levels of service were originally set by the community at the time of construction through the Kaharoa Water Supply Liaison Committee. The source, pumps and network were designed to supply a steady flow to each property over 24 hours with each property requiring its own on-site storage and, if necessary, pumping equipment.

The flow for each property is calculated from a daily allocation based on land area and land use (dairy or sheep/beef). The allocation is enforced by the use of a flow restrictor at each connection point.

Quantity

Flow	Dairy – 450 litres/hectare/day Sheep/Beef – 250 litres/hectare/day
The minimum allocation for small lots is 1,500 litres per day.	
Pressure Range	No minimum (enough to provide flow) Maximum 90 metres pressure head
Note:	Flow/Pressure figures are at point of supply.
Fire-fighting Water	No public fire fighting water supply is provided for.
Water Quality	2006 Public Health Grading – Ee

Supply Funding
The Kaharoa Water supply is self-funding with all costs and revenues identified in a separate stand-alone account.

Financial/Technical Planning
Key documents ensuring sound management of the Water Supply are the Annual Business Plan and the Asset Management Plan, which are available from the Engineering Department of Council.

Related Documents

Legislation
Local Government Act 2002; Local Government (Rating) Act 2002, Health Act 1956, Water Supply Protection Regulations 1961, Water Services and Trade Wastes Bylaw 2004.

RDC Files
87 09 030, 87 02 010, 87 06 060

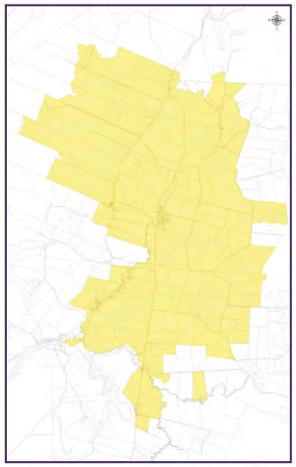
Council Minutes
Resolution Council Meeting May/June 1999
Works Committee Rec. E 95/08/19 Resolved 26 Sept. 1995
Works Committee Rec. E 89/04/16 Resolved 20 April 1989
Works Committee Rec. E 89/08/35 Resolved 21 August 1989
Works Committee Rec. E 97/06/19 Resolved 3 June 1997
Works Committee Rec. E 98/04/08 Resolved 14 April 1998

Reports
"A study of Kaharoa Water Supply System" RDC May 1996
"Kaharoa Water Supply Scheme Network Analysis" RDC Feb. 1999

water supplies activity plan cont.

Reporoa Water Supply

A predominantly farming supply serving 361 properties and supplying 6,800 hectares of farmland. Water is fed from two sources, Wharepapa Spring to the northwest which gravitates to the Reporoa village, dairy factory and beyond; and the Deep Creek spring to the south which is pumped into the Broadlands and Mihi area. An average of 6,687m3 was used daily in 2008 with a peak consumption of 8,879 m3. It is supplied through 65km of pipework. The largest consumer is the Fontera Co-operative Group Ltd factory. The supply is lightly chlorinated.



Rotorua District Council Plan Number 11015, Sheet 8

Description of Area

A predominantly farming area which incorporates the Reporoa Village and includes the Reporoa Dairy Factory as shown on RDC Plan 11015, Sheet 8. Refer also to District Plan maps 88, 89, 90, 114, 117.

History

This supply is an amalgamation of the former Reporoa Water Supply (established 1968) and the former Mihi Water Supply (established 1953). These were amalgamated in 2005.

Levels of Service

The following levels of service are those which Council will endeavour to maintain within the Water Supply Area.

Quantity

Differing quantity levels of service are set for Farming, Residential and Dairy Factory consumers. The sources, pumps and network are designed to supply a steady flow to each farm over 16 hours with each farm requiring its own on-site storage and if necessary, pumping equipment. The flow for each property is calculated from a daily allocation based on farm area. The allocation is enforced by the use of a flow restrictor at each connection point. The Dairy Factory has one connection supplying a steady flow, plus an extra allocation during night hours which it stores in its own reservoirs for use during the day. Residential users receive an unrestricted 24 hour flow.

Flow	Residential minimum – 20 litres per minute Farming – 505 litres/hectare/day Factory – 3600 cubic metres/day
Pressure Range	Minimum 15 metres pressure head Maximum 90 metres pressure head
Note:	Flow/Pressure figures are at point of supply.
Fire-fighting Water	Although a number of fire hydrants are installed, there is no guarantee that these will meet the NZ Fire Service Code of Practice for Fire fighting Water Supplies.
Water Quality	2006 Public Health Grading Ee

Supply Funding

The Reporoa Water Supply is self-funding, with all costs and revenues identified in a separate stand-alone account.

Financial/Technical Planning

Key documents ensuring sound management of the Water Supply are the Annual Business Plan and the Asset Management Plan, which are available from the Engineering Department of Council.

Related Documents:

Legislation

Local Government Act 2002; Local Government (Rating) Act 2002, Health Act 1956, Water Supply Protection Regulations 1961, Water Services and Trade Wastes Bylaw 2004.
RDC Files 87 09 050, 87 09 070, 87 02 120, 87 02 060, 87 02 040, 87 06 090, 87 06 080.

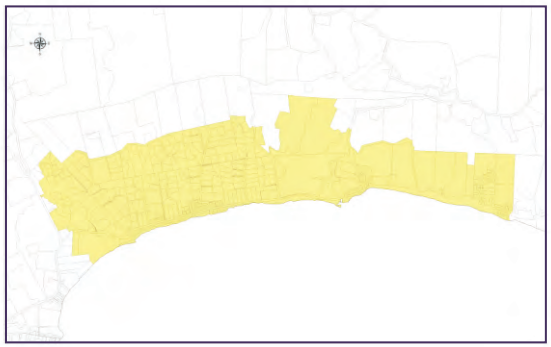
Council Minutes

Works Committee Rec. E 95/08/19 Resolved 26 Sept. 1995
Works Committee Rec. E 89/04/16 Resolved 20 April 1989
Works Committee Rec. E 90/05/36 Resolved 15 May 1990.

water supplies activity plan cont.

Hamurana Water Supply

A predominantly urban supply serving 330 properties includes a number of lifestyle and farm blocks. Water is drawn from the Hamurana Springs and pumped to a storage reservoir in Turner Road and fed on via gravity to the Unsworth Road reservoir. An average of 353m³ was used daily in 2008, with a peak consumption of 637m³, which is supplied through 17.7km of pipework. The supply is lightly chlorinated. Total reservoir capacity is 700m³.



Rotorua District Council Plan Number 11015, Sheet 9

Description of Area
A predominantly residential lifestyle and farming area on the northwestern side of Lake Rotorua as shown on RDC Plan No: 11015, Sheet 9. Refer also to District Plan maps. 2,3,4,5,6,105.

History
Commissioned in 1992.

Levels of Service
The following levels of service are those which Council will endeavour to maintain within the Water Supply Area.

Quantity

Flow	Residential minimum – 20 litres per minute Commercial/Extraordinary – dependent on size of connection
Pressure Range	Minimum 15 metres pressure head Maximum 90 metres pressure head
Note:	Flow/Pressure figures are at point of supply.
Fire-fighting Water	Although a number of fire hydrants are installed, there is no guarantee that these will meet the NZ Fire Service Code of Practice for Fire fighting Water Supplies.
Water Quality	2006 Public Health Grading – Ee

Supply Funding
The Hamurana Water Supply is self-funding, with all costs and revenues identified in a separate stand-alone account.

Financial/Technical Planning
Key documents ensuring sound management of the Water Supply are the Annual Business Plan and the Asset Management Plan, which are available from the Engineering Department of Council.

Related Documents

Legislation
Local Government Act 2002; Local Government (Rating) Act 2002, Health Act 1956, Water Supply Protection Regulations 1961, Water Services and Trade Wastes Bylaw 2004.

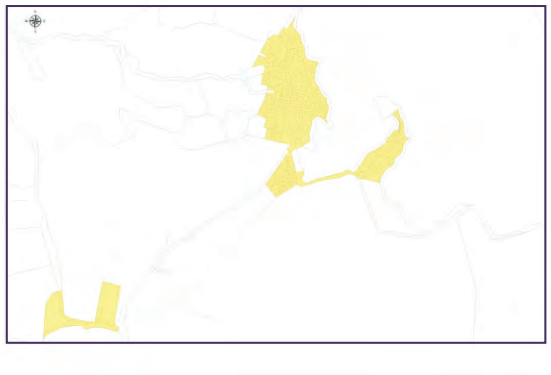
RDC Files
87 05 092, 87 05 090, 87 02 180, 87 06 201.

Council Minutes
Works Committee Rec. E 95/08/19 Resolved 26 Sept. 1995
Works Committee Rec. E 89/04/16 Resolved 20 April 1989
Works Committee Rec. E 91/09/036 Resolved 11 Sept. 1991.

water supplies activity plan cont.

Okareka Water Supply

A predominantly residential supply serving 260 properties. Water is taken from the Eastern No.1 reservoir (Waipa Spring source) and pumped to a storage reservoir in Okareka Loop Road near Lake Tikitapu (Blue Lake). An average of 209m³ was used daily in 2008, with a peak consumption of 390m³, which is supplied through 12.7km of pipework. The supply is lightly chlorinated. Total reservoir capacity is 600m³.



Rotorua District Council Plan Number 11015, Sheet 10

Description of Area
A residential area on the shores of Lake Okareka as shown on RDC Plan No: 11015, Sheet 10. Refer also District Plan Maps 78, 108.

History
The supply was commissioned in 1994.

Levels of Service
The following levels of service are those which Council will endeavour to maintain within the Water Supply Area.

Quantity

Flow	Residential minimum – 20 litres per minute Commercial/Extraordinary – dependent on size of connection
Pressure Range	Minimum 20 metres pressure head Maximum 90 metres pressure head
Note:	Flow/Pressure figures are at point of supply.
Fire-fighting Water	Although a number of fire hydrants are installed, there is no guarantee that these will meet the NZ Fire Service Code of Practice for Fire fighting Water Supplies.
Water Quality	2006 Public Health Grading – Ee

Supply Funding
The Okareka Water Supply is self-funding, with all costs and revenues identified in a separate stand-alone account.

Financial/Technical Planning
Key documents ensuring sound management of the Water Supply are the Annual Business Plan and the Asset Management Plan, which are available from the Engineering Department of Council.

Related Documents

Legislation
Local Government Act 2002; Local Government (Rating) Act 2002, Health Act 1956, Water Supply Protection Regulations 1961, Water Services and Trade Wastes Bylaw 2004.

RDC Files
87 09 200, 87 05 080, 87 02 200, 87 06 200.

Council Minutes
Works Committee Rec. E 95/08/19 Resolved 26 Sept. 1995
Works Committee Rec. E 89/04/16 Resolved 20 April 1989
Works Committee Rec. E 89/08/37 Resolved 21 August 1989