

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 charge 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 |

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 24,291m³ was used daily in 2008, with estimated peak day consumption of 34,904m³, which is supplied through 292km of pipe work. The supply is lightly chlorinated. Total reservoir capacity is 32,655m³.

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 4,185m³ was used daily in 2008, with an estimated peak day consumption of 6,087m³ which is supplied through 85km of pipework. The supply is lightly chlorinated. Total reservoir capacity 7,270m³.

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 2,486m³ was used daily in 2008 with a peak consumption of 3,580m³, which is supplied through 49km of pipework. The supply is lightly chlorinated. Total reservoir capacity is 6,130m³.



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

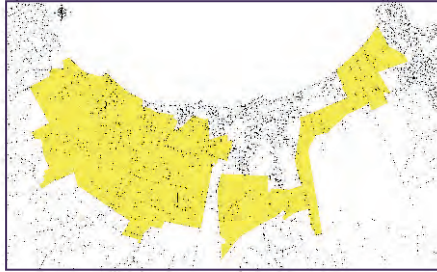
87 09 020, 87 09 010, 87 09 011, 87 09 060, 87 06 010, 87 06 020,
87 06 030, 87 03 010, 87 03 020, 87 03 030, 87 03 040.

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

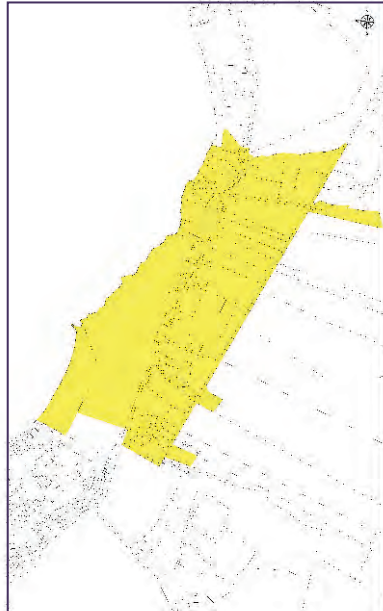
87 09 060, 87 06 030, 87 03 030

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

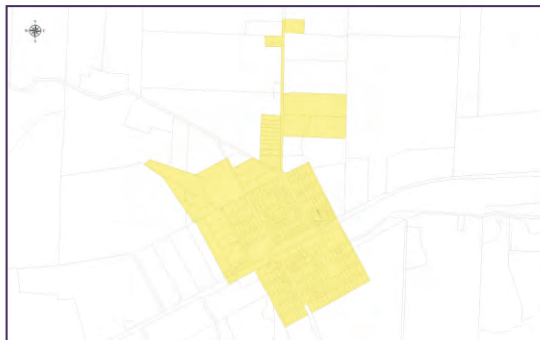
Council Minutes

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

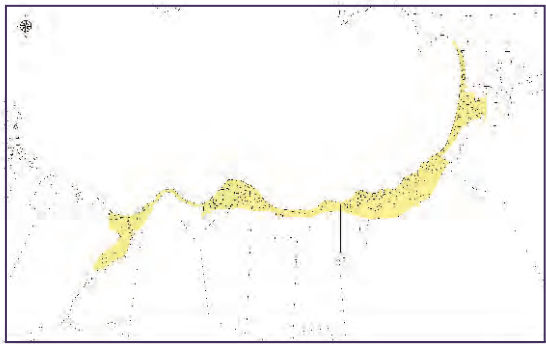
Works Committee Rec. E 89/04/16 Resolved 20 April 1989

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 293m³ was used daily in 2008, with a peak consumption of 463m³, which is supplied through 13.4km of pipework. The supply is lightly chlorinated. Total reservoir capacity is 308m³.



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 |

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

Supply Funding

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

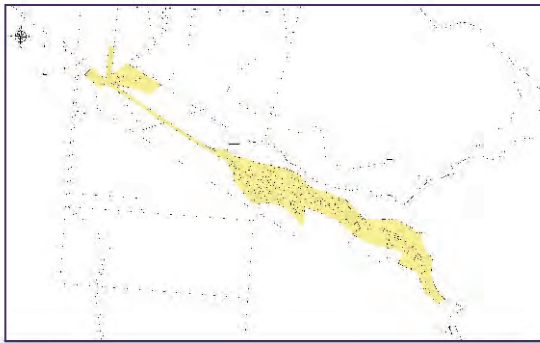
Financial/Technical

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.

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

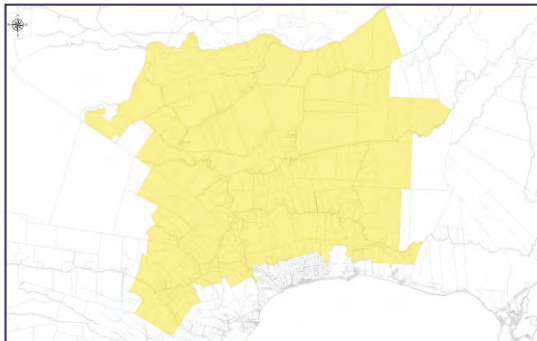
Council Minutes

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 1,469m³ was used daily in 2008, with a peak consumption of 2,717m³, which is supplied through 56km of pipework. The supply 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

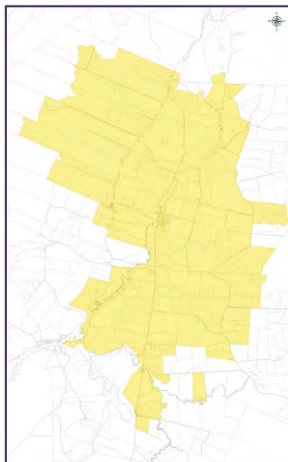
Reports

"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.

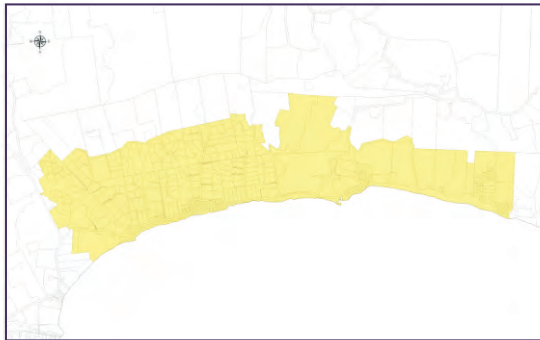
Council Minutes

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.

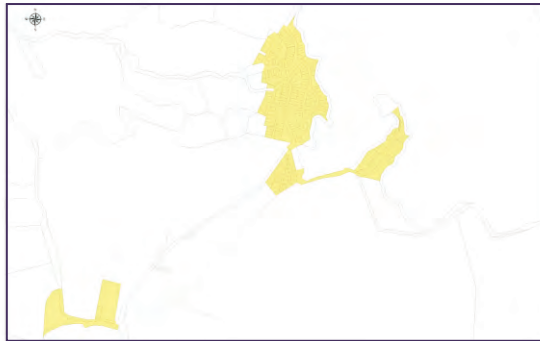
Council Minutes

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