

Activity Profile: Wastewater

Why we do this

For the protection of public and environmental health, through treatment of wastewater in selected areas.

For further information on how this activity contributes to Community Outcomes please consult the Revenue and Financing Policy – Activity Analysis.

What we do

- Collects, treats and disposes of wastewater through sustainable, cost-effective and environmentally friendly methods.
- Owns and operates wastewater schemes for: Glinks Gully, Te Kopuru, Dargaville, Maungaturoto, Kaiwaka and Mangawhai; and
- Undertakes asset management, planning, operation and maintenance of the wastewater schemes, capital and refurbishment programmes and consent monitoring and compliance, along with responsibility of professional and physical works undertaken on the network.

How this benefits the community

- We provide and maintain infrastructure that supports the economy of the area. We will ensure that people who are able to will be connected to Council schemes;
- We are intent on lifting Kaipara district's well-being by providing infrastructure where people live close together, which protects the health of both the community and the environment; and
- We will protect and enhance our natural assets and open spaces by ensuring we meet our compliance with the discharge consents.

Risks and issues

- Failure of a scheme due to the age of the assets, and the inaccessibility for inspections (pipes are underground so are difficult to locate and inspect adequately);
- Affordability, the cost to repair and provide service with aging pipes coupled with relatively small communities served by a scheme can push the expenses (and rates) out of reach for communities;
- If the trend toward higher environmental standards for discharge consents (treated wastewater released into harbours or rivers) continues, it may become unreasonable to expect communities to front the costs of upgrading equipment or services to meet the standards;
- The Mangawhai Community Wastewater Scheme (MCWWS) will reach capacity by 2030 if the 'minimum approach upgrade' is taken;

- Committing relatively large expenditure to upgrade the MCWWS may expose Council in the event of a significant downturn in the economy and resulting low growth;
- As part of the ongoing longer term planning for the scheme, investigations of future disposal options to provide additional disposal capacity will be undertaken concurrently and a preferred option recommended to Council for approval. This is to ensure that a future disposal facility is identified well before it is required and any associated resource consents can be acquired to authorise the preferred disposal. Technical investigations to support a consent variation to authorise an increase in the land application rate at the existing farm are currently being progressed. If successful, this would defer the need for an additional disposal system in the future; and
- The exact capacity of the five other wastewater schemes is unknown until specific capacity analyses (modelling) are undertaken.

How the service is funded

- Targeted rates;
- Development contributions;
- User fees and charges;
- Borrowing:
- Asset sales; and
- General rate.

Note: Details of, and the rationale for, the above funding method is contained in Council's Revenue and Financing Policy.

Legislation, Policies and Bylaws associated with this service (included but not limited too)

- Local Government Act 1974;
- Local Government Act 2002;
- Resource Management Act 1991;
- Health Act 1956;
- Building Act 2004;
- Regional Policy Statement;
- Regional Water and Soil Plan;
- Regional Coastal Plan;
- New Zealand Coastal Policy Statement;
- National Policy Statement for Freshwater Management;
- Wastewater Drainage Policy and Wastewater Drainage Bylaw 2016; and
- Trade Waste Bylaw 2009.

Improvement Programme 2018/2028 - Sewerage and the Treatment and Disposal of Sewage

<p>Year 1 - 2018/2019 Planned improvement / change</p>	<ul style="list-style-type: none"> • Develop a central database and geospatial framework for condition assessment information and generate renewal programme from the system; • Provide a central management software system for consents, compliance and monitoring to replace the manual system; • Continue the data cleansing project to improve our knowledge of our assets (including asset lives to aid renewal planning); • Wastewater Modelling (Dargaville, Maungaturoto). Scoping exercise to determine needs and level of detail required for development of hydraulic model; • Continue the MCWWS resource consent variation application; • Extend the MCWWS irrigation system; • Upgrade the MCWWS existing reticulation and pump stations; and • Upgrade the MCWWS treatment plant.
<p>Year 2 - 2019/2020 Planned improvement / change</p>	<ul style="list-style-type: none"> • Continue development of a central database and geospatial framework for condition assessment information and generate renewal programme from the system; • Complete the data cleansing project to reduce the number of unknown asset attributes (including asset lives to aid renewal planning); • Wastewater Modelling (Kaiwaka). Scoping exercise to determine needs and level of detail required for development of hydraulic model; • Wastewater Modelling (Dargaville, Maungaturoto and Kaiwaka). Develop, test and implement hydraulic model to identify capacity issues, optimisation of pumping stations, manage growth; • Commence the desludging of the Dargaville Wastewater Oxidation Pond; • Complete the upgrade of the MCWWS existing reticulation system and pump stations; and • Complete the upgrade of the MCWWS treatment plant.

Improvement Programme 2018/2028 - Sewerage and the Treatment and Disposal of Sewage

Year 3 - 2020/2021 Planned improvement / change	<ul style="list-style-type: none"> • Complete the central database and geospatial framework for condition assessment information and generate renewal programme from the system; • Wastewater Modelling (Kaiwaka). Development of hydraulic model to identify capacity issues, optimisation of pumping stations, manage growth; • Complete the desludging of the Dargaville Wastewater Oxidation Pond; and • Commence the extension of the MCWWS reticulation system (ME3).
Years 4-10 - 2021/2028 Planned improvement / change	<ul style="list-style-type: none"> • Review and refine Wastewater Models (Dargaville, Maungaturoto and Kaiwaka); and • Continue the extension of the MCWWS reticulation system.

Measuring Performance - Sewerage and the Treatment and Disposal of Sewage

What Council measures	LTP Year 1 Target 2018/2019	LTP Year 2 Target 2019/2020	LTP Year 3 Target 2020/2021	LTP Years 4-10 Target 2021/2028
The number of dry weather sewage overflows from Council's <i>sewerage systems</i> , expressed per 1,000 sewerage connections to that sewerage system. The resource consent provides for severe weather events and power failure exceptions.	≤1	≤1	≤1	≤1
Where Council attends to sewage overflows resulting from a blockage or other fault in the territorial authority's sewerage system, the following median response times apply: Attendance time: from the time that the territorial authority receives notification to the time that service personnel reach the site. (Department of Internal Affairs measure)	≤2 hours	≤2 hours	≤2 hours	≤2 hours
Where Council attends to sewage overflows resulting from a blockage or other fault in the territorial authority's sewerage system, the following median response times apply: Resolution time: from the time that the territorial authority receives notification to the time that service personnel confirm resolution of the blockage or other fault.	≤48 hours	≤48 hours	≤48 hours	≤48 hours

What Council measures	LTP Year 1 Target 2018/2019	LTP Year 2 Target 2019/2020	LTP Year 3 Target 2020/2021	LTP Years 4-10 Target 2021/2028
The total number of complaints received by Council about sewage odour. Expressed per 1,000 sewerage connections.	≤10	≤10	≤10	≤10
The total number of complaints received by Council about sewerage system faults e.g. blockages, breaks. Expressed per 1,000 sewerage connections. (Department of Internal Affairs measure)	≤27	≤27	≤27	≤27
The total number of complaints received by Council about Council's response to issues with its sewerage system. Expressed per 1,000 sewerage connections. (Department of Internal Affairs measure)	≤50	≤48	≤46	≤44
The number of: abatement notices, infringement notices, enforcement orders and convictions received by Council in relation to its resource consents for discharge from its sewerage systems.	0	0	0	0
Major capital projects are completed within budget.	Achieved	Achieved	Achieved	Achieved

Significant negative effects - Sewerage and the Treatment and Disposal of Sewage

- In case of failure or significant breakage, there could be contamination of public waterways which may have large environmental or personal health issues;
- As a number of community populations stay static, the rising cost of ongoing maintenance or pipe renewal may become economically unrealistic; and
- Failure of a wastewater treatment plant (WTP) in meeting the resource consent may result in Northland Regional Council (NRC) issuing an infringement notice.

Funding Impact Statement - Operating

For the year ended:	Annual Plan	Budget	Budget	Budget	Budget	Budget	Budget	Budget	Budget	Budget	Budget
30 June	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025	2025-2026	2026-2027	2027-2028
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Operating funding											
Sources of operating funding											
General rates, uniform annual general charges, rate penalties	2,050	1,337	1,346	1,412	1,490	823	892	949	1,032	1,096	1,207
Targeted rates	5,463	6,151	6,369	6,332	6,362	6,744	7,244	7,548	7,763	8,333	8,680
Subsidies and grants for operating purposes	0	0	0	0	0	0	0	0	0	0	0
Fees and charges	9	9	10	10	10	10	11	11	11	11	12
Internal charges and overheads recovered	0	0	0	0	0	0	0	0	0	0	0
Local authorities fuel tax, fines, infringement fees and other receipts	0	0	0	0	0	0	0	0	0	0	0
Total operating funding	7,522	7,497	7,725	7,754	7,862	7,577	8,147	8,508	8,806	9,440	9,899
Application of operating funding											
Payments to staff and suppliers	2,237	2,449	3,138	2,949	1,856	1,904	2,047	2,076	2,156	2,409	2,493
Finance costs	2,860	2,584	2,493	2,593	2,693	2,779	2,886	2,856	2,933	2,985	3,156
Internal charges and overheads applied	961	1,176	1,405	1,363	1,043	1,076	1,135	1,156	1,195	1,286	1,328
Other operating funding applications	0	0	0	0	0	0	0	0	0	0	0
Total applications of operating funding	6,058	6,209	7,036	6,905	5,592	5,759	6,068	6,088	6,284	6,680	6,977
Surplus (deficit) of operating funding	1,464	1,288	689	849	2,270	1,818	2,079	2,420	2,522	2,760	2,922

Funding Impact Statement - Capital

For the year ended:	Annual Plan	Budget	Budget	Budget	Budget	Budget	Budget	Budget	Budget	Budget	Budget
30 June	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025	2025-2026	2026-2027	2027-2028
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Capital funding											
Sources of capital funding											
Subsidies and grants for capital expenditure	0	0	0	0	0	0	0	0	0	0	0
Development and financial contributions	350	1,885	1,909	2,436	2,413	2,409	2,409	2,409	2,409	2,409	2,235
Increase (decrease) in debt	-720	-71	-1,052	-1,082	-1,209	-570	-578	-449	152	-54	-817
Gross proceeds from sale of assets	0	0	0	0	0	0	0	0	0	0	0
Lump sum contributions	0	0	0	0	0	0	0	0	0	0	0
Other dedicated capital funding	0	0	0	0	0	0	0	0	0	0	0
Total sources of capital funding	-370	1,814	857	1,354	1,204	1,839	1,831	1,960	2,561	2,355	1,418
Applications of capital funding											
Capital expenditure											
- to meet additional demand	521	1,915	1,553	1,772	1,814	2,463	2,525	480	2,272	2,790	2,868
Capital expenditure											
- to improve the level of service	94	748	895	420	553	301	59	159	756	624	16
Capital expenditure											
- to replace existing assets	519	1,041	634	414	489	549	1,163	1,134	1,267	1,292	1,286
Increase (decrease) in reserves	-41	-602	-1,536	-403	618	344	163	2,607	788	409	170
Increase (decrease) of investments	0	0	0	0	0	0	0	0	0	0	0
Total applications of capital funding	1,093	3,102	1,546	2,203	3,474	3,657	3,910	4,380	5,083	5,115	4,340
Surplus (deficit) of capital funding	-1,464	-1,288	-689	-849	-2,270	-1,818	-2,079	-2,420	-2,522	-2,760	-2,922
Funding Balance	0	0	0	0	0	0	0	0	0	0	0

Capital Expenditure Programme - Sewerage and the Treatment and Disposal of Sewage

	Budget 2018/2019 \$	Budget 2019/2020 \$	Budget 2020/2021 \$
Sewerage and the Treatment and Disposal of Sewage	3,703,500	3,082,645	2,606,233
165 - Te Kopuru Wastewater Scheme	2,500	12,813	34,079
Environmental compliance	✓	✓	✓
Reticulation			✓
Treatment Plant modifications		✓	✓
202 - Dargaville Wastewater Scheme	1,241,000	867,150	684,719
Environmental compliance	✓	✓	✓
Pipe Renewal from condition assessment	✓	✓	✓
PS1/PS2 Rising main from pump station 2 to Pump station 1	✓		
Pump stations and rising mains	✓	✓	✓
Pump stations 1 and 2 upgrade	✓	✓	✓
Safety grills pump stations		✓	✓
Treatment		✓	
207 - Mangawhai Wastewater Scheme	45,000	46,125	47,186
Renewals including pump stations	✓	✓	✓
219 - Kaiwaka Wastewater Scheme	152,500	166,563	13,107
Environmental compliance	✓	✓	✓
Pipe Renewals from condition assessment	✓	✓	
Pump Stations SCADA upgrade		✓	✓

	Budget 2018/2019 \$	Budget 2019/2020 \$	Budget 2020/2021 \$
Sewerage and the Treatment and Disposal of Sewage	3,703,500	3,082,645	2,606,233
232 - Maungaturoto Wastewater Scheme	72,500	103,995	44,564
Environmental compliance	✓	✓	✓
Pump stations and rising mains			✓
Reticulation		✓	
Safety grills on pump stations		✓	
Treatment	✓	✓	
253 - Glinks Gully Wastewater Scheme	0	0	10,486
Pump stations and rising mains			✓
280 - Mangawhai Wastewater Scheme	2,190,000	1,886,000	1,772,092
Additional capacity for growth- Council contribution	✓	✓	✓
Extend irrigation system	✓		
Extend reticulation (8 years)			✓
Upgrade existing reticulation	✓	✓	
Upgrade WWTP	✓	✓	