

## SEWERAGE

### Cost of Proposed Services

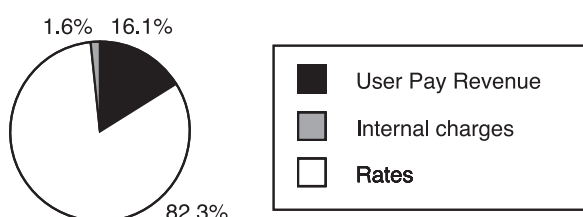
Budget 1999/00			Budget 2000/01		
Net Cost	Operational Outputs	Costs (After Internal Recoveries)	Revenue		Net Cost
\$		\$	\$		\$
104,379	Plans and Policy Statements	119,107	0		119,107
40,366	Information and Advice	67,404	(20,000)		47,404
334,912	Consents and Applications	347,629	0		347,629
8,738,418	Liquid Waste Collection	8,965,064	(434,425)		8,530,639
4,649,808	Liquid Waste Treatment and Disposal	7,292,593	(2,286,960)		5,005,633
<b>13,867,883</b>	<b>Net Cost of Service</b>	<b>16,791,797</b>	<b>(2,741,385)</b>		<b>14,050,412</b>

Note: The above Cost of Service Statement includes a depreciation provision for 1999/00 of \$4,844,150 and in 2000/01 of \$5,772,500. The cost of capital charge for 1999/00 is \$16,898,998 and for 2000/01 is \$15,113,128. Cost of capital is not reflected in the above figures.

Projected Cost of Service 2001/02	14,535,420
Projected Cost of Service 2002/03	14,826,129

1999/00	Capital Outputs	2000/01
\$		\$
2,811,593	Renewals and Replacements	3,179,310
9,491,500	Asset Improvements	7,006,340
665,000	New Assets	977,886
<b>12,968,093</b>		<b>11,163,536</b>

### Sources of Funding



### Nature and Scope

- Treating and disposing of all liquid wastes in a safe and environmentally sound manner.
- Providing and maintaining the sewerage collection system and ensuring its maintenance and renewal so as to sustain service needs.
- Researching the need for and planning the development of sewerage services.
- Providing information and advice on sewerage systems and services as a basis for public and private decision-making.
- Providing a scientific investigations capability to undertake wastewater testing and environmental, ecological and trade waste assessments.
- A further \$14M has been added to the budget for the upgrading of the Wastewater Treatment Plan in 2005/06 and 2006/07. This upgrade will greatly improve effluent discharge quality.

This activity has a significant impact on the maintenance of the health of the citizens of Christchurch and the quality of their environment. It is based on a comprehensive reticulation network for the collection, transport, treatment and disposal of sewage and other liquid wastes, including 1,560 km of sewer mains with 100,000 lateral connections, 78 pumping stations and three sewage treatment works. The latter treat 150 million litres per day of sewage to required standards and includes the operation of effluent disposal and sludge reuse systems.

### Overall Service Objective

These services contribute towards the following Council Strategic Objectives: C1, C2, C5, E1, E2, E3, F5, F7, G1 and G2 (see pages 32 and 33).

In summary the aim is:

- Provision of liquid waste management services for the community in a safe and environmentally responsible manner. This will include:

- understanding and meeting customers' needs;
- planning for city growth;
- promotion and implementation of a waste strategy of reduction, reuse, recycling, recovery, safe residue disposal for liquid waste;
- maintaining appropriate information systems;
- conforming with all statutory requirements;
- promotion of sustainability;
- maintaining cultural sensitivity;
- operating on a cost accountable basis including regularly reviewing operating costs and revenue;
- a policy of continuous improvement in all areas of operation and management.

### Objectives for 2000/01

- To develop a comprehensive Liquid Waste Management Plan which conforms to the requirements of the Local Government Amendment Act No. 4. The objectives below will form elements of this plan.
- To preserve the value of the public reticulation system by following an asset management strategy.
- To ensure adequate system capacity to cater for present and future urban growth by continuation of infiltration and inflow remedial works.
- To minimise sewage overflows to private property, public roads and waterways.
- To minimise energy costs for all operating plant, by maximising biogas used for energy production.
- To comply with water right effluent discharge standards as required through achievement of target treatment levels.

8. To hold sewage treatment total costs to targeted figures.

## Performance Indicators

- 2.1 Draft Liquid Waste Management Plan completed and special consultative procedure started. (New Performance Indicator.)
- 3.1 Full implementation of the 1999/00 sewer renewal capital works programme, as in the Asset Management Plan. (1998/99 : \$0.186m, i.e. 12% out of total of \$1.575m carried forward to next year.)
- 4.1 Complete major catchment flow monitoring, commence sub-catchment investigations, plus inspection and remedial works on a further 15,000 properties (1998/99 a further 13,830 inspected).
- 5.1 Record and report all overflows of sewage with a target of no overflows resulting from failure of Council pumping equipment. (1998/99 : seven overflow events due to wet weather, none due to pumping failure.)
- 6.1 Maximise engine generator use with average of 8,000 hours (91% uptime out of possible 8,760 per year) on load over the two National Engines and the Waukesha generating set. (1998/99 : Achieved 7,850 hours onload 89.6%).
- 7.1 Measure discharge pollutant levels with a target of an average of 70% and 65% reduction in BOD and suspended solids through the Christchurch Wastewater Treatment Plant. (1998/99 : Achieved 64% and 65% respectively.)

7.2 Measure discharge faecal coliform levels with a target of an average 99.8% reduction in faecal coliforms throughout the Christchurch Wastewater Treatment Plant and oxidation ponds with a final effluent average less than 10,000/100ml as measured in the final pond prior to discharge. (1998/99: Achieved 99.9% reduction and 5,600/100ml.)

7.3 Develop a baseline monitoring program and a baseline data set for nitrogen removal through the plant. (New Performance Indicator).

8.1 Measure wastewater **treatment** costs against the target of \$17.05 per person per year, \$44.30 per ratepayer and \$0.12/m<sup>3</sup> per year.\* (1998/99: \$10.92 per person, \$28.94 per ratepayer and \$0.08/m<sup>3</sup>) and average wastewater **total** costs of \$42.70/person/year, \$111.00 per ratepayer per year and \$0.29/m<sup>3</sup>. (1998/99 : \$49.43 per person, \$125.28 per ratepayer and \$0.33m<sup>3</sup>.)

\* Note that the increases from 1998/99 to 2000/01 for this performance indicator are due to increased operating costs of the Christchurch Wastewater Treatment Plant resulting from the capacity upgrade.



A view of construction work on one of the four new secondary clarifiers. This is part of the treatment Plant upgrade.



An aerial view of the Christchurch Wastewater Treatment Plant.